

# **BIE College and Career Ready Standards Summative Assessment Accessibility Features and Accommodations Manual**

Guidance for Districts and Decision-Making Teams to Ensure  
that the Bureau of Indian Education (BIE) College and  
Career Ready Standards (CCRS) Summative Assessments  
Produce Valid Results for All Students







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## Background

### Introduction

BIE is committed to providing all students with equitable access to high-quality, 21st century assessments. By applying principles of universal design, using technology, embedding accessibility features, and allowing a broad range of accommodations, BIE provides opportunities for the largest possible number of students to demonstrate their knowledge and skills. BIE sets and maintains high expectations that all students will have access to the full range of grade-level and course content standards. Additionally, BIE adopted common policies for accessibility features, accommodations, and participation in the CCRS summative assessments. Together, these elements will increase student access to CCRS summative assessments, fidelity of implementation, and comparability.

BIE goals for promoting student access include:

- Applying principles of universal design for accessible assessments during every stage of the development of the assessment items and performance tasks;
- Minimizing/eliminating features of the assessment that are irrelevant to what is being measured so that all students can more accurately demonstrate their knowledge and skills;
- Measuring the full range of complexity of the standards;
- Using technology for the accessible delivery of the assessments;
- Building accessibility throughout the test without sacrificing assessment validity;
- Using a combination of accessible authoring and accessible technologies from the inception of items and tasks; and
- Engaging state and national experts throughout the development process through item review, bias and sensitivity review, policy development and review, and research.

The *BIE Accessibility Features and Accommodations Manual* has been created to ensure that:

- Participation in the assessments is consistent for students with disabilities and English learners (EL);
- Appropriate tools are used by students to address their individual learning needs, and that accommodations are provided to eligible students (including students with disabilities, ELs, and ELs with disabilities); and
- Accessibility features and accommodations used on the CCRS summative assessments are generally consistent with those used in daily instruction.

This manual provides information on the accessibility features and accommodations that will be available during the CCRS summative assessments, based on careful review and inclusion of the following:

- Current<sup>1</sup> and field test research on effective practices for assessing diverse student groups and backgrounds (including needs of students with disabilities and ELs, culture, region, linguistic needs, dialect, and socio-economic background);
- Feedback from experts on students with disabilities and ELs; and
- Feedback from the content experts.

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1 Abedi, J. & Ewers, N. (2013). Accommodations for English Language Learners and Students with Disabilities: A Research-Based Decision Algorithm; Christensen, L., C. Johnston, and C. Rogers (2012). Common Core Accommodations Guidance. PARCC State Consortium. Refer to the reference list for the research foundation for this Manual.



## Structure of the *BIE Accessibility Features and Accommodations Manual*

The Manual consists of the following sections:

### Background and Introduction

**Section 1: Overview of the CCRS Summative Assessment, Claims, and Design:** This section summarizes the various CCRS summative assessments and provides the approaches used for universal design.

**Section 2: BIE Accessibility System and Accessibility Features for All Students Taking the CCRS Summative Assessments:** This section provides an overview of the BIE Accessibility System and defines the accessibility features that will be offered to all students taking the CCRS summative assessments.

**Section 3: Accommodations for Students with Disabilities and ELs:** This section outlines the accommodations for students with disabilities and ELs taking the CCRS summative assessments.

**Section 4: Decision-Making Process for Selecting, Using, and Evaluating Accessibility Features and Accommodations for Students with Disabilities, ELs, and ELs with Disabilities:** This section describes a five-step process for selecting, administering, and evaluating the use of accommodations for CCRS summative assessments.



## Section 1: Overview of the Bureau of Indian Education (BIE) College and Career Ready Standards (CCRS) Summative Assessment, Claims, and Design

### Overview of the CCRS Summative Assessment

The CCRS summative assessment system is designed to determine whether students are college- and career-ready or on track, assess the full range of the College and Career Ready (CCRS), measure the full range of student performance, and provide timely data throughout the academic year to teachers to help inform instruction, interventions, and professional development.

The CCRS summative assessments in English language arts/literacy (ELA/L) and mathematics will include a rich set of performance-based tasks that address a long-standing concern among educators about large-scale student assessments: that they have been unable to capture some of the most important skills that we strive to develop in students. The CCRS summative assessments were carefully crafted to accomplish this important goal. They enable teachers, schools, students, and parents to gain important insights into how well critical knowledge, skills, and abilities essential for young people to thrive in college and careers are being mastered.

The assessments at each grade level will assess the CCSS for that grade. However, in mathematics, a small portion of the assessments will assess securely-held<sup>2</sup> content from the previous grade. For more information regarding high school mathematics sequences, refer to the Mathematics Model Content Frameworks at <https://resources.newmeridiancorp.org/math-test-design/>.

In order to promote improvements in curriculum and instruction and support various forms of accountability, the CCRS summative assessments are designed to measure the full range of the CCSS and full continuum of student abilities, including the performance of high-performing and underperforming students. Performance level scores will be reported according to five levels. More information about the performance levels can be found by visiting <https://resources.newmeridiancorp.org/math-test-design/> and <https://resources.newmeridiancorp.org/ela-test-design/>.

### CCRS ELA/Literacy Assessments

The ELA/literacy summative assessment at each grade level will include three units. For each performance-based task, students will be asked to read or view one or more texts, answer comprehension and vocabulary questions, and write an essay that requires them to draw evidence from the text(s). Some units across the grade levels will also include one or two additional reading passages, literary or informational, with related comprehension and vocabulary questions. BIE will use both print and multimedia texts.

The claims listed below drive the design of the CCRS ELA/literacy summative assessments.

**Master Claim:** On track for college and career readiness; the degree to which a student is college- and career-ready (or, on track to being ready) in ELA/literacy. Under the master claim, there are two major claims: (1) reading complex text (i.e., students read and comprehend a range of sufficiently complex texts independently), and (2) writing (i.e., students write effectively when using and/or analyzing sources).

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<sup>2</sup> The ability to flexibly apply what one already knows to a non-routine or complex problem is an important aspect of readiness for college and careers.



Further delineation in what is being measured is indicated by the following six sub-claims:

1. Vocabulary, Interpretation, and Use (RL/RI.X.4 and L.X.4-6).
  - a. Students use context to determine the meaning of words and phrases.
2. Reading Literature (RL.X.1-10).
  - a. Students demonstrate comprehension and draw evidence from readings of grade-level, complex literary text.
3. Reading Informational Text (RI.X.1-10).
  - a. Students demonstrate comprehension and draw evidence from readings of grade-level, complex informational texts.
4. Written Expression (W.X.1-10).
  - a. Students produce clear and coherent writing in which the development, organization, and style are appropriate to the task, purpose, and audience.
5. Conventions and Knowledge of Language (L.X.1-3).
  - a. Students demonstrate knowledge of conventions and other important elements of language.
6. Research (data taken from Research Simulation Task).
  - a. Students build and present knowledge through integration, comparison, and synthesis of ideas.

Results of the ELA/literacy assessments will be reported in three categories:

1. ELA/literacy (major claim);
2. Reading and comprehending a range of sufficiently complex texts independently (reading) (sub-claim);
3. Writing effectively when using and/or analyzing sources (writing); and
4. ELA/literacy results will be based on a composite of students' reading and writing scores.

Students will receive both a scale score and performance level scores for ELA/literacy, and scale scores for the reading and writing categories.

### CCRS Mathematics Assessments

The summative mathematics assessment at each grade level will include both short- and extended-response questions focused on applying skills and concepts to solve problems that require demonstration of the mathematical practices with a focus on modeling, reasoning, and precision. The assessments will also contain short-answer questions focused on conceptual understanding, procedural skills, and application.

The claims listed below are the claims that drive the design of the CCRS mathematics assessments.

**Master Claim:** On track for college and career readiness; the degree to which a student is college- and career-ready (or, on track to being ready) in mathematics. The student solves grade-level/course-level problems in mathematics as set forth in the Standards for Mathematical Content with connections to the Standards for Mathematical Practice.

- **Sub Claim A:** Major Content with Connections to Practices. The student solves problems involving the Major Content for his grade/course with connections to the Standards for Mathematical Practice.
- **Sub Claim B:** Additional and Supporting Content with Connections to Practices. The student solves problems involving the Additional and Supporting Content for his grade/course with connections to the Standards for Mathematical Practice.



- **Sub Claim C:** Highlighted Practices MP.3 with Connections to Content: Expressing Mathematical reasoning. The student expresses grade-level/course-level appropriate mathematical reasoning by constructing viable arguments, critiquing the reasoning of others and/or attending to precision when making mathematical statements.
- **Sub Claim D:** Highlighted Practice MP.4 with Connections to Content: Modeling/Application. The student solves real-world problems with a degree of difficulty appropriate to the grade/course by applying knowledge and skills articulated in the standards for the current grade/course (or, for more complex problems, knowledge and skills articulated in the standards for previous grades/courses), engaging particularly in the Modeling practice, and
  - Where helpful making sense of problems and persevering to solve them (MP.1);
  - Reasoning abstractly and quantitatively (MP.2);
  - Using appropriate tools strategically (MP.5);
  - Looking for and making use of structure (MP.7); and/or
  - Looking for and expressing regularity in repeated reasoning (MP.8).

### Use of Technology to Deliver CCRS Summative Assessments

CCRS summative assessments use a computer-based assessment delivery platform that is easy for students to learn, intuitive to use, and provides an opportunity for results to be reported quickly and accurately. The CCRS summative assessment delivery platform is compliant with the Accessible Portable Item Profile (APIP) and Web Content Accessibility Guidelines (WCAG) 2.0. BIE has released technology guidelines to inform schools and districts as they make technology decisions to best meet the instructional and assessment needs of their students.

### Participation Guidelines for CCRS Summative Assessments

All students, including students with disabilities and ELs, are required to participate in the CCRS summative assessments and have their assessment results be part of BIE accountability systems, with narrow exceptions for ELs in their first year in a U.S. school (described in Section 4), and certain students with disabilities who have been identified by the Individualized Education Program team to take an alternate assessment. All other students will participate in the CCRS ELA/literacy and mathematics assessments. Federal laws governing student participation in BIE assessments include the Every Student Succeeds Act (ESSA), the Individuals with Disabilities Education Improvement Act of 2004 (IDEA), Section 504 of the Rehabilitation Act of 1973 (reauthorized in 2008), and the Elementary and Secondary Education Act (ESEA) of 1965, as amended. Specific provisions under these laws for students with disabilities and ELs are summarized in [Appendix J: Legal Background](#). Consult BIE to determine which alternate and English language proficiency assessments are offered.

All students can receive accessibility features on CCRS summative assessments.

Four distinct groups of students may receive accommodations on CCRS summative assessments:

1. **Students with disabilities who have an Individualized Education Program (IEP);**
2. **Students with a Section 504 plan** who have a physical or mental impairment that substantially limits one or more major life activities, have a record of such an impairment, or are regarded as having such an impairment, but who do not qualify for special education services;
3. **Students who are ELs;** and
4. **Students who are ELs with disabilities who have an IEP or 504 plan.** These students are eligible for both accommodations for students with disabilities and accommodations for ELs.



The following definitions will help users of the manual to understand and implement accommodations appropriately:

- **Student with a disability:** One who has been found eligible based on the definitions provided by the Individuals with Disabilities Education Improvement Act of 2004 (IDEA) or Section 504 of the Rehabilitation Act of 1973.
- **EL:** Assessment consortia are currently collaborating to develop a comprehensive definition. Traditionally, EL students have also been termed “limited English proficient” students and “English language learners.” Legal language is included in [Appendix J: Legal Background](#).
- **Former EL:** A student who is no longer classified as an EL, although progress will continue to be tracked for two years after they have achieved the standards of fluency as identified by the BIE English language proficiency assessment.

## General Testing Procedures

For information about coordinating or administering the CCRS summative assessments, including test security policies, administration procedures, and general administration tasks to complete before, during, and after testing, refer to the *Test Coordinator Manual* and the *Test Administrator Manuals*. Manuals are available now. Refer to the BIE portal.

## Universal Design

Universal design, when applied to assessment, is analogous to universal design in architecture where, for example, ramps and curb cuts designed for people in wheelchairs are also considered essential for people without disabilities, such as parents pushing strollers or people moving heavy furniture.<sup>3</sup> Universal design<sup>4</sup> describes a concept or philosophy that, when applied to assessments, provides all students with equal opportunities to demonstrate what they have learned. The purpose of universally designed assessments is to provide access for the greatest number of students during assessment, and to minimize the need for individualized design or accommodations. Universal design acknowledges differences among individuals, and that for accurate assessment to occur, a range of methods and materials are needed to measure learning. Universal design builds flexibility into assessments at the development stage, which enables flexible adjustments for a broad range of students. All students are intended to benefit from assessments that are universally designed, including students who are gifted and talented; ELs; students with physical, cognitive, and/or sensory disabilities; students with emotional or language/learning disabilities; students with more than one of these characteristics; students with unique linguistics needs; other underperforming students; and students without disabilities.

The principles of universal design for assessment are described by Thompson, et al.:

“Universally designed assessments are designed and developed from the beginning to allow participation of the widest possible range of students, and to result in valid inferences about performance for all students who participate in the assessment. Universally designed assessments are based on the premise that each child in school is a part of the population to be tested, and that testing results must not be affected by disability, gender,

3 Maryland State Board of Education. (2011). “A Route for Every Learner Report.”

4 The term “universal design” is defined in the Individuals with Disabilities Education Act (IDEA) and the Higher Education Opportunity Act (HEOA) as having the same definition as that found in the Assistive Technology Act of 1998: The term “universal design” means a concept or philosophy for designing and delivering products and services that are usable by people with the widest possible range of functional capabilities, which include products and services that are directly accessible (without requiring assistive technologies) and products and services that are interoperable with assistive technologies. (20 U.S.C. §1401(35)(IDEA); 20 U.S.C. §1003(23) (HEOA), both referencing the Assistive Technology Act of 1998, as amended, 29 §3002).

race, or English language ability. Universally designed assessments are not intended to eliminate individualization, but they may reduce the need for accommodations and various alternative assessments by eliminating access barriers associated with the tests themselves.<sup>5</sup>

Universal design emphasizes that in order to increase access, assessment designers cannot use a “one size fits all” approach, but must build in and make available opportunities for choice and create multiple alternatives and approaches for individuals to express their knowledge. Using these principles, item writers consider the full range of students in the assessment population and develop items, tasks, and prompts that measure the desired construct for the greatest number of students without the need for accommodation or adaptation. Guided by universal design, assessment developers design the assessment to meet the specific needs of as many students as possible and minimize the number of necessary accommodations, while acknowledging that the need for accommodations cannot be eliminated entirely.”

BIE has included the following universal design requirements for item development in the BIE Accessibility Guidelines:

- The item or task takes into consideration the diversity of the assessment population and the need to allow the full range of eligible students to respond to the item/stimulus.
- Constructs have been precisely defined and the item or task measures what is intended.
- Assessments contain accessible, non-biased items.
- Assessments are designed to be amenable to accommodations.
- Instructions and procedures are simple, clear, and intuitive.
- Assessments are designed for maximum readability, comprehensibility, and legibility.<sup>6</sup>
- The item or task material uses a clear and accessible text format.
- The item or task material uses clear and accessible visual elements (when essential to the item).
- The item or task material uses text appropriate for the intended grade level.
- Decisions will be made to ensure that items and tasks measure what they are intended to measure for EL students with different levels of English proficiency and/or first language proficiency.
- All accessibility features have been considered that may increase access while preserving the targeted construct.
- Multiple means of item presentation, expression, and student engagement have been considered with regard to items/tasks for both students with disabilities and ELs.
- Changes to the format of an item will be considered that do not alter the item/task meaning or difficulty.

In addition to the universal design requirements, BIE has provided item developers with comprehensive accessibility guidelines for writing items to ensure that all items/tasks are bias-free, sensitive to diverse cultures, stated clearly, of appropriate linguistic complexity, and consistently formatted.

5 Thompson, S. J., Johnstone, C. J., & Thurlow, M. L. (2007). Universal design applied to large scale assessments (Synthesis Report 44). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved [April 1, 2013], from the World Wide Web:

<https://nceo.info/Resources/publications/OnlinePubs/Synthesis44.html>.

6 Thompson, Johnstone, & Thurlow (2002). The National Center for Educational Outcomes (NCEO).



Principles of universal design, when applied to assessment, may provide educators with more valid inferences about the performance levels of students with disabilities and ELs, as well as the performance of their peers.

Universally designed general assessments cannot eliminate, but may reduce the need for accommodations and alternate assessments.

## Section 2: BIE Accessibility System and Accessibility Features for All Students Taking the CCRS Summative Assessments

### BIE Accessibility System

Through a combination of universal design principles and available accessibility features, BIE has designed an inclusive assessment system by considering accessibility from initial design through item development, field testing, and implementation of the assessments for all students, including students with disabilities, ELs, and ELs with disabilities. Although accommodations may still be needed for some students with disabilities and ELs to assist in demonstrating what they know and can do, the computer-embedded and externally provided accessibility features should minimize the need for accommodations during testing and ensure the inclusive, accessible, and fair testing of the diverse students being assessed.

### What are Accessibility Features?

On the CCRS summative computer-based assessments, accessibility features are tools or preferences that are either built into the assessment system or provided externally by Test Administrators. Accessibility features can be used by any student taking the CCRS summative assessments (i.e., students with and without disabilities, gifted students, ELs, and ELs with disabilities). Since the accessibility features are intended for all students, they are not classified as accommodations. Students should be exposed to these features prior to testing, and should have the opportunity to select and practice using them. Even though accessibility features are available to every student, that doesn't necessarily mean they are appropriate for every student. Consideration should be given to the supports a student consistently uses and finds helpful during instruction and when engaging in individual work. Practice tests that include accessibility features are available for teacher and student use throughout the year. To practice now, go to the BIE resource site.

### Accessibility Features Identified in Advance

A relatively small number of students will require additional accessibility features for their particular needs (e.g., changing the background or font color on-screen, listening to text-to-speech for the mathematics assessments). Recent research suggests that providing too many tools on-screen may lead to ineffective use of the tools provided and/or an impact on a student's test performance.<sup>7</sup> Furthermore, the on-off controls for these features might distract some students if they were shown on-screen, or interfere with other features or accommodations. As an example, if a student does not regularly receive text-to-speech or other audio representations on their math textbooks during instruction, text-to-speech for mathematics on the CCRS summative assessments may distract a student or slow their pacing, possibly interfering with their performance.<sup>8</sup> Based on the needs and preferences of the individual student, some accessibility features will be selected ahead of time by students in collaboration with educators. Students must practice using these features, either in a classroom or real world application or setting, and these features must also be generally consistent with those provided for classroom instruction and classroom assessments. Not only does the student need to practice using these features, but must also be using them during daily instruction to ensure it is not a feature just used for testing. Students can decide whether or not to use a pre-selected support, without any consequence to the student, school, or district.

<sup>7</sup> Higgins, J., Fedorchak, G., & Katz, M. (2012). Assignment of Accessibility Tools for Digitally Delivered Assessments: Key Findings. White Paper for Enhanced Assessment Grant # S368A100008.

<sup>8</sup> In fall/winter 2015 PARCC conducted an external validity study for text-to-speech. A final study report is expected in September 2017.



It is strongly recommended that decisions are made on an individual student basis based on the specific needs of the child as opposed to group decisions for a class or grade. Individualizing access needs on the assessment for each student provides increased opportunities to accurately demonstrate knowledge and skills, and will reduce the likelihood of giving students incorrect accessibility features or accommodations on the day of the test.

### **What is a Student Accommodation Layout File?**

The student accommodation layout file is a collection of student information regarding a student's testing condition, materials, and accessibility features and accommodations that are needed to take a CCRS summative assessment.

### **Why Collect Student Accessibility Features and Accommodations Information Prior to the Assessment?**

Prior to the assessment, the following student information should be collected so students receive the appropriate accessibility features and accommodations on testing day (it is the role of the school to ensure that the student's information is correct in Aspen:

1. Embedded accessibility features in the TestNav 8 online platform that need to be enabled for students during administration (e.g., color contrast [background/font color], text-to-speech for mathematics, etc.) (via the student accommodation layout file);
2. Embedded accommodations in the TestNav 8 online platform that need to be enabled for students during administration (e.g., ASL, closed captioning, text-to-speech for ELA/literacy, etc.) (via the student accommodation layout file);
3. Externally-provided accessibility features identified in advance, and accommodations for students with disabilities and ELs (via the student accommodation layout file); and
4. Hard copy accommodated forms that require advance shipping (braille edition, paper-based edition, large print edition, etc.) (via the student accommodation layout file).

The student accommodation layout file provides a record for School Test Coordinators and Test Administrators to ensure that students receive individualized accessibility features and accommodations during the assessments.

### **How is Information Collected for the Student Accommodation Layout File?**

The student accommodation layout file will be based on observations and stated preferences by the student or parent/guardian regarding a student's testing needs that have been determined to increase access during daily instruction and assessment. Observations based on a student's interaction with the online testing platform can be made during the practice tests. A student's testing needs should be reviewed at least annually, and revised as appropriate, to reflect current education-related needs or preferences.

### **Process for Collecting Student Accommodation Layout File Information**

- For *students with disabilities*, the IEP team or 504 Plan Coordinator will make decisions about which accessibility features and accommodations should be identified in the student accommodation layout file.
- For *ELs*, the educators responsible for selecting accommodations (or an EL team, if available) will identify which accessibility features and accommodations should be identified in the student's student accommodation layout file.
- For *ELs with disabilities*, the IEP team (which includes an adult familiar with the language needs of the student) or 504 Plan Coordinator will make decisions about which accessibility features and accommodations should be identified in the student accommodation layout file.
- For students *without* disabilities, and who are not ELs, decisions about which accessibility features identified in advance (if any and if allowed) will be included in the student's accommodation layout file will be made based on the student's education-related needs and preferences by an informal team, which may include the:

- Student (as appropriate);
- Parent/guardian; and
- Student’s primary educator in the subject of the assessment.

### Accessibility Features for All Students<sup>9</sup>

Table 1: Accessibility Features for All Students lists the accessibility features that BIE will make available to ALL STUDENTS. These features are available through the online platform, or may be externally-delivered by a Test Administrator or other adult on the CCRS summative assessments. Students should determine whether they wish to use the feature on an item-by-item basis, based on the features they use during instruction and in daily life.

Where applicable, the chart below will include the test administration activities for before, during, and after testing necessary for successful implementation of the BIE accessibility features. There are a few accessibility features that must be pre-selected for the student in the student accommodation layout file in order to activate the feature on the platform. When needed, this information is included in the “before testing” guidance and the corresponding column in the student accommodation layout file file is also provided.

**Table 1: Accessibility Features for all Students**

Table includes Accessibility Features for All Students within Test.

| Accessibility Feature  | Administration Guidelines   |
|--|---|
| <b>Audio Amplification</b>                                     | <p><b>Before Testing:</b> The student can test the audio using the “Test Audio” link in TestNav.</p> <p><b>During Testing:</b> The student can use the volume control in TestNav to raise or lower the volume.</p>  |
| <b>Bookmark</b>  | <p><b>During Testing:</b> The student selects the “Bookmark” icon in the toolbar. The student electronically “bookmarks” items to review later. To remove the bookmark, select the “Bookmark” icon again.</p>   |
| <b>Blank Scratch Paper</b><br>(provided by Test Administrator) | <p><b>Before Testing:</b> Test Administrators must supply at least one page of blank scratch paper (i.e., either unlined, lined, or graph) per student, per unit. If graph paper is used during mathematics instruction, it is recommended that schools provide graph paper as scratch paper for mathematics units. Students with visual impairments may also use braille paper, raised line paper, bold line paper, raised line graph paper, bold line graph paper, abacus, or Math Window.</p> <p><b>During Testing:</b> The student uses blank scratch paper (i.e., lined, unlined, or graph) to take notes and/or work through items during testing. Additional pages may be provided as needed. Students are not required to write their names on scratch paper.</p> <p><b>After Testing:</b> Test Administrators are responsible for collecting ALL scratch paper after testing is completed to be securely destroyed. Scratch paper must be securely shredded if it has been used. Schools may reuse unused scratch paper only if paper is completely blank.</p> |

<sup>9</sup> A foundational piece of research for BIE policy decisions on accessibility features: Abedi, J. & Ewers, N. (2013). Accommodations for English Language Learners and Students with Disabilities. A Research-Based Decision Algorithm.





| Accessibility Feature   | Administration Guidelines   |
|---|---|
| <b>Eliminate Answer Choices</b>   | <b>During Testing:</b> The student selects the “Answer Eliminator” icon in the toolbar. On multiple choice options, a student selects an answer and a red X appears and “crosses out” the answer choice. The student may disable this feature by selecting “Answer Eliminator” in the toolbar again.  |
| <b>General Administration Directions Clarified</b><br>(by Test Administrator)                         | <b>During Testing:</b> The Test Administrator clarifies general administration directions only. No passages or test items may be clarified.   |
| <b>General Administration Directions Read Aloud and Repeated as Needed</b><br>(by Test Administrator) | <b>During Testing:</b> The Test Administrator reads aloud the general administration directions only. A student may raise his or her hand and request the directions be repeated.   |
| <b>Highlight Tool</b>   | <b>During Testing:</b> The student electronically highlights text as needed to recall and/or emphasize. The student has the option to remove highlighting over text. The highlighter color option will change depending on the color contrast option selected.  |
| <b>Headphones or Noise Buffers</b>  | <p><b>Before Testing:</b> Test Administrator prepares classroom with headphones for participating students.</p> <p><b>During Testing:</b> The student uses headphones or noise buffers to minimize distraction, access embedded text-to-speech, or filter external noise during testing (in addition to when headphones are required for the ELA/literacy assessment). If headphones are used only as noise buffers, do not plug them into the testing device.</p>  |
| <b>Line Reader Mask Tool</b>  | <p><b>During Testing:</b> The student selects "Show Line Reader Mask" in the user drop-down menu. The student uses an on-screen tool to assist in reading by raising and lowering the tool for each line of text on-screen. The Line Reader can be resized and the size of the reader window can be adjusted. The student may disable this feature by selecting, "Hide Line Reader Mask" in the user drop-down menu.</p> <p>The Line Reader includes additional functionality to close the Line Reader window and allow the feature to work as a general masking tool. The mask box can be resized by the student to cover content on the screen as necessary. In addition, the Line Reader window is moveable anywhere within the boundaries of the Line Reader tool.</p> <p>The Line Reader Mask box color will change depending on the color contrast option selected.</p> |



| Accessibility Feature   | Administration Guidelines  |
|---|--|
| <b>Magnification/<br/>Enlargement Device</b>                    | <p><b>During Testing:</b></p> <ul style="list-style-type: none"> <li>• <u>Browser/Device Magnification</u>: The student can use keyboard shortcuts (e.g., Ctrl+) for PCs or pinch/zoom for tablets to magnify what's displayed on the screen (while preserving clarity, contrast, and color).</li> <li>• <u>Magnifier</u>: The student can also select "Enable Magnifier" in the user drop-down menu. The student enlarges text and graphics on-screen via the plus and minus buttons in the drop-down menu (500%). The student may disable this feature by selecting, "Disable Magnifier" in the user drop-down menu.</li> </ul> <p><b>Note:</b> Magnifying beyond 300% may affect heading formatting and may cause text-wrapping, and therefore it is not recommended.</p> |
| <b>Notepad</b>  | <p><b>During Testing:</b> The student selects the "Notepad" icon in the toolbar. The student writes notes using embedded Notepad tool on the ELA/literacy assessments. The student may disable this feature by selecting "Notepad" in the toolbar again.</p> <p><b>Note:</b> The notepad tool cannot be resized. In addition, the tool does not save across items and only saves student entered text on the item for which it was entered.</p>  |
| <b>Pop-up Glossary</b>  | <p><b>During Testing:</b> The student is able to view definitions of pre-selected, underlined words by hovering over them. The definition appears in a pop-up text box.</p>  |
| <b>Redirect Student to the Test<br/>(by Test Administrator)</b> | <p><b>During Testing:</b> The Test Administrator redirects the student's attention to the test without coaching or assisting the student in any way. There is no limit to the number of times a Test Administrator can redirect a student back to the test. Examples: Providing reminders to stay on task and focused during the assessments; Providing a visual cue to the student to remain on task.</p>   |
| <b>Spell Check or External Spell<br/>Check Device</b>           | <p><b>During Testing:</b> The student uses the embedded spell check icon in TestNav to review their written text for errors. If preferred, the student uses an external spell check device. Device may not have embedded grammar check, connect to the internet, or save information.</p>  |
| <b>Writing Tools</b>  | <p><b>During Testing:</b> The student uses embedded writing process tools for written responses, including copy/paste, bold, italicize, underline, insert bullets, numbered list, undo, redo, and spell check. Writing tools are available in the constructed response items on the ELA/literacy assessment.</p> <p><b>Note:</b> The copy/paste functionality does not include the ability to copy test content. Only text contained within a student response can be copy/pasted.</p>   |

### Administrative Considerations for All Students

Detailed guidelines on the administration of the CCRS summative assessments will be included in the *Test Administrator Manuals* and the *Test Coordinator Manual*.

Although students are generally tested in their regular classroom and follow the standard test administration schedule for the grade and content area being assessed, the principal or test coordinator



has the authority to schedule testing sessions in spaces other than regular classrooms, and at different scheduled times, as long as all requirements for testing conditions and test security are met as set forth in the *Test Administrator Manuals and Test Coordinator Manual*. Decisions may be considered, for example, that benefit students who are easily distracted in large group settings by testing them in a small group or individual setting. In general, changes to the timing, setting, or conditions of testing are left to the discretion of the principal or Test Coordinator.

In accordance with principles of universal design for assessment, BIE is providing the following administrative guidance regarding the timing and scheduling of assessments, and setting/locations for testing. These administrative considerations are available to all students. Administrative considerations must be identified for the student in the student accommodation layout file.

The principal or test coordinator may determine that ANY student can receive one or more of the following test administration considerations, regardless of the student's status as a student with a disability or EL.

**Table 2: Administrative Considerations for All Students**

| Administrative Consideration                           | Description  |
|--|--|
| <b>Small Group Testing</b>                             | Student is tested in a separate location as an individual or with a small group of students with matching accessibility features, accommodations, or testing needs as appropriate. Check BIE policy on the maximum number of students allowed in a small testing group.  |
| <b>Time of Day</b>                                     | Student is tested during a specific time of day based on their individual needs (e.g., ELA/literacy in the morning; no testing after lunch).   |
| <b>Separate or Alternate Location</b>                  | Student is tested in a specifically assigned location.   |
| <b>Specified Area or Setting</b>                       | Student is tested in a specialized area or setting (e.g., front of the classroom, seat near the door, library, etc.).  |
| <b>Adaptive and Specialized Equipment or Furniture</b> | Student is provided specialized equipment or furniture needed for a successful testing environment (e.g., low lighting; adaptive seat).  |
| <b>Frequent Breaks</b>                                 | Guidance on logistics for administering the CCRS summative assessments with frequent breaks: <ul style="list-style-type: none"><li>• <i>Medical Breaks</i>: Student takes a break due to pre-existing or sudden onset of a temporary or long-term medical condition. Student's testing time stops.</li><li>• <i>Individual Bathroom Breaks</i>: Student requests a bathroom break within their overall allotted testing time. Student's testing time does not stop.</li><li>• <i>In-Chair Stretch Break</i>: Student pauses and stretches. Student's testing time does not stop.</li><li>• Other Frequent Breaks, according to BIE policy.</li></ul> |
| <b>Student Reads Assessment Aloud to Self</b>          | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"><li>• Student's accommodations will list "Student Read Aloud" in Pearson Access.</li></ul> <p><b>During Testing:</b> The student reads aloud the assessment to him or herself. Students may use an external device such as a whisper phone, read to themselves in a normal voice, or use other strategies from classroom instruction. The student must be tested in a separate setting.</p>  |

## Section 3: Accommodations for Students with Disabilities and English Learners

### Accommodations for Students with Disabilities and ELs

It is important to ensure that performance in the classroom and on assessments is influenced minimally, if at all, by a student's disability or linguistic/cultural characteristics that is unrelated to the content being assessed. For CCRS summative assessments, accommodations are considered to be adjustments to the testing conditions, test format, or test administration that provide equitable access during assessments for students with disabilities and students who are ELs. In general, the administration of the assessment should not be the first occasion in which an accommodation is introduced to the student. In addition, Test Administrators administering the assessment or providing accommodations should be an education professional who is familiar with the student, and who is typically responsible for providing the accommodation in the classroom. To the extent possible, accommodations should:

- Provide equitable access during instruction and assessments;
- Mitigate the effects of a student's disability;
- Not reduce learning or performance expectations;
- Not change the construct being assessed; and
- Not compromise the integrity or validity of the assessment.

Accommodations are intended to reduce and/or eliminate the effects of a student's disability and/or English language proficiency level; however, **accommodations should never reduce learning expectations by reducing the scope, complexity, or rigor of an assessment.** Moreover, accommodations provided to a student on the CCRS summative assessments must be generally consistent with those provided for classroom instruction and classroom assessments. There are some accommodations that may be used for instruction or for formative assessments but are not allowed for the CCRS summative assessment because they impact the validity of the assessment results – for example, allowing a student to use a thesaurus or access the internet during a CCRS summative assessment. There may be consequences (e.g., excluding a student's test score) for the use of non-allowable accommodations during CCRS summative assessments. It is important for educators to become familiar with policies regarding accommodations used for the CCRS summative assessments.

The guidelines provided in this manual are intended to ensure that valid and reliable scores are produced on the CCRS summative assessments, and that an unfair advantage is not given to students who receive accommodations. Outside of the guidance provided in this manual, changes to an accommodation or the conditions in which it is provided may change what the assessment is measuring, and will likely call into question the reliability and validity of the results regarding what a student knows and is able to do as measured by the assessment.

To the extent possible, accommodations should adhere to the following principles:

- Accommodations enable students to participate more fully and fairly in instruction and assessments and to demonstrate their knowledge and skills.
- Accommodations should be based upon an individual student's needs rather than on the category of a student's disability, level of English language proficiency alone, level of or access to grade-level instruction, amount of time spent in a general classroom, current program setting, or availability of staff.
- Accommodations should be based on a documented need in the instruction/assessment setting and should not be provided for the purpose of giving the student an enhancement that could be viewed as an unfair advantage.
- Accommodations for students with disabilities should be described and documented in the student's appropriate plan (i.e., either the IEP or 504 plan).



- Accommodations for ELs should be described and documented.
- Students who are ELs with disabilities qualify to receive accommodations for both students with disabilities and ELs.
- Accommodations should become part of the student's program of daily instruction as soon as possible after completion and approval of the appropriate plan.
- Accommodations should not be introduced for the first time during the testing of a student.
- Accommodations should be monitored for effectiveness.
- Accommodations used for instruction should also be used, if allowable, on local district assessments and BIE assessments.

In the event that a student was provided a test accommodation that was NOT LISTED in his or her IEP, 504 plan, or was not documented for an EL, or if a student was NOT PROVIDED a test accommodation listed in his or her IEP/504 plan/documentation for an EL, the school must follow BIE's policies and procedures for notifying BIE.

### Scoring and Reporting

Summative assessment scores for students who receive any of the accommodations listed in this manual will be aggregated with the scores of other students and those of relevant groups, and can be included for accountability purposes. BIE may choose to monitor the number and percentage of students using newer assessment accommodations such as text-to-speech, external speech-to-text device, etc. at the school, district, and/or BIE level.

If needed, refer to BIE policy and guidance for further information on coding BIE accommodations.

### Unique Accommodations

BIE has developed a comprehensive list of accessibility features and accommodations that are designed to increase access to CCRS summative assessments and will result in valid, comparable assessment scores. However, students with disabilities or ELs may require additional accommodations that are not found in this manual. BIE will individually review requests for unique accommodations and will provide approval after determining whether the accommodation would result in a valid score for the student. Refer to [Appendix E: Unique Accommodation Request Form](#).

### Emergency Accommodations

An emergency accommodation may be appropriate for a student who incurs a temporary disabling condition that interferes with test performance shortly before or during the CCRS summative assessment window. A student who does not have an IEP or 504 plan may require an accommodation as a result of a recently-occurring accident or illness. Cases include students who have a recently-fractured limb (e.g., arm, wrist, shoulder); whose only pair of eyeglasses has broken; or a student returning after a serious or prolonged illness or injury. An emergency accommodation should be given only if the accommodation will result in a valid score for the student (i.e., does not change the construct being measured by the test[s]). If the principal (or designee) determines that a student requires an emergency accommodation on the CCRS summative assessment, an Emergency Accommodation Form must be completed and maintained in the student's assessment file. If required by BIE, consult with the district office for approval. If appropriate, the Emergency Accommodation Form may also be submitted to the District Assessment Coordinator to be retained in the student's central office file. Requests for emergency accommodations will be approved after it is determined that use of the accommodation would result in a valid score for the student. **The parent must be notified that an emergency accommodation was provided.** Refer to [Appendix F: Use of an Emergency Accommodation on a CCRS Summative Assessment](#).

## Student Refusal Form

If a student refuses an accommodation listed in his or her IEP, 504 plan, or if required by the BIE, an EL plan, the school should document in writing that the student refused the accommodation, and the accommodation must be offered and remain available to the student during testing. This form must be completed and placed in the student's file and a copy must be sent to the parent on the day of refusal. Principals (or designee) should work with Test Administrators to determine who, if any others, should be informed when a student refuses an accommodation documented in an IEP, 504 plan, or if required by the BIE, an EL plan. Refer to [Appendix G: Student Accommodation Refusal Form](#).

## Ongoing Research and Data Collection on Use of Accommodations

BIE will continue to research the effectiveness, validity, differential impact, relevance, and feasibility of the accommodations, and revise as needed.

## Accommodations for Students with Disabilities<sup>10</sup>

Table 3 provides a list of PRESENTATION ACCOMMODATIONS for students with disabilities that describe changes in the assessment format and method in which the assessment is administered. The table also outlines the before, during, and after testing activities necessary to successfully administer these accommodations. Accommodations for students with disabilities must be pre-selected for the student in the student accommodation layout file. This information is included in the "before testing" guidance and the corresponding column in the student accommodation layout file is also provided.

**Table 3: Presentation Accommodations for Students with Disabilities** 

| Accommodation  | Administration Guidelines  |
|----------------|--|
| Answer Masking | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodations will list "Answer Masking" in Pearson Access.</li> </ul> <p><b>During Testing:</b> When answer masking is enabled, multiple choice and multiple select answers will be masked. The student will uncover answer options when ready. The student may disable this feature by selecting, "Disable Answer Masking" in the user drop-down menu.</p> |

<sup>10</sup> A foundational piece of research for PARCC policy decisions on accessibility features: Abedi, J. & Ewers, N. (2013). Accommodations for English Language Learners and Students with Disabilities: A Research-Based Decision Algorithm.; Christensen, L., C. Johnston, and C. Rogers (2012). Common Core Accommodations Guidance. PARCC State Consortium.



| Accommodation   | Administration Guidelines  |
|---|--|
| <b>Color Contrast</b><br><b>(Background/Font Color)</b>   | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodations will list "Color Contrast" in Pearson Access.</li> </ul> <p><b>During Testing:</b> Alternate on-screen background and/or font color is enabled based on need or preference. The student may change the color contrast option or disable this feature by selecting, "Change the background and foreground color" in the user drop-down menu.</p> <div data-bbox="820 464 1157 886"> <p><b>Contrast Settings</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/>  Black on White (Default)</li> <li><input type="radio"/>  Black on Cream</li> <li><input type="radio"/>  Black on Light Blue</li> <li><input type="radio"/>  Black on Light Magenta</li> <li><input type="radio"/>  White on Black</li> <li><input type="radio"/>  Yellow on Blue</li> <li><input type="radio"/>  Gray on Green</li> </ul> </div>   |
| <b>Assistive Technology</b><br><i>(Non-Screen Reader)</i> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodations will list "Assistive Technology Non Screen Readers" in Pearson Access.</li> <li><u>Testing:</u> Assistive technology should be tested during an Infrastructure Trial to determine whether the assistive technology will interact with TestNav and can be used successfully during computer-based testing. Note that CCRS summative assessments are designed to be Web Content Accessibility Guidelines (WCAG) compliant. For information on how to test assistive technology devices and software for use on the CCRS summative assessments with the TestNav 8 platform via an Infrastructure Trial, refer to the Assistive Technology Guidelines available here: Refer to the BIE portal.</li> </ul> <p><b>During Testing:</b> Students may use a range of assistive technologies on the CCRS summative assessments, including devices that are compatible with the BIE online testing platform, and those that are used externally on a separate computer. Refer to the list of allowable Assistive Technology available here: Refer to the BIE portal.</p> <p><b>After Testing:</b> Test Administrators are responsible for collecting all nonscorable student work created from assistive technology devices. Content must be cleared off all devices. Paper nonscorable student work must be securely shredded.</p> |

| Accommodation   | Administration Guidelines  |
|---|--|
| <p><b>Screen Reader Version for Mathematics</b><br/> <i>(for a student who is blind or visually impaired)</i></p> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student’s accommodations will list “Assistive Technology Screen Readers” in Pearson Access.</li> <li>• <u>Materials and Equipment:</u> For optimal screen reader usage, BIE recommends using JAWS 17 (note that CCRS summative assessments are designed to be compliant with the Web Content Accessibility Guidelines [WCAG]). Tactile graphics booklets are required for test administration. Counts for materials are determined prior to the deadline for paper material distribution. Any registrations that require materials submitted after the deadline for paper must be ordered via Additional Orders.</li> <li>• <u>Screen Reader Testing:</u> Screen reader software SHOULD be tested during an Infrastructure Trial. These activities will determine whether the assistive technology will interact with TestNav and can be used successfully during computer-based testing. Reference the Assistive Technology Guidelines available at the following link: Refer to the BIE portal.</li> <li>• <u>Test Administrator Training:</u> Test Administrators should review: <ul style="list-style-type: none"> <li>○ BIE Assistive Technology Guidelines available at Refer to the BIE portal.</li> <li>○ <a href="#">Appendix L: CCRS Summative Assessments for Students with Visual Impairments, Including Blindness.</a></li> </ul> </li> </ul> <p><b>During Testing:</b> A student who is blind or has a visual impairment takes the assessments using his or her preferred screen reader software, pending an Infrastructure Trial. A student who uses a screen reader will also need a tactile graphics booklet, which contains only the graphics portion of test questions and visual descriptions of pictures and multimedia, where applicable. If the student is not using headphones, the student must be tested in a separate setting.</p> <p>Due to technical limitations, the following tools are not available for use with the Screen Reader Version: pointer, notepad, answer eliminator, magnifier, line reader, answer masking, color contrast (background/font color), ruler, protractor, and calculator.</p> <p><b>After Testing:</b> Tactile graphics booklets contain secure item content and should be handled as secure test materials. Test Administrators should return tactile graphics to Test Coordinators. Test Coordinators must return tactile graphics with the nonscorable materials.</p> |





| Accommodation  | Administration Guidelines  |
|--|--|
| <b>Refreshable Braille Display with Screen Reader Version for ELA/Literacy</b> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student’s accommodations will list “Refreshable Braille Display” in Pearson Access. Once a student is placed into a test session, the student will be assigned a Screen Reader form.</li> <li>• <u>Materials and Equipment</u>: For screen reader usage, BIE recommends using JAWS 17. Refreshable braille displays and tactile graphics booklets are required for administration.</li> <li>• <u>Screen Reader Testing</u>: Screen reader software SHOULD be tested prior to testing. These activities will determine whether the assistive technology will interact with TestNav and can be used successfully during computer-based testing. For optional screen reader usage, BIE recommends using JAWS 2021.</li> <li>• <u>Test Administrator Training</u>: Test Administrators should review: <ul style="list-style-type: none"> <li>○ <a href="#">Appendix L: CCRS Summative Assessments for Students with Visual Impairments, Including Blindness</a>.</li> <li>○ BIE Assistive Technology Guidelines available at refer to the BIE portal.</li> </ul> </li> </ul> <p><b>During Testing:</b> A student who is blind or has a visual impairment takes the ELA/literacy assessments using his or her preferred screen reader software, pending an Infrastructure Trial, with a refreshable braille display. A student who uses a screen reader with refreshable braille will also need a tactile graphics booklet, which contains only the graphics portion of test questions and visual descriptions of pictures and multimedia where applicable. If the student is not using headphones, the student must be tested in a separate setting.</p> <p><b>After Testing:</b> Tactile graphics booklets contain secure item content and should be handled as secure test materials. Test Administrators should return tactile graphics to Test Coordinators. Test Coordinators must return tactile graphics with the nonscorable materials.</p> |



| Accommodation                           | Administration Guidelines  |
|---|--|
| Hard Copy Braille Edition <sup>11</sup> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodations will list "Electronic Braille Response" in Pearson Access.</li> <li>• <b>Materials:</b> Braille Kits are required for administration. Braille Kits include Test Administrator Braille Scripts, one copy of the student's Hard Copy Braille Assessment, standard test booklet or answer document for transcription, and supplementary math materials (braille ruler, braille protractor) where appropriate.</li> <li>• <b>Test Administrator Training:</b> Test Administrators of students with visual impairments must review: <ul style="list-style-type: none"> <li>○ Braille Kits, which will be provided to schools at least two full school days prior to testing<sup>12</sup> in a SECURE ENVIRONMENT for the Test Administrator to verify that the braille code is accurate on the test booklet cover and review the braille test administration scripts, including information specific to administering paper-based braille. Additional guidance located in BIE policy regarding the number of days Test Administrators may access materials prior to testing (refer to <b>Appendix C</b> of the <i>Test Coordinator Manual</i>). Braille notes are inserted behind the cover of the first volume of the Braille test. <b>Important:</b> Reading, viewing, copying, or reproducing passages or test items is prohibited.</li> <li>○ <a href="#">Appendix L: CCRS Summative Assessments for Students with Visual Impairments, Including Blindness</a>.</li> <li>○ If needed by the student, braille test booklets or answer documents may be disassembled for testing (but must be reassembled for return). It is critical that Test Administrators count the number of pages in the test booklet or answer document prior to disassembling the test booklets or answer documents to help ensure that all pages are returned.</li> </ul> </li> </ul> |

<sup>11</sup> Distribution quantities for any paper-based accommodations and accessibility feature are derived from the student registration process. Any materials required for paper-based accessibility features and accommodations for students registered after the deadline for paper registration must be ordered via Additional Orders.

<sup>12</sup> Refer to BIE policy on the official number of days staff can review secure test materials.



| Accommodation    | Administration Guidelines   |
|------------------|---|
|                  | <p><b>During Testing:</b> A student who is blind or has a visual impairment and is unable to take the computer-based test with a refreshable braille display may take the ELA/literacy and mathematics assessments using the hard-copy contracted braille edition. Tactile graphics are already embedded in the hard copy braille edition. For students using braille forms, the Test Administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed verbatim by a Test Administrator in a standard student test booklet or answer document, which is included in the Braille Test Kit. Only transcribed responses will be scored.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> <li>• Test Administrators are responsible for collecting all nonscorable student work created from assistive technology devices. Content must be deleted off all devices. Nonscorable student work must be securely shredded.</li> <li>• If the braille test booklet or answer document was disassembled, it must be reassembled for return. To reassemble test booklets or answer documents, the Test Administrator may staple or binder clip all pages for return. Failure to return all pages will be considered a breach of security.</li> </ul> |
| Tactile Graphics | <p><b>Before Testing:</b> Refer to Table 3b “Screen Reader Version” for details.</p> <p><b>During Testing:</b> A student who is blind or has a visual impairment who uses a screen reader or refreshable braille will also need a tactile graphics booklet, consisting only of the graphics portion of test questions, and visual descriptions of pictures and multimedia, where applicable. Tactile graphics will also be embedded in the hard copy braille edition assessments, when needed.</p> <p><b>After Testing:</b> Tactile graphics booklets contain secure item content and should be handled as secure test materials. Test Administrators should return tactile graphics to Test Coordinators. Test Coordinators must return tactile graphics with the nonscorable materials.</p>   |

| Accommodation       | Administration Guidelines  |
|---------------------|--|
| Large Print Edition | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodations will list "Large Print" in Pearson Access.</li> <li>• <b>Materials:</b> Large Print Test Kit includes a large print assessment booklet, standard test booklet or answer document for transcription, Test Administrator large print scripts, and supplementary large print mathematics materials (large print ruler &amp; protractor), when appropriate.</li> <li>• <b>Test Administrator Training:</b> Test Administrators of students with visual impairments must review:             <ul style="list-style-type: none"> <li>○ <a href="#">Appendix L: CCRS Summative Assessments for Students with Visual Impairment, Including Blindness.</a></li> <li>○ <a href="#">Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based CCRS Summative Assessments.</a></li> </ul> </li> </ul> <p><b>During Testing:</b> A large print paper-based form of each assessment is available for a student with a visual impairment who is unable to take a computer-based assessment. The font size for the BIE large print edition will be 18 point on paper sized 14" x 18". Students will not record their answers in standard print test booklets or answer documents. Instead, students will circle their answers in a large print test booklet. For constructed response items, students will write their answers on the lines provided in their large print test booklets. In mathematics, students will need to write their answers in boxes at the top of the answer grids, but they do not need to bubble in their answers. Test Administrators should refer to the TAM Scripts for instances where they should demonstrate an activity or display information. Demonstrations should be conducted where they are visible for each student (e.g., on the board, near the student).</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed verbatim by a Test Administrator in a standard student test booklet or answer document, which is included in the Large Print Test Kit. Only transcribed responses will be scored. At least two persons must be present during transcription of student responses (one transcriber and one observer confirming accuracy). It is recommended that one of the individuals be an LEA or School Test Coordinator.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses.</a></li> </ul> |



| Accommodation   | Administration Guidelines   |
|---|---|
| <b>Paper-Based Edition</b><br><i>(Alternate Representation – Paper Test)</i>        | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student’s accommodations will list “Alternate Representation Paper Test” in Pearson Access.</li> <li>• <b>Materials:</b> Paper-Based Edition of the assessment</li> <li>• <b>Test Administrator Training:</b> Test Administrators must review the following appendix for accessibility features and accommodations in a paper-based environment: <ul style="list-style-type: none"> <li>○ <a href="#">Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based CCRS Summative Assessments.</a></li> </ul> </li> </ul> <p><b>During Testing:</b> For schools administering the computer-based assessments, a paper-based assessment is available for students who (1) are unable to take a computer-based assessment due to a disability; (2) recently entered the school and has very little or no prior experience or familiarity with technology; (3) attend a school providing paper-based assessments as the primary mode; or (4) are unable to access an online assessment due to religion or beliefs.</p>       |
| <b>Closed Captioning of Multimedia on the ELA/Literacy Assessments<sup>13</sup></b> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student’s accommodations will list “Closed Captions” in Pearson Access.</li> </ul> <p><b>During Testing:</b> A student who is deaf or hearing impaired views captioned text embedded in multimedia (i.e., video) segments of the ELA/literacy summative assessments. Captioning can be turned on/off within the video player as needed. Transcripts will also be available in an additional tab within the test form. See the Closed Captioning tutorial available here:</p> <p>Refer to the BIE portal.</p>   |
| <b>Human Reader/ Human Signer for Mathematics</b>                                   | <ul style="list-style-type: none"> <li>• Student’s accommodations will list “Human Reader” or “Human Signer” in Pearson Access</li> <li>• <b>Materials:</b> Read Aloud Kits, which include one copy of the student test booklet and answer document and an extra test booklet for Test Administrators (Human Reader/Signer). Providing this accommodation must review: <ul style="list-style-type: none"> <li>○ Read Aloud Kits at least two school days prior to paper-based testing, with kits provided to schools for this purpose. Review of Read Aloud Kits must occur in a SECURE ENVIRONMENT.</li> <li>○ <a href="#">Appendix K: Human Signer Guidelines</a> (signers only).</li> <li>○ <a href="#">Appendix L: CCRS Summative Assessments for Students with Visual Impairments, Including Blindness.</a></li> <li>○ Refer to the Text-to-Speech Tutorial on the BIE portal for training on functionality.</li> </ul> </li> <li>• <b>Note:</b> Check BIE policy in <b>Appendix C</b> of the <i>Test Coordinator Manual</i> to see if there are additional requirements for the use of these accommodations.</li> </ul> |

<sup>13</sup> The CCRS call for comparisons between different media. An example of this is RI9-10.7: Analyze various accounts of a subject told in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized in each account. Adding closed captioning to any students other than those who are deaf or hard of hearing affects the ability to effectively assess this type of standard, and therefore it is listed as an accommodation as opposed to a support for all.

| Accommodation | Administration Guidelines   |
|---------------|---|
|               | <p>In making decisions on whether to provide a student with this accommodation, IEP teams and Section 504 Plan Coordinators should consider whether the student has:</p> <ul style="list-style-type: none"> <li>• Blindness or a visual impairment and has not learned (or is unable to use) braille;</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• A disability that <i>severely limits or prevents</i> him/her from accessing printed text, even after varied and repeated attempts to teach the student to do so (e.g., student is unable to decode printed text);</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Deafness or a hearing impairment and is severely limited or prevented from decoding text due to a documented history of early and prolonged language deprivation.</li> </ul> <p>Before listing the accommodation in the student's IEP or Section 504 plan, teams/coordinators should consider whether:</p> <ul style="list-style-type: none"> <li>• The student has access to printed text during routine instruction through a reader, other spoken-text audio format, or signer;</li> <li>• The student's inability to decode printed text or read braille is documented in evaluation summaries from locally-administered diagnostic assessments; and the student receives ongoing, intensive instruction and/or interventions in the foundational reading skills to continue to attain the important college and career-ready skill of independent reading.</li> </ul> <p>Decisions about who receives this accommodation will be made by IEP teams and Section 504 Plan Coordinators. For a student who receives one of these accommodations, no claims should be inferred regarding the student's ability to demonstrate foundational reading skills (i.e., decoding). BIE will collect data on the frequency of their use for the purpose of carefully monitoring and determining appropriate decision-making.</p> |



| Accommodation   | Administration Guidelines  |
|---|--|
| <b>American Sign Language (ASL) Video for the Mathematics Assessments</b> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student’s accommodations will list “American Sign Language” in Pearson Access. Once a student is placed into a test session, the student will be assigned an ASL Video form. If a student does not use ASL, a human interpreter and separate test setting will be required.</li> <li><u>Student Training</u>: It is highly recommended that students review the American Sign Language Math Dictionary prior to testing. This video is available on the BIE portal.</li> <li><u>Test Administrator Training</u>: Human signers should refer to the online BIE American Sign Language Math Video Glossary for guidance on how to deliver mathematics symbols and terms. This video is available on the BIE portal.</li> </ul> <p><b>During Testing:</b> The student views an embedded video of a human interpreter for the mathematics assessments. The student may pause and resume the video but cannot adjust the pace.</p> |
| <b>Human Signer for Test Directions</b><br>(No ASL video option)          | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student’s accommodations will list “Human Signer Test Directions” in Pearson Access.</li> <li><u>Test Administrator Training</u>: Human Signers must review: <ul style="list-style-type: none"> <li>Test Administrator Scripts included in the <i>Test Administrator Manuals</i>.</li> <li><a href="#">Appendix K: Human Signer Guidelines</a> (signers only).</li> </ul> </li> </ul> <p><b>During Testing:</b> A human signer will sign the test directions to a student. The student may either be tested in a small group or a separate setting based on the student’s experiences during classroom assessments.</p>   |

Table 4 provides a list of RESPONSE ACCOMMODATIONS for students with disabilities that allow a student to respond to test items using different formats. The table outlines the activities needed before, during, and after testing to administer the response accommodations appropriately. Accommodations for students with disabilities must be pre-selected for the student in the student accommodation layout file.

**Table 4: Response Accommodations for Students with Disabilities**



| Accommodation   | Administration Guidelines  |
|---|--|
| <b>Assistive Technology</b><br><i>(Non-Screen Reader)</i> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodations will list "Assistive Technology Non Screen Readers" in Pearson Access.</li> <li><u>Testing:</u> Assistive technology should be tested during an Infrastructure Trial to determine whether the assistive technology will interact with TestNav and can be used successfully during computer-based testing. For information on how to test assistive technology devices and software for use on the CCRS summative assessments with the TestNav 8 platform via an Infrastructure Trial, refer to the Assistive Technology Guidelines available on the BIE portal. Note that CCRS summative assessments are designed to be Web Content Accessibility Guidelines (WCAG) compliant.</li> </ul> <p><b>During Testing:</b> Students may use a range of assistive technologies on the CCRS summative assessments, including devices that are compatible with the BIE online testing platform, and those that are used externally on a separate computer. Refer to the list of allowable Assistive Technology available here: <a href="https://bie.mypearsonsupport.com/">https://bie.mypearsonsupport.com/</a>.</p> <p><b>After Testing:</b> Test Administrators are responsible for collecting all nonscorable student work created from assistive technology devices. Content must be cleared off all devices. Nonscorable student work must be securely shredded.</p> |



| Accommodation                    | Administration Guidelines   |
|----------------------------------|---|
| <p><b>Braille Note-taker</b></p> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Students accommodations will list Assistive Capturing Responses in Pearson Access</li> </ul> <p><b>During Testing:</b> A student who is blind or has a visual impairment may use an electronic braille note-taker. The grammar checker, internet, and stored file functionalities must be turned off. For students using braille forms, the Test Administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet, answer document, or TestNav.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>Student responses generated using an electronic braille note-taker must be transcribed verbatim by a Test Administrator into the student’s standard test booklet, answer document, or TestNav. Only transcribed responses will be scored. Responses must be transcribed by the teacher of the student with visual impairment or a Test Administrator supervised by the teacher of the student with visual impairment.</li> <li>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li>Test Administrators are responsible for collecting all nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul>       |
| <p><b>Braille Writer</b></p>     | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodation will list “Assistive Capturing Responses” in Pearson Access.</li> </ul> <p><b>During Testing:</b> A student who is blind or has a visual impairment may use a braille writer. For CCRS summative assessments, grammar checker, internet, and stored file functionalities must be turned off. For students using braille forms, the Test Administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet, answer document, or TestNav.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>Student responses generated using a braille writer must be transcribed verbatim by a Test Administrator into the student’s standard test booklet, answer document, or TestNav. Only transcribed responses will be scored. Responses must be transcribed either by the teacher of the student with visual impairment or a Test Administrator supervised by the teacher of the student with visual impairment.</li> <li>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li>Test Administrators are responsible for collecting all nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul> |



| Accommodation   | Administration Guidelines  |
|---|--|
| <p><b>Calculation Device</b><br/> <i>(on <u>Calculator Sections</u> of Mathematics Assessments)</i></p> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• <u>Materials:</u> <ul style="list-style-type: none"> <li>○ Allowable calculators for the calculator accommodation on calculator sections include:           <ul style="list-style-type: none"> <li>▪ <u>Grades 3-5:</u> Four-function with square root and percentage functions.</li> <li>▪ <u>Grades 6-7:</u> Four-function with square root and percentage functions.</li> <li>▪ <u>Grade 8:</u> Scientific calculators (Student may also bring a four-function with square root and percentage functions in addition to a grade-level calculator).</li> <li>▪ <u>High School:</u> Graphing calculators with functionalities consistent with TI-84 or similar models (Student may also bring a scientific calculator or a four-function with square root and percentage functions).</li> </ul> </li> </ul> </li> </ul> <p><b>During Testing:</b> A student uses a specific calculation device (e.g., large key, talking, or other adapted calculator) other than the embedded grade-level calculator on the CALCULATOR SECTION of the mathematics assessments. If a talking calculator is used, the student must use headphones or be tested in a separate setting.</p> |



| Accommodation   | Administration Guidelines   |
|---|---|
| <p><b>Calculation Device and Mathematics Tools</b><br/> <i>(on <u>Non-Calculator Sections</u> of Mathematics Assessments)</i></p> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• <b>Purpose:</b> The purpose of the calculation device on the non-calculator sections accommodation is to provide access for students with a disability that <i>severely limits or prevents</i> their ability to perform basic calculations (i.e., student is unable to perform single-digit addition, subtraction, multiplication, or division). For these students, a calculation device may be used on the non-calculator AND calculator sections of the mathematics assessments. The IEP or Section 504 plan must specify which device(s) or manipulatives.</li> <li>• Student’s accommodations will list “Hand-held Calculator” in Pearson Access. Manipulatives may require BIE approval, depending on BIE policies.</li> <li>• <b>Materials:</b> <ul style="list-style-type: none"> <li>○ Hand-held calculator.</li> <li>○ Allowable calculators for the calculator accommodation on non-calculator sections: <ul style="list-style-type: none"> <li>▪ <u>Grades 3-5:</u> Four-function with square root and percentage functions.</li> <li>▪ <u>Grades 6-7:</u> Four-function with square root and percentage functions.</li> <li>▪ <u>Grade 8:</u> Scientific calculators (Student may also bring a four-function with square root and percentage functions in addition to grade-level calculator).</li> <li>▪ <u>High School:</u> Graphing calculators with functionalities consistent with TI-84 or similar models. (Student may also bring a scientific calculator or a four-function with square root and percentage functions).</li> </ul> </li> <li>○ Allowable mathematics tools include: <ul style="list-style-type: none"> <li>▪ Arithmetic tables (e.g., addition charts, subtraction charts, multiplication charts; division charts).</li> <li>▪ Two-color chips (e.g., single-sided or double-sided).</li> <li>▪ Counters and counting chips.</li> <li>▪ Square tiles.</li> <li>▪ Base 10 blocks.</li> <li>▪ 100s chart.</li> </ul> </li> <li>○ A student with a visual impairment may need other mathematics tools, such as a large print ruler (embedded BIE ruler is designed in 18 point font), braille ruler, tactile compass, or braille protractor. Note that braille mathematics kits will include the appropriate grade-level braille ruler and braille protractors.</li> </ul> </li> </ul> |

| Accommodation | Administration Guidelines  |
|---------------|--|
|               | <p><b>During Testing:</b> A student uses a calculation device (e.g., four-function calculator, large key, or other adapted calculator), arithmetic table (including addition/subtraction and/or multiplication/division charts), and/or manipulatives (IEP or Section 504 plan must specify which device or manipulative) on the NON-CALCULATOR SECTIONS of the mathematics assessments. If a talking calculator is used, the student must use headphones or be tested in a separate setting.</p> <p><b>Important Guidelines for identifying students to receive this accommodation:</b><br/>IEP teams and Section 504 Plan Coordinators should carefully review the following guidelines before identifying students to receive this accommodation. If all guidelines are NOT met, and the student is given Calculation Device and Mathematics Tools without proper documentation, the student's assessment score may be invalidated and the score would not be counted in the overall assessment results (i.e., the student would be considered a "non-participant" for the mathematics assessment.)</p> <p>In making decisions whether to provide the student with this accommodation, IEP teams and Section 504 Plan Coordinators should consider whether the student has:</p> <ul style="list-style-type: none"> <li>• A disability that <i>severely limits or prevents</i> the student's ability to perform basic calculations (i.e., single-digit addition, subtraction, multiplication, or division), even after varied and repeated attempts to teach the student to do so.</li> </ul> <p>Before listing the accommodation in the student's IEP/Section 504 plan, teams should also consider whether:</p> <ul style="list-style-type: none"> <li>• The student is unable to perform calculations without the use of a calculation device, arithmetic table, or manipulative during routine instruction.</li> <li>• The student's inability to perform mathematical calculations is documented in evaluation summaries from locally-administered diagnostic assessments.</li> <li>• The student receives ongoing, intensive instruction and/or interventions to learn to calculate without using a calculation device, in order to ensure that the student continues to learn basic calculation and fluency.</li> </ul> <p>For a student who receives this accommodation, no claims should be inferred regarding the student's ability to perform basic mathematical calculations without the use of a calculator.</p> |



| Accommodation  | Administration Guidelines   |
|--|---|
| <p><b>ELA/Literacy Selected Response Options<sup>14</sup></b></p> <ul style="list-style-type: none"> <li>• <b>Speech-to-Text</b></li> <li>• <b>Human Scribe</b></li> <li>• <b>Human Signer</b></li> <li>• <b>Assistive Technology Device</b></li> </ul> <p><b>Mathematics Response Options</b></p> <ul style="list-style-type: none"> <li>• <b>Speech-to-Text</b></li> <li>• <b>Human Scribe</b></li> <li>• <b>Human Signer</b></li> <li>• <b>Assistive Technology Device</b></li> </ul> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student’s accommodations will list “Assistive Capturing Responses” in Pearson Access.</li> <li>• <b>Materials:</b> External device provided by the student, if needed. If the student uses speech-to-text software, such as Dragon® Naturally Speaking, then a separate computer must be provided; one to run the assessment on TestNav and a second computer to run the software. TestNav 8 does not contain embedded speech-to-text software.</li> <li>• <b>Test Administrator Training:</b> Test Administrators providing the scribe accommodation must review: <ul style="list-style-type: none"> <li>○ <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses.</a></li> <li>○ <a href="#">Appendix K: Human Signing Guidelines</a> (signers only).</li> </ul> </li> <li>• <b>Note:</b> Check BIE policy in Appendix C of the Test Coordinator Manual to see if there are additional requirements for the use of the Human Scribe accommodation for ELA/Literacy.</li> </ul> <p><b>Note:</b> If a student is using an allowable 3rd party external Assistive Technology that provides speech-to-text functionality that will interact with TestNav, the student must also be registered for Assistive Technology Non Screen-reader to allow the assistive technology to work.</p> <ul style="list-style-type: none"> <li>• Assistive technology, including speech-to-text software, should be tested during an Infrastructure Trial, prior to testing. Some speech-to-text software will not interact with TestNav, and users should set up a separate, adjacent testing station; the student will use two testing stations, one device with the test and one device with the familiar software.</li> <li>• Reference the Assistive Technology Guidelines available on the BIE portal.</li> </ul> <p><b>During Testing:</b> Student dictates responses either verbally, using an external speech-to-text device, an augmentative/assistive communication device (e.g., picture/word board), or by dictating, signing, gesturing, pointing, or eye-gazing. The student must be tested in a separate setting. The student must be familiar with any assistive technology external device used for test administration. <b>Note: TestNav does not have embedded Speech-to-Text functionality - students must use allowable Assistive Technology or an external third party device (responses must be transcribed).</b></p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student’s responses when transcribing) into the student’s standard test booklet or answer document. Only transcribed responses will be scored.</li> </ul> |

<sup>14</sup> This accommodation applies to Evidence Based Selected Response, and Technology Enhanced Constructed Response items (not Prose Constructed Response items) on the English language arts/literacy (ELA/L) assessments.

| Accommodation  | Administration Guidelines   |
|--|---|
|  | <ul style="list-style-type: none"> <li>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> <li>Test Administrators are responsible for collecting all paper nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul>  |
| <p><b>ELA/Literacy Constructed Response Options<sup>15</sup></b></p> <ul style="list-style-type: none"> <li><b>Speech-to-Text</b></li> <li><b>Human Scribe</b></li> <li><b>Human Signer</b></li> <li><b>Assistive Technology Device</b></li> </ul> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student’s accommodations will list “Assistive Capturing Responses” in Pearson Access.</li> <li>If you plan to use a Chromebook or iPad as a third-party external assistive technology device, contact BIE for additional guidance.</li> <li><b>Materials:</b> External device provided by the student, if needed.</li> <li><b>Test Administrator Training:</b> Test Administrators providing the scribe accommodation must review:             <ul style="list-style-type: none"> <li><a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li><a href="#">Appendix K: Human Signing Guidelines</a> (signers only).</li> </ul> </li> </ul> <p><b>Note:</b> If a student is using an allowable 3rd party external Assistive Technology that provides speech-to-text functionality that will interact with TestNav, the student must also be registered for Assistive Technology Non Screen-reader to allow the assistive technology to work.</p> <ul style="list-style-type: none"> <li>Assistive technology, including speech-to-text software, should be tested prior to testing. Some speech-to-text software will not interact with TestNav, and users should set up a separate, adjacent testing station; the student will use two testing stations, one device with the test and one device with the familiar software.</li> <li>Reference the Assistive Technology Guidelines available on the BIE portal.</li> </ul> <p><b>During Testing:</b> Student dictates responses either verbally, using an external speech-to-text device, an augmentative/assistive communication device (e.g., picture/word board), or by dictating, signing, gesturing, pointing, or eye-gazing. The student must be tested in a separate setting. The student must be familiar with any assistive technology external device used for test administration. <b>Note: TestNav does not have embedded Speech-to-Text functionality - students must use allowable Assistive Technology or an external third party device (responses must be transcribed).</b></p> |

<sup>15</sup> This accommodation applies to Prose Constructed Responses on the ELA/Literacy assessments.



| Accommodation                | Administration Guidelines   |
|------------------------------|---|
|                              | <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> <li>• Test Administrators are responsible for collecting all nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul> <p><b>Important Guidelines for identifying students to receive these accommodations:</b><br/>IEP teams and Section 504 Plan Coordinators should carefully review the following guidelines before identifying a student to receive this accommodation. If all guidelines are NOT met, and the student is given the Human Scribe accommodation on a CCRS English language arts/literacy (ELA/literacy) assessment, the student's assessment score may be invalidated and the score would not be counted in the overall assessment results (i.e., the student would be considered a "non-participant" for the English language arts/literacy (ELA/literacy) assessment.)</p> <p>In making decisions whether to provide the student with this accommodation, IEP teams and Section 504 Plan Coordinators should consider whether the student has:</p> <ul style="list-style-type: none"> <li>• A physical disability that <i>severely limits or prevents</i> the student's motor process of writing through keyboarding;</li> <li>OR</li> <li>• A disability that <i>severely limits or prevents</i> the student from expressing written language, even after varied and repeated attempts to teach the student to do so.</li> </ul> <p>Before listing the accommodation in the student's IEP or Section 504 plan, teams/coordinators should also consider whether:</p> <ul style="list-style-type: none"> <li>• The student's inability to express in writing is documented in evaluation summaries from locally-administered diagnostic assessments;</li> <li>• The student routinely uses a scribe for written assignments; and</li> <li>• The student receives ongoing, intensive instruction and/or interventions to learn written expression, as deemed appropriate by the IEP team or Section 504 Plan Coordinator.</li> </ul> |
| <b>Monitor Test Response</b> | <p><b>During Testing:</b> The Test Administrator monitors proper placement of student responses. This accommodation is to ensure that the student is marking the answer for the problem the student intends to answer. For example, a student may accidentally skip a question. The Test Administrator CANNOT assist the student in any way with respect to the content of the item.</p>  |

| Accommodation  | Administration Guidelines   |
|--|---|
| <p><b>Word Prediction External Device on the ELA/Literacy Assessment</b></p> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodation will list "Word Prediction" in Pearson Access.</li> <li>• <u>Materials</u>: External Word Prediction Device.</li> </ul> <p><b>Note:</b> If a student is using an allowable 3rd party external Assistive Technology that provides Word Prediction functionality that will interact with TestNav, the student must also be registered for Assistive Technology Non Screen-reader to allow the assistive technology to work.</p> <ul style="list-style-type: none"> <li>• Assistive technology should be tested prior to testing. If the specific device will not interact with TestNav, a secondary testing device to run the external device software will be needed. Some external word prediction software will not interact with TestNav, and users should set up a separate, adjacent testing station; the student will use two testing stations, one device with the test and one device with the familiar software.</li> <li>• Reference the Assistive Technology Guidelines available on the BIE portal.</li> </ul> <p><b>During Testing:</b> The student uses an external word prediction device that provides a bank of frequently- or recently-used words on-screen after the student enters the first few letters of a word. The student must be familiar with the use of the external device prior to assessment administration. The device may not connect to the internet or save information.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Student responses generated using the External Word Prediction Device software must be transcribed verbatim by a Test Administrator into TestNav. Only transcribed responses submitted in TestNav will be scored. <b>Note:</b> If the student is writing his/her responses directly into TestNav through the external software for word prediction, then transcribing is not necessary.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li>• Test Administrators are responsible for collecting all nonscorable student work created using external word prediction device software. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul> <p><b>Important Guidelines for identifying students to receive this accommodation:</b><br/>IEP teams and Section 504 Plan Coordinators should carefully review the following guidelines before identifying a student to receive this accommodation.</p> <p>In making decisions whether to provide the student with this accommodation, IEP teams and Section 504 Plan Coordinators are instructed to consider whether the student has:</p> |



| Accommodation | Administration Guidelines   |
|---------------|---|
|               | <ul style="list-style-type: none"><li>A physical disability that <i>severely limits or prevents</i> the student from writing or keyboarding responses;</li><li>OR</li><li>A disability that <i>severely limits or prevents</i> the student from recalling, processing, and expressing written language, even after varied and repeated attempts to teach the student to do so.</li></ul> <p>Before listing the accommodation in the student's IEP/Section 504 plan, teams/coordinators are instructed to consider whether:</p> <ul style="list-style-type: none"><li>The student's inability to express in writing is documented in evaluation summaries from locally administered diagnostic assessments;</li><li>The student routinely uses a word-prediction device or software during classroom writing assignments; and</li><li>The student receives ongoing, intensive instruction, and/or intervention in language processing and writing, as deemed appropriate by the IEP team/Section 504 Plan Coordinator.</li></ul> |

Table 5 describes the TIMING AND SCHEDULING ACCOMMODATION for students with disabilities that is intended to increase the allowable time in which to complete an assessment. The table outlines the activities needed before, during, and after testing necessary to successfully administer the assessments with this accommodation. Accommodations for students with disabilities must be pre-selected for the student in the student accommodation layout file. This information is included in the “before testing” guidance.

Table 5: Timing and Scheduling Accommodation for Students with Disabilities



| Accommodation | Administration Guidelines  |
|---------------|--|
| Extended Time | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"><li>Student's accommodations will list “Extended Time” in Pearson Access. The student does not need to take the full day if it is not needed.</li><li><u>Test Administrator Training:</u> Test Administrators providing this accommodation must review:<ul style="list-style-type: none"><li><a href="#">Appendix D: Guidance for Selecting and Administering the Extended Time Accommodation.</a></li></ul></li></ul> <p><b>During Testing:</b> The amount of time a student receives must be indicated in the student's IEP or Section 504 plan. It is recommended to test students receiving the extended time accommodation in a separate setting to minimize distractions to other students, and to schedule these students for testing in the morning to allow adequate time for completion of a test unit by the end of the school day.</p> |



## Accommodations for English Learners<sup>9</sup>

Table 6 lists the accommodations on CCRS summative assessments that are available to ELs, cross-referenced with recommendations regarding the effectiveness of the accommodation based on the English Language Proficiency (ELP) level of the student. See Section 4 for how ELP is determined.

**Table 6: Guidance on Selection of Accommodations for English Learners on CCRS Summative Assessments**

**KEY for Table 6:**

- Highly recommended for use by ELs at this ELP level
- ⊙ Recommended for use by ELs at this ELP level
- May not be appropriate for students at this ELP level

| Accommodations   | Most likely to benefit ELs at this ELP Level |              |          |
|--|--|--------------|----------|
|  | Beginning                                    | Intermediate | Advanced |
| Extended time  | ●  | ●            | ●        |
| Word-to-Word Dictionary (English/Native Language)  | ⊙  | ●            | ●        |
| Mathematics Response Speech-to-Text  | ●  | ⊙            | ○        |
| Mathematics Response Human Scribe  | ●  | ⊙            | ○        |
| General Administration Directions Read Aloud and Repeated in Student's Native Language (by Test Administrator) | ●  | ⊙            | ○        |
| General Administration Directions Clarified as Needed in Student's Native Language (by Test Administrator)     | ●  | ⊙            | ○        |



Table 7 provides a list of ACCOMMODATIONS for ELs. The table describes the activities needed before, during, and after testing necessary to administer these accommodations appropriately. Accommodations for ELs must be pre-selected for the student in the student accommodation layout file. This information is included in the “before testing” guidance.

**Table 7: Accommodations for English Learners on CCRS Summative Assessments**

| Accommodation   | Administration Guidelines  |
|---|--|
| Extended time   | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"><li>• Student’s accommodations will list “Extended Time” in Pearson Access.</li><li>• <u>Test Administrator Training</u>: Test Administrators providing this accommodation must review:<ul style="list-style-type: none"><li>◦ <a href="#">Appendix D: Guidance for Selecting and Administering the Extended Time Accommodation</a>.</li></ul></li></ul> <p><b>During Testing:</b> The amount of time a student receives must be indicated in the student’s EL plan. It is recommended to test students receiving the extended time accommodation in a separate setting to minimize distractions to other students, and to schedule these students for testing in the morning to allow adequate time for completion of a test unit by the end of the school day.</p>   |
| Word-to-Word Dictionary<br>(English/ Native Language) | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"><li>• Student’s accommodations will list “Dictionary” in Pearson Access.</li><li>• <u>Materials</u>: Word-to-word dictionaries are provided to students by their school, based on those used by the student for routine classroom instruction.</li></ul> <p><b>During Testing:</b> The student uses a published bilingual, word-to-word dictionary that does not include definitions, pronunciation, phrases, sentences, or pictures. The student should be familiar with the dictionary they will use during testing. Students should be given ample time to complete the test using the accommodation. If no printed word-to-word dictionary can be found for a specific language, an electronic translator may be used. The device may not connect to the internet or store information, and therefore, web-based translators are not allowed. Please contact BIE for a list of approved bilingual word-to-word dictionaries.</p> |

| Accommodation   | Administration Guidelines   |
|---|---|
| <p><b>Mathematics Response</b></p> <ul style="list-style-type: none"> <li>• <b>Speech-to-Text</b></li> <li>• <b>Human Scribe/ Human Signer</b></li> </ul> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodations will list "Assistive Capturing Responses" in Pearson Access.</li> <li>• <u>Materials</u>: External device provided by the student, if needed. If the student uses speech-to-text software, such as Dragon® Naturally Speaking, then a separate computer must be provided; one to run the assessment on TestNav and a second computer to run the software. TestNav 8 does not contain embedded speech-to-text software.</li> <li>• <u>Test Administrator Training</u>: Test Administrators providing the scribe accommodation must review:             <ul style="list-style-type: none"> <li>○ <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses.</a></li> </ul> </li> </ul> <p><b>Note:</b> If a student is using an allowable 3rd party external Assistive Technology that provides speech-to-text functionality that will interact with TestNav, the student must also be registered for Assistive Technology Non Screen-reader to allow the assistive technology to work.</p> <ul style="list-style-type: none"> <li>• Assistive technology, including speech-to-text software, should be tested prior to testing. Some speech-to-text software will not interact with TestNav, and users should set up a separate, adjacent testing station; the student will use two testing stations, one device with the test and one device with the familiar software.</li> <li>• Reference the Assistive Technology Guidelines available on the BIE portal.</li> </ul> <p><b>During Testing:</b> A student dictates responses verbally, using an external speech-to-text device or by dictating. The student must be tested in a separate setting. The student must already be familiar with any external device used for this accommodation. <b>Note: TestNav does not have embedded Speech-to-Text functionality - students must use allowable Assistive Technology or an external third party device (responses must be transcribed).</b></p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> <li>• Test Administrators are responsible for collecting and shredding all nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices.</li> </ul> |



| Accommodation   | Administration Guidelines   |
|---|---|
| <p><b>General Administration Directions Read Aloud and Repeated in Student's Native Language</b> <i>(by Test Administrator)</i></p> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodations will list "Test Direction Native Language" in Pearson Access.</li> <li>• <u>Materials:</u> <ul style="list-style-type: none"> <li>○ A local translator fluent both in English and the student's native language may translate and read the directions in the language of the student.</li> </ul> </li> <li>• <b>Test Administrator Training:</b> Test Administrators, or other qualified interpreters, providing the general administration directions in languages other than English must review the directions in advance in order to provide consistent transadaptations. Test Administrators providing this accommodation will ideally be literate and fluent in English, as well as in the student's native language; or may collaborate with a local translator, if available.</li> </ul> <p><b>During Testing:</b> The Test Administrator, or other qualified interpreter, reads aloud the general administration instructions in the student's native language. The student may request that directions be repeated. The student must be tested in a separate setting.</p> |
| <p><b>General Administration Directions Clarified in Student's Native Language</b> <i>(by Test Administrator)</i></p>               | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodations will list "Test Direction Native Language" in Pearson Access.</li> <li>• <u>Test Administrator Training:</u> Test Administrators providing this accommodation should be literate and fluent in English, as well as in the student's native language.</li> </ul> <p><b>During Testing:</b> The Test Administrator clarifies general administration directions only in the student's native language. Test Administrators, or other qualified interpreters, providing this accommodation should ideally be literate and fluent in English, as well as in the student's native language; or Test Administrator may be assisted by a translator who speaks the language of the student, if available.</p>   |

## Section 4: Decision-Making Process for Selecting, Using, and Evaluating Accessibility Features and Accommodations for Students with Disabilities, English Learners, and English Learners with Disabilities

### Including All Students in CCRS Summative Assessments

#### English Learners

Federal law requires that students not be excluded from assessments with the intention of holding schools accountable for the academic performance of all students, with a narrow exception granted to ELs in their first year of instruction in a U.S. school (see above). ELs in BIE may not be excluded from CCRS summative assessments in ELA/literacy (with the exception of ELs in their first year in a U.S. school) and mathematics assessments. ELs whose parents have waived services may not be excluded from CCRS assessments and are still eligible to receive accommodations allowed to ELs on CCRS summative assessments.

#### Students with Disabilities

The ESEA and IDEA require that all students with disabilities be administered CCRS assessments, either with or without accommodations, or through an alternate assessment. The results of those assessments are intended to hold schools accountable for the academic performance of all students. It is important that IEP teams and 504 Plan Coordinators actively engage in a planning process that includes:

- Participation of all students in the CCRS summative assessments at the grade level or course in which they are enrolled;
- Assurance of the provision of appropriate accommodations to facilitate student access to instruction and assessments based on grade-level or course standards; and
- Use of alternate assessments based on the content standards, where necessary to assess the academic performance of students with the most significant cognitive disabilities.

#### Equal Access to Grade-Level Content

The CCRS are educational targets for students to learn at each grade level or course. Teachers should regularly ensure that students are working toward grade-level learning standards by using instructional strategies that are appropriate for each student based on individual needs, strengths, and challenges. Providing appropriate accommodations during instruction and assessments is likely to promote equal access to grade-level and course content.

To accomplish the goal of equal access, educators (including general educators, special educators, educators specializing in English language acquisition, other members of IEP teams, 504 Plan Coordinators, and EL teams, if applicable) should:

- Be familiar with the CCRS and the accountability system, including applicable assessments, at the BIE and district level;
- Be familiar with the CCRS summative assessment administration procedures and the *BIE Accessibility Features and Accommodations Manual*; and
- Collaborate regularly to maximize and ensure the student's access to grade-level or course standards.

All students must have access to grade-level or course academic learning standards. Most of these students will be able to achieve these standards when the following three conditions are met:



1. Classroom instruction is provided by teachers who are qualified to teach the CCRS and who know how to differentiate instruction and provide educationally appropriate instruction for diverse learners;
2. IEPs and 504 plans for students with disabilities, and EL plans for ELs, where appropriate, are developed to ensure the provision of equal access to the general curriculum and district-wide assessments; and
3. Appropriate accessibility features and/or accommodations are determined and provided to help students access grade-level or course content.

The Common Core State Standards can be accessed here: <http://www.corestandards.org>.

### **Step 1: Expect All Students to Achieve Academic Grade-Level and Course Content Standards**

In accordance with the Elementary and Secondary Education Act (ESEA) and Individuals with Disabilities Education Improvement Act of 2004 (IDEA), BIE expects that all students in BIE who are not taking an alternate assessment will participate in the CCRS summative assessments. The CCRS summative assessment system sets and maintains high expectations that all students will have access to the full range of grade-level and course content standards.

Several laws require the participation of students with disabilities and ELs in standards-based instruction and assessment. Refer to [Appendix J: Legal Background](#) for additional information.

### **Step 2: Learn About Accessibility Features and Accommodations**

It is critical that educational teams learn about accessibility features and accommodations that provide increased access for students or reduce or eliminate the effects of a student's disability, or EL status, and provide equitable access to grade-level or course content for diverse learners. For information on which accessibility features and accommodations are available on the CCRS summative assessments, refer to Sections 2 and 3 of this manual.

### **Modifications for CCRS Summative Assessments**

Modifications, as contrasted with accessibility features and accommodations, involve changes in the CCRS summative assessment or in the conditions in which a student takes the assessment that would result in unacceptable changes in what the assessment is designed to measure (e.g., reducing or changing expectations for students), or provide an unfair advantage to a student. Therefore, modifications are not permitted on the CCRS summative assessments.

Examples of modifications that would result in invalidated results on CCRS summative assessments include:

- Allowing a student to be assessed off grade-level;
- Instructing a student to skip selected items, reducing the scope of assessments, so a student completes only a limited number of problems or items;
- Modifying the complexity of assessments to make them easier (e.g., deleting response choices on a multiple-choice assessment so that a student selects from two or three options instead of four);
- Providing hints, clues, or other coaching that directs the student to correct responses;
- Defining vocabulary on the assessment, or explaining assessment items;
- Allowing the student to complete an assessment of English language arts/literacy (ELA/L) in a language other than English; and
- Using a bilingual dictionary that provides definitions (rather than an acceptable word-to-word dual-language dictionary).

Providing a student with modifications during a CCRS summative assessment may constitute a test irregularity and will result in an invalidated score (i.e., the score will not be counted) and/or an investigation by BIE into the school's or district's testing practices. Moreover, providing modifications to students during BIE assessments may have the unintended consequence of reducing their opportunities to learn critical content and may result in adverse effects on the student throughout his or her educational career.

### **Step 3: Select Accessibility Features and Accommodations for Individual Students**

The team or group responsible for selecting accessibility features for all students, and accommodations for ELs and/or students with disabilities should:

- Discuss which accessibility features and accommodations might assist a student during daily instruction in the classroom;
- Determine which accessibility features and accommodations to “try out” with the student during instruction in each content area;
- Document and evaluate the effectiveness of the accessibility features and accommodations used over time;
- Adjust the use of accessibility features and accommodations as needed for the future; and
- Based on the effectiveness of the supports used in the classroom, determine which accessibility features and accommodations should also be used on CCRS summative assessments, and whether they are allowed.

In selecting appropriate accessibility features and accommodations for CCRS summative assessments, it is important that educators be aware of the following:

- Accessibility features and accommodations should be considered and discussed separately for each CCRS content-area assessment.
- Students should receive the accessibility features and accommodation they need to participate in the assessment, but should not receive more accessibility features and accommodations than are necessary to participate meaningfully.
- Accessibility features and accommodations are intended to increase a student's access to the assessment but will not compensate for a student's lack of academic/content knowledge and skills.
- Students need opportunities beforehand to try out accessibility features and accommodations and learn which are most helpful in classroom instruction, as well as on large-scale assessments.
- The more input students have in selecting their accessibility features and accommodations, the more likely the accessibility features and/or accommodations will be used.
- Accommodations that provide access to students on assessments should be based on their needs as students with disabilities or ELs not their lack of content knowledge or skills.
- Teams should be careful to avoid selecting accessibility features and accommodations using a “kitchen-sink” approach that provides the student with unnecessary or mutually-contradictory accommodations in an attempt to provide every possible advantage on the assessment. This approach could make accessing the test more difficult and confusing for the student.



## The Decision-Making Process

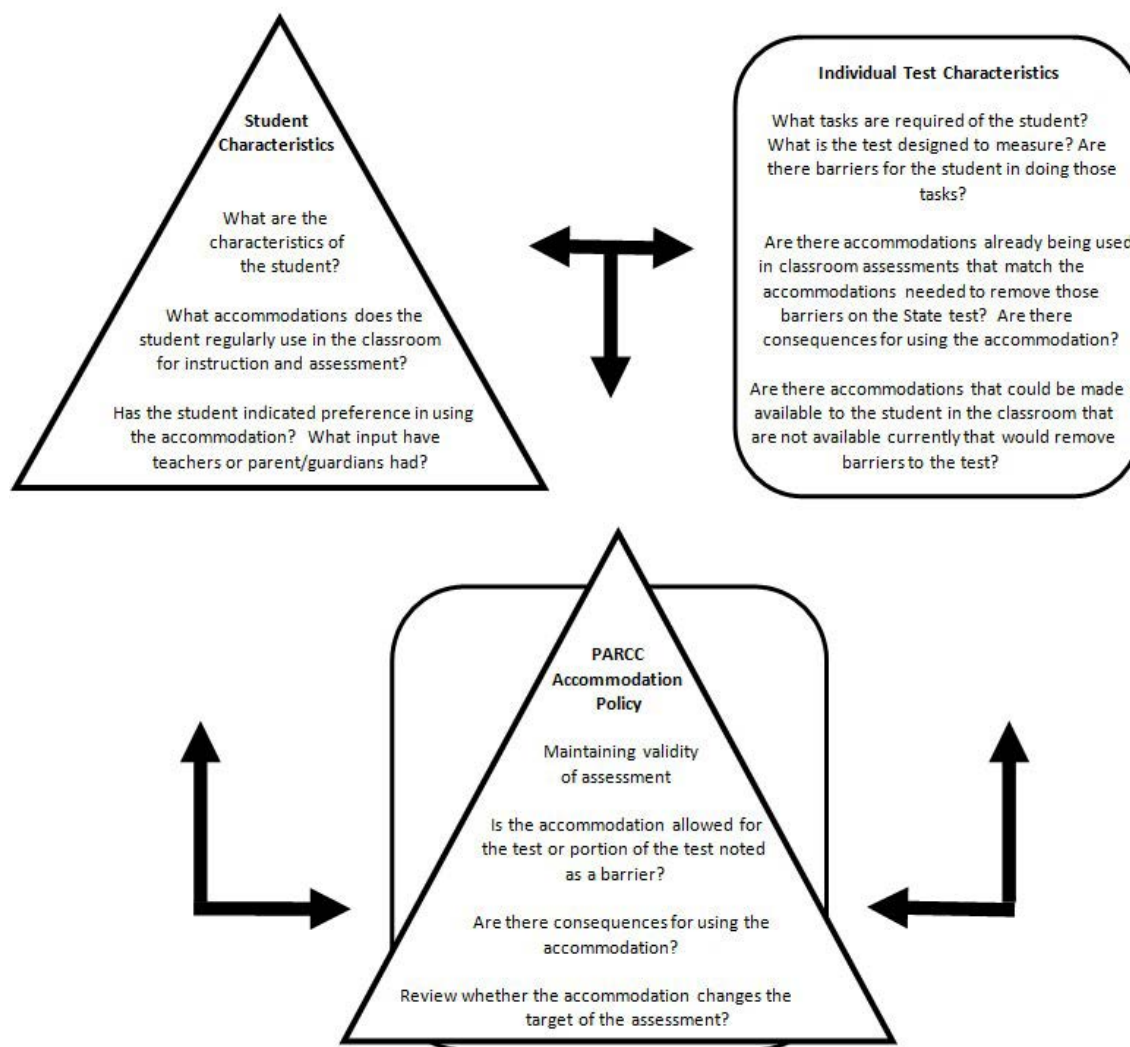
Figure 1 shows considerations for selecting CCRS summative assessment accommodations for students with disabilities, ELs, and ELs with disabilities. This process could be replicated for selecting accessibility features. The decision-making process should include consideration of at least the following three factors:

**Factor 1:** Student characteristics and learning needs (e.g., disabilities, language proficiency, accommodations used in classroom instruction/assessments to access and perform in academic standards and assessments).

**Factor 2:** Individual assessment characteristics (i.e., knowledge about what tasks are required on CCRS summative assessments and ways to remove physical and other barriers to students' ability to perform those tasks).

**Factor 3:** BIE accessibility features and accommodations policies that maintain the validity of assessment results.

**Figure 1: Considerations When Making Decisions for Assessment Accommodations**

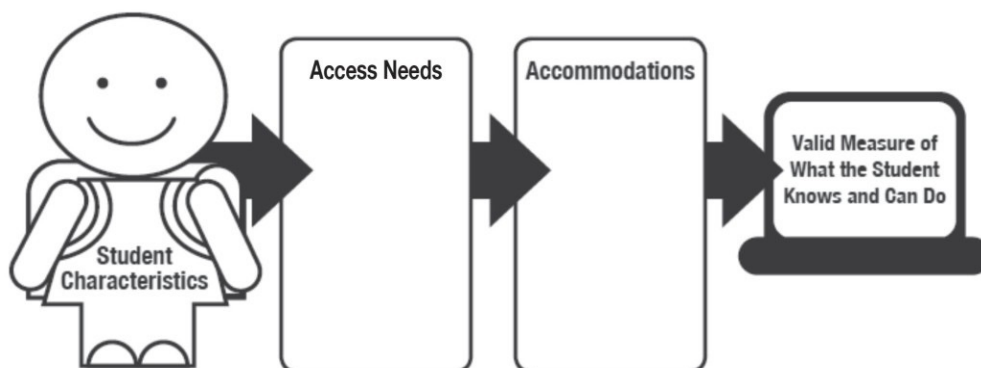




### Decision-Making Process – Factor #1: Student Characteristics and Learning Needs

Figure 2 shows the process of how student characteristics and access needs impact the selection of accessibility features and accommodations. Accessibility features and accommodations should remove barriers to learning.

**Figure 2: Student Characteristics and Learning Needs**



### Decision-Making Process – Factor #2: Individual Test Characteristics

It is important to examine the tasks students are being asked to do on the CCRS summative assessments by asking the following questions:

- What are the characteristics of the assessment and what will the tasks and items look like?
- Are the assessment tasks similar to classroom assessment tasks, and does the student have the opportunity to practice similar tasks prior to testing?
- Does the student use an accessibility feature and/or accommodation for a classroom task that is allowed for similar tasks on the CCRS summative assessments?
- Do other barriers exist that could be removed by using accessibility features and/or accommodations that are not already offered or used by the student?

### Decision-Making Process – Factor #3: BIE Accessibility Features and Accommodations Policies That Maintain the Validity of Assessment Results

It will be important for educators, parents, and teams selecting accommodations for the CCRS summative assessments to review the test security, test administration, and test accommodation policies in order to determine whether the accommodation is allowed on the CCRS summative assessment(s), and if there will be any consequences for the school, district, or student if the accommodation is used. For example, if certain instructional accommodations are used for testing, the validity of assessment results may be compromised if the accommodation involves modifying the assessment, giving assistance to the student to respond to questions during testing, or providing an accommodation that gives the student an unfair advantage on all or part of the assessment. Assessment policies must be reviewed thoroughly before accommodations are selected for the assessments, and any discrepancies between instructional and assessment accommodations should be communicated to the parent and the educators working with the student.

### Questions to Guide Accessibility Feature and Accommodation Selection for Students with Disabilities

Teams should use these questions to guide the selection of appropriate accessibility features and accommodations for students with disabilities:

- What are the student's learning strengths and challenges, and are these based on language needs, a disability, or both?
- How do the student's learning and/or language needs affect the achievement of grade-level or course content CCRS?



- What specialized instruction, if any (e.g., learning strategies, organizational skills, reading skills) is required by the student to achieve grade-level or course content CCRS?
- Which accessibility features and/or accommodations are regularly used by the student during instruction and assessments?
- Which new accessibility features and/or accommodations, if any, would increase the student's access to instruction and assessment by addressing the student's learning needs and reducing the effects of the student's disability?
- Should an existing accessibility feature and/or accommodation be implemented differently?
- What were the outcomes when accessibility features and/or accommodations were used and when they were not used during classroom assignments and on assessments?
- What is the student's perception of how well an accessibility feature and/or accommodation "works"?
- What difficulties did the student experience when using accessibility features and/or accommodations?
- What are the perceptions of parents, teachers, and specialists about the effectiveness of the accessibility feature and/or accommodation?
- Should the student continue to use an accessibility feature and/or accommodation "as is," are changes needed, or should use be discontinued?

The following should also be considered in the selection of accessibility features and/or accommodations:

- Whether the accessibility feature and/or accommodation is respectful of a student's age and grade (e.g., older students may prefer accessibility features and/or accommodations provided through use of technology, rather than those administered by an adult);
- Student's willingness to learn to use the accessibility feature and/or accommodation;
- Explicit instruction in how to use the accessibility feature and/or accommodation in classroom and testing settings; and
- The conditions for use of the accessibility feature and/or accommodation on CCRS summative assessments.

### **Individuals Involved in Selecting Accessibility Features and Accommodations for Students with Disabilities**

Effective decision-making on how a student will participate in the CCRS summative assessments, including the provision of appropriate accessibility features and accommodations, begins with gathering and reviewing information about the student's disability, present level of academic achievement, and functional performance in relation to the CCRS. This process is best accomplished by a team of people who know the student best. The team should include individuals who can present information to the discussions about providing the student equal learning opportunities, and identifying practices and approaches intended to help the student overcome learning obstacles during instruction and assessment.

Test accessibility features and accommodations should not be assigned broadly to all students with the same disability. Accessibility features and accommodations should be selected based on the student's learning preferences, previous record of success using the accessibility feature or accommodation, disability-related needs, and level of the student's comfort using the accessibility feature or accommodation in question. The selected accessibility features and accommodations must be listed in the student's IEP or 504 plan and consistently provided in the classroom in order to obtain useful feedback on their effectiveness. Providing accessibility features and accommodations that the student does not need may actually adversely impact his or her performance on the test and interfere with

the test's ability to measure the student's achievement. IEP teams and 504 Plan Coordinators should consider whether the recommended accessibility feature(s) and/or accommodation(s):

- Are necessary to access the test items;
- Have been useful to other students with similar profiles; and
- Will negatively affect the integrity, validity, and security of the assessment.

All IEP team members/504 Plan Coordinators, and other key individuals should provide information and perspectives for the entire team to consider during team meetings regarding the selection, implementation, and evaluation of appropriate accessibility features and accommodations.

### **Students**

Students can provide valuable information to the IEP team or 504 Plan Coordinator on their strengths and areas of challenge, the effectiveness of the accessibility features and accommodations they use, and their degree of comfort in using them. This information can greatly assist team decision-making regarding which accessibility features and/or accommodations to recommend. Including students in the decision-making process will enhance their self-advocacy, their understanding of the need for the accessibility feature and/or accommodation, and may result in an increased willingness to use the accessibility feature and/or accommodation consistently. Students can also signal when they are outgrowing the need for an accessibility feature and/or accommodation.

### **School Administrator (Principal/Assistant Principal)**

The School Administrator promotes the expectation that students with disabilities are capable learners who can and will achieve at high levels in all local and CCRS summative assessments if they are included in high-quality standards-based instruction. The principal is responsible for:

- Implementing the district's policies that provide equal access to instructional and assessment programs for all students;
- Ensuring that assessment accessibility features and/or accommodations are fully, consistently, and appropriately implemented during the administration of CCRS summative assessments, as specified in each student's IEP or 504 plan; and
- Exercising leadership and discretion in resolving circumstances in which last-minute changes occur in a student's status. For example, if a student no longer is eligible for special education services, changes in accessibility features and/or accommodations for the assessment may be needed.

Principals should be familiar with the policies and procedures outlined in the *Test Administrator Manuals* and the *BIE Accessibility Features and Accommodations Manual*.

### **General Educator (Content Area Teacher)**

General education teachers are important team members who should be familiar with and knowledgeable of the accessibility features and/or accommodations required by each student, and how to administer them appropriately.

The general education teacher plays an active and significant role in the determination and use of instructional and assessment accessibility features and accommodations for students with disabilities. General educators are familiar with curriculum content and the purposes of the CCRS summative assessments. In collaboration with special education teachers, general educators provide appropriate instructional and assessment accessibility features and/or accommodations to ensure that students with disabilities have full access to grade-level and/or course content that is available to their nondisabled peers. The results of the assessments, in turn, can provide teachers with information that will support individual students in achieving the CCRS.



## Special Educator

The special education teacher plays an important role in providing information on how to match the learning characteristics of students to the appropriate instructional and assessment accessibility features and/or accommodations, ensuring that the student is able to demonstrate his or her knowledge and skills without barriers or restrictions due to his or her disability.

## Related Service Providers

Related service providers, such as speech-language pathologists, school psychologists, physical therapists, and occupational therapists, serve essential roles in supporting the education of students with disabilities in school environments. As members of IEP teams (and 504 Plan Coordinator discussions, as appropriate), related service providers can lend their unique expertise and perspectives to discuss how to improve learning and assessment opportunities for students with disabilities.

## Parents/Guardians

Students who use accessibility features and/or accommodations will often need them at home, in the community, and as they get older, in postsecondary education and at work. Parents are familiar with the strengths and needs of their children and can provide valuable information to enhance discussions about the appropriateness of selected instructional and assessment accessibility features and/or accommodations. Parents also have information and perspectives on the strategies their child uses routinely to complete homework assignments and other tasks around the home. To enable parents to participate in meaningful discussions, it is important that they receive information in a language that is accessible to them about the:

- Need and rationale for assessment accessibility features and/or accommodations;
- Types of available assessment accessibility features and accommodations and how assessments will be administered; and
- Purpose of assessments, what they measure, and how the results will be used.

## Documenting Accommodations on a Student's IEP

For students with disabilities served under IDEA, determining appropriate instructional and assessment accommodations should not pose any particular problems for IEP teams that follow good IEP team practices. With information obtained from the required summary of the student's "present levels of academic achievement and functional performance," the decision of identifying and documenting accommodations is a fairly straightforward process. The term "present levels of achievement and functional performance" refers to a federal requirement in which IEP team members must state "how the child's disability affects the child's involvement and progress in the general education curriculum—the same curriculum as nondisabled children" [20 USC § 1414(d)(1)(A)(i)(I)].

There are three areas in which accommodations can potentially be addressed in the IEP:

1. "Participation in Assessments" [20 USC § 1412(a)(16)]. This section of the IEP documents accommodations needed to facilitate the participation of students with disabilities in BIE and district assessments.
2. "Consideration of Special Factors" [20 USC § 1414(d)(3)(B)]. This is where communication and assistive technology supports are considered.
3. "Supplementary Aids and Services" [20 USC § 1401(33) and 20 USC § 1414(d)(1)(A)(i)]. This area of the IEP includes "aids, services, and other supports that are provided in regular education classes or other education related settings to enable students with disabilities to be educated with nondisabled students to the maximum extent appropriate.

### **Documenting Accommodations on a Student's 504 Plan**

Section 504 of the Rehabilitation Act of 1973, specifies that no otherwise qualified person with a disability shall, solely by reason of his or her disability, be excluded from participating in federally-funded programs or activities, including elementary, secondary, or postsecondary schooling. "Disability" in this context refers to a "physical, sensory, or mental impairment, which substantially limits one or more major life activities." This can include physical impairments; illnesses or injuries; communicable diseases; chronic conditions like asthma, allergies and diabetes; and learning problems. A 504 plan spells out the accommodations that will be needed for these students to have an opportunity to *access the test* to the same extent as his/her nondisabled peers, and might include such things as wheelchair ramps, blood sugar monitoring, interpreting/transliteration services, preferential seating, an extra set of textbooks, a peanut-free lunch environment, home instruction, or a tape recorder or keyboard for taking notes.

Each student who meets the eligibility guidelines for accommodations under Section 504 will have a Section 504 plan developed for him/her to use in school. The plan specifies the nature of the impairment, the major life activity affected by the impairment, accommodations necessary to meet the student's needs, and the person(s) responsible for implementing the accommodations. It is recommended that accommodations be listed separately in the 504 plan for instruction and for assessments, since they may differ or be allowed for one and not the other.

### **Individuals Involved in Selecting Accessibility Features and Accommodations for ELs**

Determining appropriate linguistic support for ELs during classroom instruction and on assessments is facilitated by gathering and reviewing information about the student and the student's level of performance in relation to district and BIE academic standards and current English language proficiency level. The process of determining the amount and types of instructional and assessment supports involves attempts by members of the educational team to remove barriers and "level the playing field" for the student so that he or she can participate in the general education curriculum and assessments.

Decisions about assessment accessibility features and accommodations for ELs should be made by a group of individuals familiar with the student who can identify the appropriate accessibility features and accommodations for each EL.

Individuals involved in the decision-making process may include any of the following:

#### **Students**

Students can provide valuable information on their strengths and areas of challenge based on linguistic needs, the effectiveness of the accessibility features and/or accommodations they use, if any, and their degree of comfort in using them. This information can greatly assist decision-making regarding which accessibility features and/or accommodations to recommend. Including students in decision-making will enhance their self-advocacy, their understanding of the need for the accessibility feature and/or accommodation, and may result in an increased willingness to use the accessibility feature and/or accommodation consistently. Students can also signal when they are outgrowing the need for an accessibility feature and/or accommodation due to their maturation or increased language proficiency.



### **ESL/Bilingual Educator**

The ESL/bilingual educator can apply his or her knowledge of language acquisition with familiarity with the individual student's linguistic needs to devise strategies and supports that facilitate learning the English language during instruction and provide accessibility during assessment.

### **School Administrator (Principal/Assistant Principal)**

The School Administrator promotes the expectation that ELs can and will achieve at high levels in all local, BIE, and CCRS summative assessments if they are included in high-quality standards-based instruction. The principal is responsible for:

- Implementing the district's policies that provide equal access to instructional and assessment programs and resources for all students;
- Ensuring that assessment accessibility features and accommodations are fully, consistently, and appropriately implemented during the administration of CCRS summative assessments; and
- Exercising leadership and discretion in resolving circumstances in which last-minute changes for assessment are needed. For example, allowing a student to be tested in a separate setting apart from other students.

### **General Educator (Content Area Teacher)**

General education teachers are important team members who should be familiar with and knowledgeable of the linguistic accommodations required by each student, and how to administer them appropriately. They are familiar with curriculum content and the purposes of the CCRS summative assessments. In collaboration with ESL/bilingual teachers (and special education teachers, if appropriate), general educators provide appropriate instructional and assessment accessibility features and accommodations to ensure that ELs have full access to the programs and services that are available to their native English speaking peers. The results of the assessments, in turn, can provide teachers with information that will support individual students in achieving the CCRS.

### **Special Educator**

If the EL student has a disability, the special education teacher plays an important role in providing information on how to match the learning characteristics of the student to the appropriate instructional and assessment accessibility features and/or accommodations, ensuring that the student is able to demonstrate his or her knowledge and skills without barriers or restrictions due to his or her disability.

### **Parents/Guardians**

Students who use accessibility features and/or accommodations will often need them at home, in the community, and as they get older, in postsecondary education and at work. Parents are familiar with the strengths and needs of their children and can provide valuable information to enhance discussions about the appropriateness of selected instructional and assessment accessibility features and/or accommodations. Parents also have information and perspectives on the strategies their child uses routinely to complete homework assignments and other tasks around the home. To enable parents to participate in meaningful discussions, it is important that they receive information about the:

- Need and rationale for assessment accessibility features and/or accommodations;
- Types of available assessment accessibility features and/or accommodations and how assessments will be administered; and
- Purpose of assessments, what they measure, and how the results will be used.

Educators responsible for selecting accessibility features and accommodations for ELs can use the guidance found in this section to make appropriate decisions on assigning accessibility features and accommodations to ELs in the student accommodation layout file. To be effective, accommodations



must address the unique linguistic needs of the students for whom they are provided and should assist the student in overcoming the language barriers that prevent him or her from learning in the classroom and accessing the content of the CCRS summative assessments. Educators should also review and select appropriate accessibility features available for ELs on the computer-based CCRS summative assessments and design a student accommodation layout file for the student.

Decision-making teams are encouraged to determine and assign accessibility features and accommodations to ELs as early as possible in the school year to ensure that the student is familiar with their use. Accessibility features and accommodations should be evaluated over time for their effectiveness. The student should not be introduced to an accessibility feature and/or accommodation on the day of the assessment.

### **Guidelines for Selecting Appropriate Accessibility Features and Accommodations for ELs**

Because EL status itself is transitional in nature, there are accessibility features and accommodations specific to ELs that provide different degrees and types of linguistic support to ELs as they progress through levels of English language proficiency. Appropriate accessibility features and accommodations enable ELs to more effectively demonstrate their knowledge of the content.

The following process can be used to select accessibility features and accommodations for ELs:

1. The classroom teacher examines the types of support that help a student access the curriculum, and tries them out to determine whether they meet the student's needs: Does the accessibility feature and/or accommodation help the student overcome the barrier posed by his/her developing English language proficiency? Is the student comfortable using the accessibility features and/or accommodation?

The student's teacher should observe the student in the classroom (or range of classrooms/school settings) using the accessibility feature(s) and/or accommodation(s) and inform members of the team of educators as to which accessibility features and/or accommodations are most appropriate and effective.

2. The teacher should document and provide information on a student's use of linguistic accommodations during classroom instruction and assessment.
3. Once classroom information and data are compiled about the student's background, instructional needs, and use of the accessibility features and/or accommodation(s), the educators selecting accessibility features and/or accommodations for the EL can help the classroom teacher and student evaluate whether to continue using the accessibility feature(s) and/or accommodation and/or suggest additional accessibility feature(s) and/or accommodations, supports, or approaches that may be effective for use with the student.

Based on the accessibility feature(s) and/or accommodations used successfully in the classroom, and the list of Allowable Accommodations for ELs on CCRS summative assessments (Table 6), educators can select appropriate accessibility features and/or accommodations for use on the CCRS summative assessments.

These considerations should also be used to match each EL's unique linguistic needs with BIE EL accessibility features and/or accommodations:



**When selecting accessibility features and/or accommodations for ELs, consider the student's:**

- 1. Level of English language proficiency (ELP) on the CCRS ELP test**
  - Beginning, Intermediate, or Advanced
- 2. Literacy development in English and/or the native language**
  - Native language literacy
  - Interrupted schooling/literacy background
- 3. Background factors that impact effective accommodations use**
  - Grade/age
  - Affective filter (i.e., level of student anxiety/comfort with English)
  - Time in U.S. schools

Additional considerations for selecting accommodations include:

1. Level of English language proficiency (ELP) on CCRS ELP test.  
Determine the student's Composite ELP Level based on the overall performance level on the BIE ELP test (Table 8), and select appropriate EL accessibility features and/or accommodations for each content area assessment that is most likely to benefit students at that ELP level.<sup>16</sup>

**Table 8: Composite ELP Levels Linked with Commonly-Used CCRS English Proficiency Assessments<sup>17</sup>**

| WIDA ACCESS for ELLs® English Language Proficiency (ELP) Levels |            | Proficiency Levels on BIE's English proficiency tests (approximate) | Composite ELP Level (Acosta et al., 2008) |
|---|------------|---|---|
| Level 1   | Entering   | Level 1   | Beginning                                 |
| Level 2   | Emerging   | Level 2   |   |
| Level 3   | Developing | Level 3   | Intermediate                              |
| Level 4   | Expanding  | Level 4   |   |
| Level 5   | Bridging   | Level 5   | Advanced                                  |
| Level 6   | Reaching   | Level 6   |   |

### **Guidelines for Matching Accommodations to a Student's Overall ELP Level**

#### *ELs with Beginning ELP*

ELs at the Beginning level have very limited proficiency in reading and writing. These students tend to experience the greatest need for accommodations but are often least equipped to use them. In general, the use of oral supports (in English) is recommended, rather than written accommodations, but even oral accommodations may not produce an effect for students at the lowest proficiency levels.

#### *ELs with Intermediate ELP*

ELs at the Intermediate level typically have developed some literacy in English and can benefit from a wider range of written and oral accommodations. Decision makers should note that the need for accommodations at this level varies considerably depending upon the unique background and characteristics of the student, as well as the literacy demands of the test. Research suggests that native language accommodations, such as bilingual word-to-word dictionaries, as well as English-language

<sup>16</sup> The considerations for determining level of English language proficiency may be modified as states move toward adoption of a common EL definition in the future.

<sup>17</sup> Many States use WIDA ACCESS for ELLs® and ELDA ELP assessments to determine English language proficiency.



accommodations, are useful at the Intermediate level. Where possible, and as needed, it may be beneficial to have the text on the mathematics assessments read aloud to these students. Scribing responses may also be appropriate for these students.

### ELs with Advanced ELP

ELs at the Advanced level would be expected to have a decreased need for most accommodations. Native language support such as bilingual word-to-word dictionaries (and extra time to use them) may be helpful if the EL is literate in his/her native language and has received recent instruction in that language (whether in the United States or abroad).

## **2. Literacy Development in English and/or the Native Language**

Factors that influence the selection of accommodations include the following:

- **Native Language Literacy**

For students with literacy in their native language, consider providing the student with a word-to-word bilingual dictionary, along with extended time in which to use it.

- **Interrupted Schooling/Literacy Background**

For students who have experienced interrupted formal education and, as a result, have comparatively low levels of literacy in both their native language and in English, it is likely that the EL will be more orally-dominant in his/her developing English language proficiency. In this case, consider providing the EL with oral language support accessibility features and/or accommodations that are more likely to benefit ELs at the Beginning ELP, such as verbatim reading of the mathematics assessment.

## **3. Background Factors that Impact Effective Accommodations Use**

Selecting accessibility features and/or accommodations based on the background of the student increases the likelihood that use of the accessibility feature and/or accommodation will be successful. Such factors include: grade/age of student, time in U.S. schools, and the affective needs of the student (i.e., comfort level and/or anxiety with English). In addition, the following may also impact a student's ability to use and benefit from EL accommodations:

- Students who have recently arrived in the U.S. will need to gain familiarity with U.S. testing practices and expectations.
- Anxiety can increase the student's "affective filter" and adversely impact test performance.
- Older students may refuse an accessibility feature and/or accommodation because they do not want to draw attention to themselves in front of classmates for receiving special attention or consideration.

### **Eligibility for EL Accommodations**

Only students currently classified as ELs (or EL, LEP) are eligible to receive accommodations designated for ELs on CCRS summative assessments, including students classified as ELs whose parent/guardian has refused language support program services. Refer to Section 3 for accommodations that are allowable on CCRS summative assessments for ELs.

### **Selecting Accessibility Features and/or Accommodations for ELs with Disabilities**

ELs with disabilities are eligible for accessibility features and/or accommodations allowed for ELs, as well as accessibility features and/or accommodations allowed for students with disabilities. The IEP team or 504 Plan Coordinator should collaborate with school EL (i.e., language) staff and evaluation professionals to determine the English language development needs of an EL with an identified disability.



Making assessment accessibility features and accommodations decisions in isolation can result in providing inappropriate access to the student. Therefore, an EL staff familiar with the student should be a member of, or collaborate with, the IEP team or 504 Plan Coordinator in order to:

- Determine the appropriate accommodation(s) that address both the student's linguistic needs and disability;
- Discuss the effective implementation of the accommodations; and
- Determine the effectiveness of such accommodations.

#### **Step 4: Administer Accessibility Features and Accommodations during Assessments**

##### **Planning to Administer Accessibility Features and Accommodations during CCRS Summative Assessments**

Once decisions have been made about which accessibility features and accommodations will be provided, the logistics of providing the accessibility features and accommodations during CCRS summative assessments must be coordinated well ahead of the test administration. It is important to engage the appropriate personnel in planning the logistics regarding the provision of assessment accessibility features and accommodations on test day. Student accommodation layout file information should be compiled with the names of students, the accessibility features and/or accommodations they require, test locations, and staff responsible for administering tests with accessibility features and accommodations. Special educators and English language educators are often given the responsibility for arranging, coordinating, and providing assessment accessibility features and/or accommodations in a school and to assist general educators in understanding how to properly provide specific accessibility features and/or accommodations. It is essential for Test Administrators to know and understand the requirements for providing accessibility features and/or accommodations on CCRS summative assessments. Staff must adhere to specific guidelines for correctly administering accessibility features and accommodations to the correct students so that scores are valid. Test Administrators should also anticipate whether a student will be allowed extra time to complete the test once the official testing time is ended.

For the CCRS summative assessments, school or district staff will need to enter data into a student's accommodation layout file in advance of testing to enable all necessary accessibility features and accommodations and ensure they are provided on test day. Finally, it is important to monitor the provision of accessibility features and accommodations on test day to ensure that they are delivered properly and that the technology is operating appropriately.

##### **Involving Students in Using Accommodations**

The more students are involved in the accommodation selection process, the more likely the accommodations will be used, especially as students reach adolescence and the desire to be more independent increases. Students need self-advocacy skills to learn how to make certain those accommodations are provided on the assessments, in instructional settings, and outside of school. Teachers and other team members can play a key role in working with students to advocate for themselves in the context of using their accommodations.

##### **Introducing Students to Accessibility Features and Accommodations**

Whether a student has a specific accessibility need, a disability, is an EL, or all of the above, accessibility features and accommodations should be introduced to students long before the CCRS summative assessments are administered, during routine instruction to determine their effectiveness. Typically, accessibility features and accommodations should never be used for the first time on an assessment.

It is highly recommended that students who need accessibility features and accommodations on the CCRS summative assessments be provided time to interact with the accessibility features and/

or accommodations on the available practice assessments. Allowing this practice time will help the student learn to use the accessibility features and/or accommodation in a new environment and can help determine if the available accessibility features and/or accommodations are effective for the student.

### **Step 5: Evaluate and Improve Accessibility Features and Accommodations Use**

It will be necessary to collect and analyze data on the use and effectiveness of accessibility features and accommodations to ensure that the participation of all students in assessments is meaningful, and to carefully document decisions and information on the selection, use, and evaluation of accessibility features and accommodations. Data on the use and impact of accessibility features and accommodations during assessments may support continuing use while rethinking others, and may also reveal patterns of accommodation use in a school or district. Examination of the data may also indicate areas in which the IEP teams, 504 Plan Coordinators, and EL educators and/or Test Administrators need additional training and support.

Observations conducted during test administration, interviews with Test Administrators, and talking with students after testing is likely to yield data that can be useful in guiding the formative evaluation process of accessibility features and accommodations use at the school, district, and student levels. Information on the use of accessibility features and accommodations is collected through the student accommodation layout file along with other demographic information in BIE. The following questions should guide the analysis of accessibility features and accommodations data at the school, district, and student level.

### **Questions to Guide Evaluation of Accessibility Features and Accommodations Use at the School and District Levels**

1. Are procedures in place to ensure that test administration procedures are not compromised due to provision of accessibility features and accommodations?
2. Are students receiving accessibility features and accommodations as documented in their IEP, 504 plan, EL plan (if applicable), or other documentation used for ELs?
3. Are procedures in place to ensure that Test Administrators comply with directions for the administration of accessibility features and accommodations?
4. What is the frequency of use of different types of accessibility features and accommodations?

### **Questions to Guide Evaluation at the Student Level**

1. What accessibility features and accommodations are used by the student during instruction and assessments?
2. What are the results of classroom assignments and assessments when accessibility features and accommodations are used versus when accessibility features and accommodations are not used?
3. If the student is not meeting the expected levels of performance, is it because he or she is not receiving access to the necessary instruction; did not receive the accessibility feature and/or accommodation; or is using an accessibility feature and/or accommodation that was not effective?
4. What is the student's perception of how well the accessibility feature and/or accommodation worked?
5. What combination of accessibility features and/or accommodations seems to be effective?
6. What are the perceptions of teachers, parents, and others about how the accessibility feature and/or accommodation appears to be working?
7. What difficulties, if any, were encountered in the use of the accessibility feature(s) and/or accommodation(s)?

The responses to these questions can guide an ongoing (formative) process to evaluate the use and effectiveness of accessibility features and accommodations used by students. It is critical that, to the



extent possible, all individuals involved in selection and delivery be involved in gathering information and making subsequent decisions on whether to continue, modify, or discontinue the use of an accessibility feature and/or accommodation.

Gathering information on selected accessibility features accommodations use on technology-based assessments will be accomplished largely through the collection of information on each student's accommodation layout file. However, educators and teams at the local level may have additional questions they want researched based on the collection of this data, which will assist in applying district- and school-based resources effectively in the future.

## Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based CCRS Summative Assessments

### Students who may participate in a Paper-Based CCRS Summative Assessment

Although CCRS summative assessments are computer-based using an online testing platform, there may be specific instances which require a student to take a paper-based assessment instead. The following conditions may result in a school choosing to administer a paper-based assessment:

- Condition #1: A student is unable to use a computer due to the impact of his or her disability. The student's inability to participate in computer-based assessments should be documented in an Individualized Education Program (IEP) or 504 plan.
  - Examples may include:
    - A student with a disability who cannot participate in the online assessment due to a health-related disability, neurological disorder, or other complex disability, and/or cannot meet the demands of a computer-based test administration;
    - A student with an emotional, behavioral, or other disability who is unable to maintain sufficient concentration to participate in a computer-based test administration, even with test accommodations;
    - A student with a disability who requires assistive technology that is not compatible with the testing platform.
- Condition #2: A student who recently entered the school and has had very little or no prior experience or familiarity with technology.
- Condition #3: The school is providing paper-based assessments for its students as the primary mode of administration.
- Condition #4: A student who is unable to access an online assessment due to religious beliefs.

There are a few accessibility features that must be pre-selected for the student in the student accommodation layout file. Accommodations for students with disabilities and/or ELs must be pre-selected for the student in the student accommodation layout file. When needed for the paper-based accessibility feature or accommodation, this information is included in the "before testing" guidance and the corresponding column in the student accommodation layout file is also provided.

Refer to the *BIE Accessibility Features and Accommodations Manual* for additional information concerning test administration considerations, accessibility features, and accommodations.

**Table A1: Accessibility Features for All Students Taking Paper-Based Assessments**

Table A1 includes Features for All Students & Accessibility Features Identified in Advance.

| CBT Comparable Accessibility Feature | PBT Accessibility Feature | PBT Administration Guidelines   |
|--------------------------------------|---------------------------|---|
| Audio Amplification                  | Auditory Aids             | <p><b>Before Testing:</b> The student brings familiar auditory aid to the test administration.</p> <p><b>During Testing:</b> The student uses amplification device assistive technology (e.g. FM System), noise buffers, or white noise machines (provided by the school or student).</p> |

| CBT Comparable Accessibility Feature  | PBT Accessibility Feature                      | PBT Administration Guidelines  |
|---|--|--|
| <b>Bookmark</b>   | <b>Place Markers (Visual Aids/ Organizers)</b> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li><u>Materials:</u> Test Administrator provides student with place markers.</li> </ul> <p><b>During Testing:</b> The student uses non-sticky place markers to “bookmark” items to review later. All place markers <u>must</u> be removed before test booklet or answer document is submitted for scoring.</p>   |
| <b>Blank Scratch Paper</b><br>(provided by Test Administrator)  | <b>Same as CBT</b>                             | <p><b>Before Testing:</b> Test Administrators must supply at least one page of blank scratch paper (i.e., either unlined, lined, or graph) per student, per unit. If graph paper is used during mathematics instruction, it is recommended that schools provide graph paper as scratch paper for mathematics units. Students with visual impairments may also use braille paper, raised line paper, bold line paper, raised line graph paper, bold line graph paper, abacus, or Math Window.</p> <p><b>During Testing:</b> The student uses blank scratch paper (lined, un-lined, or graph) to take notes and/or work through items during testing. Additional pages may be provided as needed. Students are not required to write their names on scratch paper.</p> <p><b>After Testing:</b> Test Administrators are responsible for collecting ALL scratch paper after testing is completed to be securely destroyed. Scratch paper must be securely shredded if it has been used. Schools may reuse unused scratch paper only if paper is completely blank.</p> |
| <b>Eliminate Answer Choices</b>   | <b>Writing Instrument</b>                      | <p><b>During Testing:</b> The student may use removable markers (e.g. small strips of paper) to indicate that they are eliminating an answer. Placing any stray marks in the answer area may conflict with accurate scoring.</p> <p><b>After Testing:</b> The Test Administrator ensures no small strips of paper are still in the booklets.</p>   |
| <b>General Administration Directions Read Aloud and Repeated as Needed</b><br>(by Test Administrator) | <b>Same as CBT</b>                             | <p><b>During Testing:</b> The Test Administrator reads aloud the general administration directions only. A student may raise his or her hand and request the directions be repeated.</p>   |
| <b>General Administration Directions Clarified</b><br>(by Test Administrator)                         | <b>Same as CBT</b>                             | <p><b>During Testing:</b> The Test Administrator clarifies general administration directions only. No passages or test items may be clarified.</p>   |

| CBT Comparable Accessibility Feature                    | PBT Accessibility Feature                     | PBT Administration Guidelines  |
|---|---|--|
| Highlight Tool  | Highlighter                                   | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li><u>Materials:</u> Test Administrator provides student with highlighter(s). Multiple colors may be provided.</li> </ul> <p><b>During Testing:</b> The student highlights text as needed to recall and/or emphasize. Multiple colors may be provided.</p>   |
| Headphones or Noise Buffers                             | Same as CBT                                   | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li><u>Materials:</u> Test Administrator provides student with headphones.</li> </ul> <p><b>During Testing:</b> The student uses headphones or noise buffers to minimize distraction or filter external noise during testing. If headphones are used only as noise buffers, they should not be plugged into the student's device.</p>   |
| Line Reader Mask Tool                                   | Straight Edge<br>(Visual Aids/<br>Organizers) | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li><u>Materials:</u> Test Administrator provides student with blank straight edge.</li> </ul> <p><b>During Testing:</b> The student uses a blank straight edge as he or she reads and follows along with the text.</p>   |
| Magnification/<br>Enlargement Device                    | Magnification/<br>Enlargement<br>Device       | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li><u>Materials:</u> Test Administrator provides student with magnification/enlargement device.</li> </ul> <p><b>During Testing:</b></p> <ul style="list-style-type: none"> <li>The student uses external magnification or enlargement devices to increase the font or graphic size (e.g., projector, CCTV, eye-glass mounted or hand-held magnifiers, electronic magnification systems, etc.).</li> </ul> |
| Note Pad  | Blank Scratch Paper                           | See Blank Scratch Paper  |
| Pop-up Glossary   | Glossary in Footnotes                         | <b>During Testing:</b> The student refers to a glossary of pre-selected, construct-irrelevant words in the footnotes of the paper-based test.  |
| Redirect Student to the Test<br>(by Test Administrator) | Same as CBT                                   | <b>During Testing:</b> The Test Administrator redirects the student's attention to the test without coaching or assisting the student in any way. There is no limit to the number of times a Test Administrator can redirect a student back to the test. Examples: Providing reminders to stay on task and focused during the assessments; Providing a visual cue to the student to remain on task.  |
| Spell Check or External Spell Check Device              | External Spell Check Device                   | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li><u>Materials:</u> Test Administrator provides student with external spell check device.</li> </ul> <p><b>During Testing:</b> The student uses an external spell check device. Device may not have embedded grammar check, connect to the internet, or save information.</p>   |





| CBT Comparable Accessibility Feature | PBT Accessibility Feature | PBT Administration Guidelines  |
|--------------------------------------|---------------------------|--|
| Writing Tools                        | Writing Instrument        | <b>During Testing:</b> The student uses a writing instrument on written responses to underline, bold, or add bullets for formatting. |

### Administrative Considerations for All Students

Detailed guidelines on the administration of the CCRS summative assessments will be included in the *Test Administrator Manuals* and the *Test Coordinator Manuals*.

Although students are generally tested in their regular classroom and follow the standard test administration schedule for the grade and content area being assessed, the principal has the authority to schedule students in testing spaces other than regular classrooms, and at different scheduled times, as long as all requirements for testing conditions and test security are met as set forth in the *Test Administrator Manuals* and *Test Coordinator Manuals*. Decisions may be considered, for example, that benefit students who are easily distracted in large group settings by testing them in a small group or individual setting. In general, changes to the timing, setting, or conditions of testing are left to the discretion of the principal or test coordinator.

In accordance with principles of universal design for assessment, BIE is providing the following administrative guidance regarding the timing and scheduling of assessments, and setting/locations for testing. These administrative considerations are available to all students. The principal may determine that any student can receive one or more of the following test administration considerations, regardless of the student's status as a student with a disability or EL.

**Table A2: Administrative Considerations for All Students Taking Paper-Based Assessments, at School's Discretion**

| PBT Administrative Consideration                       | Description   |
|--|---|
| <b>Student Reads Assessment Aloud to Self</b>          | <b>During Testing:</b> The student reads aloud the assessment to themselves. Students may use an external device such as a whisper phone. The student must be tested in a separate setting.   |
| <b>Small Group Testing</b>                             | Student is tested in a separate location with a small group of students with matching accessibility features, accommodations, or testing needs as appropriate. Check BIE policies on the maximum number of students allowed in a small testing group. |
| <b>Time of Day</b>                                     | Student is tested during a specific time of day based on their individual needs (e.g., ELA/literacy in the morning; no testing after lunch).  |
| <b>Separate or Alternate Location</b>                  | Student is tested in a specifically assigned location.  |
| <b>Specified Area or Setting</b>                       | Student is tested in a specialized area or setting (e.g., front of the classroom, seat near the door, library, etc.).   |
| <b>Adaptive and specialized equipment or furniture</b> | Student is provided specialized equipment or furniture needed for a successful testing environment (e.g., low lighting; adaptive seat).   |



| PBT Administrative Consideration | Description  |
|----------------------------------|--|
| <b>Frequent breaks</b>           | <p>Guidance on logistics for administrating the CCRS summative assessments with frequent breaks:</p> <ul style="list-style-type: none"> <li>• <i>Medical Breaks</i>: Student takes a break due to pre-existing or sudden onset of a temporary or long-term medical condition. Student's testing time stops.</li> <li>• <i>Individual Bathroom Breaks</i>: Student requests a bathroom break within their overall allotted testing time. Student's testing time does not stop.</li> <li>• <i>In-Chair Stretch Break</i>: Student pauses and stretches. Student's testing time does not stop.</li> <li>• <i>Other Frequent Breaks</i>, according to BIE policy.</li> </ul> |

**Table A3: Presentation Accommodations for Students with Disabilities Taking Paper-Based Assessments**

| CBT Comparable Accommodation                  | PBT Accommodation                                      | PBT Administration Guidelines  |
|---|--|--|
| <b>Answer Masking</b>                         | <b>External Masking Cards (Visual Aids/Organizers)</b> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodations will list "Answer Masking" in Pearson Access.</li> <li>• <u>Materials</u>: Test Administrator provides student with blank masking cards.</li> </ul> <p><b>During Testing:</b> The student may cover or uncover answer options with external blank masking cards as needed.</p> |
| <b>Color Contrast (Background/Font Color)</b> | <b>Colored Overlays</b>                                | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodations will list "Colored Overlay" in Pearson Access.</li> </ul> <p><b>During Testing:</b> The student uses colored overlays when taking the assessment. The color is pre-selected and should match what is currently used during instruction.</p>                                    |



| CBT Comparable Accommodation   | PBT Accommodation                                | PBT Administration Guidelines   |
|--|--|---|
| <b>Assistive Technology</b><br><i>(Non-Screen Reader)</i>                                | <b>Assistive Technology</b><br><i>(external)</i> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodations will list "Assistive Technology Non Screen Reader" in Pearson Access.</li> </ul> <p><b>During Testing:</b> Students may use a range of assistive technologies on the CCRS summative assessments, including those that are used externally on a separate computer.</p> <p><b>After Testing:</b> Test Administrators are responsible for collecting all nonscorable student work created from assistive technology devices. Content must be cleared off all devices. Paper nonscorable student work must be securely shredded. Responses must be transcribed verbatim by a test administrator in a standard student test booklet or answer document. Only transcribed responses will be scored.</p> <p>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</p> |
| <b>Screen Reader Version</b><br><i>(for a student who is blind or visually impaired)</i> | <b>Hard Copy Braille Edition</b>                 | See Hard Copy Braille Edition   |
| <b>Refreshable Braille Display with Screen Reader Version for ELA/Literacy</b>           | <b>Hard Copy Braille Edition</b>                 | See Hard Copy Braille Edition   |

| CBT Comparable Accommodation | PBT Accommodation         | PBT Administration Guidelines   |
|------------------------------|---------------------------|---|
| Hard Copy Braille Edition    | Hard Copy Braille Edition | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student’s accommodations will list “Braille Tactile Graphics” in Pearson Access.</li> <li>• <b>Materials:</b> Braille Kits are required for administration. Braille Kits include Test Administrator Braille Scripts, one copy of the student’s Hard Copy Braille Assessment, standard test booklet or answer document for transcription, and supplementary math materials (braille ruler, braille protractor) where appropriate.</li> <li>• <b>Test Administrator Training:</b> Test Administrators of students with visual impairments must review: <ul style="list-style-type: none"> <li>○ Braille Kits, which will be provided to schools at least two full school days prior to testing<sup>18</sup> in a SECURE ENVIRONMENT for the Test Administrator to verify that the braille code (e.g., English Braille American Edition (EBAE) and Unified English Braille (UEB)) is accurate on the test booklet cover and review the braille test administration scripts, including information specific to administering paper-based braille. BIE may have additional guidance located in BIE policy regarding the number of days Test Administrators may access materials prior to testing (refer to <b>Appendix C</b> of the <i>Test Coordinator Manual</i>). Braille notes are inserted behind the cover of the first volume of the Braille test. <b>Important:</b> Reading, viewing, copying, or reproducing passages or test items is prohibited.</li> <li>○ <a href="#">Appendix L: CCRS Summative Assessments for Students with Visual Impairment, Including Blindness.</a></li> <li>○ If needed by the student, braille test booklets or answer documents may be disassembled for testing (but must be reassembled for return). It is critical that Test Administrators count the number of pages in the test booklet or answer document prior to disassembling the test booklets or answer documents to help ensure that all pages are returned.</li> </ul> </li> </ul> |

<sup>18</sup> Refer to your state policy on the official number of days schools can review secure test materials.



| CBT Comparable Accommodation | PBT Accommodation | PBT Administration Guidelines   |
|------------------------------|-------------------|---|
|                              |                   | <p><b>During Testing:</b> A student who is blind or has a visual impairment and is unable to take the computer-based test with a refreshable braille display may take the ELA/ literacy and mathematics assessments using the hard copy contracted braille edition.</p> <p>Tactile graphics are already embedded in the hard copy braille edition. For students using braille forms, the Test Administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed verbatim by a Test Administrator in a standard student test booklet or answer document, which is included in the Braille Test Kit. Only transcribed responses will be scored.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> <li>• Test Administrators are responsible for collecting all nonscorable student work created from assistive technology devices. Content must be cleared off all devices. Nonscorable student work must be securely shredded.</li> <li>• If the braille test booklet or answer document was disassembled, it must be reassembled for return. To reassemble test booklets or answer documents, the Test Administrator may staple or binder clip all pages for return. Failure to return all pages will be considered a breach of security.</li> </ul> |
| Tactile Graphics             | Tactile Graphics  | <p><b>Before Testing:</b> Refer to Table 3d “Refreshable Braille Display with Screen Reader Version for ELA/Literacy” for details.</p> <p><b>During Testing:</b> Tactile graphics will be embedded in the hard copy braille edition assessments, when needed.</p> <p><b>After Testing:</b> Tactile graphics booklets contain secure item content and should be handled as secure test materials. Test Administrators should return tactile graphics to Test Coordinators. Test Coordinators must return tactile graphics with the nonscorable materials.</p>  |

| CBT Comparable Accommodation | PBT Accommodation   | PBT Administration Guidelines   |
|------------------------------|---------------------|---|
| Large Print Edition          | Large Print Edition | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodation will list "Large Print" in Pearson Access.</li> <li>• <u>Materials:</u> Large Print Test Kit includes a large print assessment booklet, standard test booklet or answer document for transcription, Test Administrator large print scripts and supplementary large print mathematics materials (large print ruler &amp; protractor), when appropriate.</li> <li>• <u>Test Administrator Training:</u> Test Administrators of students with visual impairments must review: <ul style="list-style-type: none"> <li>○ <a href="#">Appendix L: CCRS Summative Assessments for Students with Visual Impairment, Including Blindness.</a></li> <li>○ <a href="#">Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based CCRS Summative Assessments.</a></li> </ul> </li> </ul> <p><b>During Testing:</b> A large print paper-based form of each assessment is available for a student with a visual impairment who is unable to take a computer-based assessment. The font size for the BIE large print edition will be 18 point on paper sized 14" x 18". Students will not record their answers in standard print test booklets or answer documents. Instead, students will circle their answers in a large print test booklet. For constructed response items, students will write their answers on the lines provided in their large print test booklets. In mathematics, students will need to write their answers in boxes at the top of the answer grids, but they do not need to bubble in their answers. Test Administrators should refer to the Test Administrator Manual (TAM) Scripts for instances where they should demonstrate an activity or display information. Demonstrations should be conducted where they are visible for each student (e.g., on the board, near the student).</p> |



| CBT Comparable Accommodation                                       | PBT Accommodation            | PBT Administration Guidelines  |
|--|------------------------------|--|
|  |                              | <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>Responses must be transcribed verbatim by a Test Administrator in a standard student test booklet or answer document, which is included in the Large Print Test Kit. Only transcribed responses will be scored. At least two persons must be present during transcription of student responses (one transcriber and one observer confirming accuracy). It is recommended that one of the individuals be an LEA or School Test Coordinator.</li> <li>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> </ul>   |
| Paper-Based Edition  | Paper-Based Edition          | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodation will list "Alternate Representation Paper Test" in Pearson Access..</li> <li><b>Materials:</b> Paper-Based Edition of the assessment</li> <li><b>Test Administrator Training:</b> Test Administrators must review the following appendix for accessibility features and accommodations in a paper-based environment: <ul style="list-style-type: none"> <li><a href="#">Appendix A: Accessibility Features and Accommodations for Students Taking the Paper-Based CCRS Summative Assessments</a>.</li> </ul> </li> </ul> <p><b>During Testing:</b> For schools administering the computer-based assessments, a paper-based assessment is available for students who are unable to take a computer-based assessment due to a disability.</p> |
| Closed Captioning of Multimedia on the ELA/Literacy Assessments    | N/A                          | N/A  |
| American Sign Language (ASL) Video for the Mathematics Assessments | Human Signer for Mathematics | See Human Signer for Mathematics   |

| CBT Comparable Accommodation  | PBT Accommodation | PBT Administration Guidelines   |
|---|-------------------|---|
| <b>Human Signer for Test Directions</b><br><i>(No ASL Video Option)</i> | Same as CBT       | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodations will list "Human Signer" in Pearson Access.</li> <li><u>Test Administrator Training:</u> Human Signers must review: <ul style="list-style-type: none"> <li>Test Administrator Scripts included in the <i>Test Administrator Manuals</i>.</li> <li><a href="#">Appendix K: Human Signer Guidelines</a> (signer only).</li> </ul> </li> </ul> <p><b>During Testing:</b> A human signer will sign the test directions to a student. The student may either be tested in a small group or a separate setting based on the student's experiences during classroom assessments.</p> |

**Table A4: Response Accommodations for Students with Disabilities Taking Paper-Based Assessments**

| CBT Comparable Accommodation                              | PBT Accommodation                                | PBT Administration Guidelines  |
|---|--|--|
| <b>Assistive Technology</b><br><i>(Non-Screen Reader)</i> | <b>Assistive Technology</b><br><i>(external)</i> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"><li>• Student's accommodations will list "Assistive Technology Non Screen Readers" in Pearson Access.</li></ul> <p><b>During Testing:</b> Students may use a range of assistive technologies on the CCRS summative assessments, including those that are used externally on a separate computer.</p> <p><b>After Testing:</b> Test Administrators are responsible for collecting all nonscorable student work created from assistive technology devices. Content must be cleared off all devices. Paper nonscorable student work must be securely shredded. Responses must be transcribed verbatim by a test administrator in a standard student test booklet or answer document. Only transcribed responses will be scored.</p> <p>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</p> |



| CBT Comparable Accommodation | PBT Accommodation  | PBT Administration Guidelines   |
|------------------------------|--------------------|---|
| Braille Note-taker           | Braille Note-taker | <p><b>During Testing:</b> A student who is blind or has a visual impairment may use an electronic braille note-taker. The grammar checker, internet, and stored file functionalities must be turned off. For students using braille forms, Test Administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>Student responses generated using an electronic braille note-taker must be transcribed verbatim by a Test Administrator into the student's standard student booklet. Only transcribed responses will be scored. Responses must be transcribed by a teacher of the visually impaired or a Test Administrator supervised by a teacher of the visually impaired.</li> <li>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li>Test Administrators are responsible for collecting all nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul> |
| Braille Writer               | Braille Writer     | <p><b>During Testing:</b> A student who is blind or has a visual impairment may use a braille writer. For CCRS summative assessments, grammar checker, internet, and stored file functionalities must be turned off. For students using braille forms, Test Administrator directions for filling in a circle, making marks, and erasing do not apply. Students should number their responses to be sure that their answers can be transcribed accurately into a scorable test booklet or answer document.</p>   |



| CBT Comparable Accommodation  | PBT Accommodation   | PBT Administration Guidelines  |
|---|---|--|
|   |   | <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>Student responses generated using an electronic braille notetaker must be transcribed verbatim by a Test Administrator into the student's standard test booklet or answer document. Only transcribed responses will be scored. Responses must be transcribed either by a teacher of the visually impaired or a Test Administrator supervised by a teacher of the visually impaired.</li> <li>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li>Test Administrators are responsible for collecting all nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul>        |
| <p><b>Calculation Device</b><br/>(on <i>Calculator Sections of Mathematics Assessments</i>)</p> | <p><b>Calculation Device</b><br/>(on <i>Calculator Sections of Mathematics Assessments</i>)</p> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li><u>Materials:</u> <ul style="list-style-type: none"> <li>Allowable calculators for the calculator accommodation on calculator sections: <ul style="list-style-type: none"> <li><u>Grades 3-5:</u> Four-function with square root and percentage functions.</li> <li><u>Grade 6-7:</u> Four-function with square root and percentage functions.</li> <li><u>Grade 8:</u> Scientific calculators (Student may also bring a four-function with square root and percentage functions in addition to a grade-level calculator).</li> <li><u>High School:</u> Graphing calculators with functionalities consistent with TI-84 or similar models (Student may also bring a scientific calculator or a four-function with square root and percentage functions).</li> </ul> </li> </ul> </li> </ul> |

| CBT Comparable Accommodation  | PBT Accommodation   | PBT Administration Guidelines   |
|---|---|---|
|   |   | <p><b>During Testing:</b> A student uses a specific calculation device (e.g., large key, talking, or other adapted calculator) other than the embedded grade-level calculator on the calculator section of the mathematics assessments. If a talking calculator is used, the student must use headphones or be tested in a separate setting.</p>  |
| <p><b>Calculation Device and Mathematics Tools</b><br/>(on <u>Non-Calculator Sections</u> of Mathematics Assessments)</p> | <p><b>Calculation Device and Mathematics Tools</b><br/>(on <u>Non-Calculator Sections</u> of Mathematics Assessments)</p> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li> <b>Purpose:</b> The purpose of the calculation device on the non-calculator sections accommodation is to provide access for students with a disability that <i>severely limits or prevents</i> their ability to perform basic calculations (i.e., student is unable to perform single-digit addition, subtraction, multiplication, or division). Specific guidelines for determining if this accommodation would be appropriate for a specific student, see the next page. For these students, a calculation device may be used on the non-calculator AND calculator sections of the mathematics assessments. The IEP or Section 504 plan must specify which device(s) or manipulatives.         </li> <li>Any mathematical tools not included on the list may require BIE approval, depending on BIE policies. Check with your district/BIE contact if you have questions.</li> <li> <b>Materials:</b> <ul style="list-style-type: none"> <li>Allowable calculators for the calculator accommodation on non-calculator sections:             <ul style="list-style-type: none"> <li><b>Grades 3-5:</b> Four-function with square root and percentage functions.</li> <li><b>Grade 6-7:</b> Four-function with square root and percentage functions.</li> <li><b>Grade 8:</b> Scientific calculators (Student may also bring a four-function with square root and percentage functions in addition to a grade-level calculator).</li> </ul> </li> </ul> </li> </ul> |



| CBT Comparable Accommodation | PBT Accommodation | PBT Administration Guidelines   |
|------------------------------|-------------------|---|
|                              |                   | <ul style="list-style-type: none"> <li>▪ <u>High School</u>: Graphing calculators with functionalities consistent with TI-84 or similar models (Student may also bring a scientific calculator or a four-function with square root and percentage functions).</li> <li>○ Allowable mathematics tools include:             <ul style="list-style-type: none"> <li>▪ Arithmetic tables (e.g., addition charts, subtraction charts, multiplication charts; division charts).</li> <li>▪ Two-color chips (e.g., single-sided or double-sided).</li> <li>▪ Counters and counting chips.</li> <li>▪ Abacus.</li> <li>▪ Square tiles.</li> <li>▪ Base 10 blocks.</li> <li>▪ 100s chart.</li> </ul> </li> <li>○ A student with a visual impairment may need other mathematics tools, such as a large print ruler (embedded BIE ruler is designed in 18 point font), braille ruler, tactile compass, or braille protractor. Note that braille mathematics kits will include the appropriate grade-level braille ruler and braille protractors.</li> </ul> <p><b>During Testing:</b> A student uses a calculation device (e.g., four-function calculator, large key, or other adapted calculator), arithmetic table (including addition/ subtraction and/or multiplication/division charts), and/or manipulatives (IEP or Section 504 plan must specify which device or manipulative) on the non-calculator sections of the mathematics assessments. If a talking calculator is used, the student must use headphones or be tested in a separate setting.</p> |

| CBT Comparable Accommodation | PBT Accommodation | PBT Administration Guidelines   |
|------------------------------|-------------------|---|
|                              |                   | <p><b>Important Guidelines for identifying students to receive this accommodation:</b></p> <p>IEP teams and Section 504 Plan Coordinators should carefully review the following guidelines before identifying students to receive this accommodation.</p> <p>In making decisions whether to provide the student with this accommodation, IEP teams and Section 504 Plan Coordinators should consider whether the student has:</p> <ul style="list-style-type: none"> <li>• A disability that <i>severely limits or prevents</i> the student's ability to perform basic calculations (i.e., single-digit addition, subtraction, multiplication, or division), even after varied and repeated attempts to teach the student to do so.</li> </ul> <p>Before listing the accommodation in the student's IEP/Section 504 plan, teams should also consider whether:</p> <ul style="list-style-type: none"> <li>• The student is unable to perform calculations without the use of a calculation device, arithmetic table, or manipulative during routine instruction.</li> <li>• The student's inability to perform mathematical calculations is documented in evaluation summaries from locally-administered diagnostic assessments.</li> <li>• The student receives ongoing, intensive instruction and/or interventions to learn to calculate without using a calculation device, in order to ensure that the student continues to learn basic calculation and fluency.</li> </ul> <p>For a student who receives this accommodation, no claims should be inferred regarding the student's ability to perform basic mathematical calculations without the use of a calculator.</p> |



| CBT Comparable Accommodation   | PBT Accommodation   | PBT Administration Guidelines  |
|--|---|--|
| <p><b>ELA/Literacy Selected Response Options<sup>19</sup></b></p> <ul style="list-style-type: none"> <li>• Speech-to-Text</li> <li>• Human Scribe</li> <li>• Human Signer</li> <li>• Assistive Technology Device</li> </ul> <p><b>Mathematics Response Options</b></p> <ul style="list-style-type: none"> <li>• Speech-to-Text</li> <li>• Human Scribe</li> <li>• Human Signer</li> <li>• Assistive Technology Device</li> </ul> | <p><b>ELA/ Literacy Selected Response Options<sup>19</sup></b></p> <ul style="list-style-type: none"> <li>• Speech-to-Text</li> <li>• Human Scribe</li> <li>• Human Signer</li> <li>• Assistive Technology Device</li> </ul> <p><b>Mathematics Response Options</b></p> <ul style="list-style-type: none"> <li>• Speech-to-Text</li> <li>• Human Scribe</li> <li>• Human Signer</li> <li>• Assistive Technology Device</li> </ul> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Accommodation will list Speech-to-Text, Human Scribe, Human Signer, or External Assistive Technology Device in Pearson Access.</li> <li>• <b>Test Administrator Training:</b> Test Administrators providing the scribe accommodation must review: <ul style="list-style-type: none"> <li>○ <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li>○ <a href="#">Appendix K: Human Signing Guidelines</a> (signers only).</li> </ul> </li> <li>• <b>Note:</b> Check BIE policy in Appendix C of the Test Coordinator Manual to see if there are additional requirements for the use of the Human Scribe accommodation for ELA/Literacy.</li> </ul> <p><b>During Testing:</b> Student dictates responses either verbally, using an external speech-to-text device, an augmentative/assistive communication device (e.g., picture/word board), or by dictating, signing, gesturing, pointing, or eye-gazing. The student must be tested in a separate setting. The student must be familiar with any assistive technology external device used for test administration.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> <li>• Test Administrators are responsible for collecting all paper nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul> |

<sup>19</sup> This accommodation applies to Evidence Based Selected Response, and Technology Enhanced Constructed Response items (not Prose Constructed Response items) on the English/language arts (ELA/L) assessments.

| CBT Comparable Accommodation  | PBT Accommodation   | PBT Administration Guidelines  |
|---|---|--|
| <b>ELA/Literacy Constructed Response Options<sup>20</sup></b> <ul style="list-style-type: none"> <li>Speech-to-Text</li> <li>Human Scribe</li> <li>Human Signer</li> <li>Assistive Technology Device</li> </ul> | <b>ELA/Literacy Constructed Response Options<sup>20</sup></b> <ul style="list-style-type: none"> <li>Speech-to-Text</li> <li>Human Scribe</li> <li>Human Signer</li> <li>Assistive Technology Device</li> </ul> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Accommodation must list "Speech-to-Text", "Human Scribe", "Human Signer", or "External Assistive Technology Device" in Pearson Access.</li> <li><u>Materials</u>: External device provided by the student, if needed.</li> <li><u>Test Administrator Training</u>: Test Administrators providing the scribe accommodation must review: <ul style="list-style-type: none"> <li><a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li><a href="#">Appendix K: Human Signing Guidelines</a> (signers only).</li> </ul> </li> <li><b>Note</b>: Check BIE policy in <b>Appendix C</b> of the <i>Test Coordinator Manual</i> to see if there are additional requirements for the use of the Human Scribe accommodation for ELA/Literacy.</li> </ul> <p><b>During Testing:</b> Student dictates responses either verbally, using an external speech-to-text device, an augmentative/assistive communication device (e.g., picture/word board), or by dictating, signing, gesturing, pointing, or eye-gazing. The student must be tested in a separate setting. The student must be familiar with any assistive technology external device used for test administration. <b>Note: TestNav does not have embedded Speech-to-Text functionality - students must use allowable Assistive Technology or an external third party device (responses must be transcribed).</b></p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored.</li> <li>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> <li>Test Administrators are responsible for collecting all nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul> |

<sup>20</sup> This accommodation applies to Prose Constructed Responses on the ELA/literacy assessments.



| CBT Comparable Accommodation | PBT Accommodation            | PBT Administration Guidelines  |
|------------------------------|------------------------------|--|
|                              |                              | <p><b>Important Guidelines for identifying students to receive these accommodations:</b></p> <p>IEP teams and Section 504 Plan Coordinators should carefully review the following guidelines before identifying a student to receive this accommodation. In making decisions whether to provide the student with this accommodation, IEP teams and Section 504 Plan Coordinators should consider whether the student has:</p> <ul style="list-style-type: none"> <li>• A physical disability that <i>severely limits or prevents</i> the student's motor process of writing through keyboarding;</li> </ul> <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> <li>• A disability that <i>severely limits or prevents</i> the student from expressing written language, even after varied and repeated attempts to teach the student to do so.</li> </ul> <p>Before listing the accommodation in the student's IEP or Section 504 plan, teams/coordinators should also consider whether:</p> <ul style="list-style-type: none"> <li>• The student's inability to express in writing is documented in evaluation summaries from locally-administered diagnostic assessments;</li> <li>• The student routinely uses a scribe for written assignments; and</li> <li>• The student receives ongoing, intensive instruction and/or interventions to learn written expression, as deemed appropriate by the IEP team or Section 504 Plan Coordinator.</li> </ul> |
| <b>Monitor Test Response</b> | <b>Monitor Test Response</b> | <p><b>During Testing:</b> The Test Administrator monitors proper placement of student responses. This accommodation is to ensure that the student is marking the answer for the problem the student intends to answer. For example, a student may accidentally skip a question. The Test Administrator CANNOT assist the student in any way with respect to the content of the item.</p>   |



| CBT Comparable Accommodation                                   | PBT Accommodation  | PBT Administration Guidelines   |
|--|--|---|
| Word Prediction External Device on the ELA/Literacy Assessment | Word Prediction External Device on the ELA/Literacy Assessment | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodations will have "Word Prediction" listed in Pearson Access.</li> <li><u>Materials</u>: External Word Prediction Device.</li> </ul> <p><b>During Testing:</b> The student uses an external word prediction device that provides a bank of frequently- or recently-used words on-screen after the student enters the first few letters of a word. The student must be familiar with the use of the external device prior to assessment administration. The device may not connect to the internet or save information.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>Student responses generated using the External Word Prediction Device software must be transcribed verbatim by a Test Administrator into a scorable test booklet or answer document. Only transcribed responses will be scored.</li> <li>Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> <li>Test Administrators are responsible for collecting all nonscorable student work created using external word prediction device software. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul> <p><b>Important Guidelines for identifying students to receive this accommodation:</b><br/>IEP teams and Section 504 Plan Coordinators should carefully review the following guidelines before identifying a student to receive this accommodation.</p> <p>In making decisions whether to provide the student with this accommodation, IEP teams and Section 504 Plan Coordinators are instructed to consider whether the student has:</p> <ul style="list-style-type: none"> <li>A physical disability that <i>severely limits or prevents</i> the student from writing or keyboarding responses;<br/>OR</li> <li>A disability that <i>severely limits or prevents</i> the student from recalling, processing, and expressing written language, even after varied and repeated attempts to teach the student to do so.</li> </ul> |



| CBT Comparable Accommodation | PBT Accommodation             | PBT Administration Guidelines  |
|------------------------------|-------------------------------|--|
|                              |                               | <p>Before listing the accommodation in the student's IEP/Section 504 plan, teams/coordinators are instructed to consider whether:</p> <ul style="list-style-type: none"> <li>• The student's inability to express in writing is documented in evaluation summaries from locally administered diagnostic assessments;</li> <li>• The student routinely uses a word-prediction device or software during classroom writing assignments; and</li> <li>• The student receives ongoing, intensive instruction, and/or intervention in language processing and writing, as deemed appropriate by the IEP team/Section 504 Plan Coordinator.</li> </ul>   |
| Not Applicable               | Answers Recorded in Test Book | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodation will list "Answers Recorded" in Pearson Access.</li> </ul> <p><b>During Testing:</b> For students using test booklets and answer documents, the student records answers directly in the test booklet.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed exactly as written in the student's standard test booklet into the answer document. Only transcribed responses will be scored.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> </ul> |

**Table A5: Timing & Scheduling Accommodation for Students with Disabilities Taking Paper-Based Assessment**

| CBT Comparable Accommodation | PBT Accommodation | PBT Administration Guidelines  |
|------------------------------|-------------------|--|
| Extended Time                | Extended Time     | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodation will list "Extended Time" in Pearson Access.</li> <li><u>Test Administrator Training</u>: Test Administrators providing this accommodation must review: <ul style="list-style-type: none"> <li><a href="#">Appendix D: Guidance for Selecting and Administering the Extended Time Accommodation</a>.</li> </ul> </li> </ul> <p><b>During Testing:</b> The amount of time a student receives must be indicated in the student's IEP or Section 504 plan. It is recommended to test students receiving the extended time accommodation in a separate setting to minimize distractions to other students, and to schedule these students for testing in the morning to allow adequate time for completion of a test unit by the end of the school day.</p> |



**Table A6: Guidance on Selection of Accommodations for English Learners on CCRS Summative Assessments**

**KEY for Table A6:**

- **Highly recommended** for use by ELs at this ELP level
- ⊙ **Recommended** for use by ELs at this ELP level
- **May not be appropriate** for students at this ELP level

| Accommodations   | Most likely to benefit ELs at this ELP Level |              |          |
|--|--|--------------|----------|
|  | Beginning                                    | Intermediate | Advanced |
| Extended time  | ●  | ●            | ●        |
| Word-to-Word Dictionary (English/Native Language)  | ○  | ●            | ●        |
| Mathematics Response Speech-to-Text<br>Mathematics Response Human Scribe                                       | ●  | ⊙            | ○        |
| General Administration Directions Read Aloud and Repeated in Student's Native Language (by Test Administrator) | ●  | ⊙            | ○        |
| General Administration Directions Clarified as Needed in Student's Native Language (by Test Administrator)     | ●  | ⊙            | ○        |

Table A7 provides a list of ACCOMMODATIONS for ELs. The table describes the activities needed before, during, and after testing necessary to administer these accommodations appropriately.

**Table A7: Accommodations for English Learners Taking the Paper-Based Assessments**

| CBT Comparable Accommodation                                | PBT Accommodation   | PBT Administration Guidelines   |
|---|---|---|
| Extended Time   | Extended Time   | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>The amount of time a student receives must be indicated in the student's IEP or Section 504 plan. Student's accommodation will list "Extended Time" in Pearson Access.</li> <li><b>Test Administrator Training:</b> Test Administrators providing this accommodation must review: <ul style="list-style-type: none"> <li><a href="#">Appendix D: Guidance for Selecting and Administering the Extended Time Accommodation.</a></li> </ul> </li> </ul> <p><b>During Testing:</b> The amount of time a student receives must be indicated in the student's EL plan. It is recommended to test students receiving the extended time accommodation in a separate setting to minimize distractions to other students, and to schedule these students for testing in the morning to allow adequate time for completion of a test unit by the end of the school day.</p>  |
| Word-to-Word Dictionary ( <i>English/ Native Language</i> ) | Word-to-Word Dictionary ( <i>English/ Native Language</i> ) | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodation will list "Dictionary" in Pearson Access.</li> <li><b>Materials:</b> Word-to-word dictionaries are provided to students by their school, based on those used by the student for routine classroom instruction.</li> </ul> <p><b>During Testing:</b> The student uses a published bilingual, word-to-word dictionary that does not definitions, phrases, pronunciations, sentences, or pictures. The student should be familiar with the dictionary they will use during testing. Students should be given ample time to complete the test using the accommodation. If no printed word-to-word dictionary can be found for a specific language, an electronic translator may be used. The device may not connect to the internet or store information, and therefore, web-based translators are not allowed. Please contact BIE for a list of approved bilingual word-to-word dictionaries.</p> |



| CBT Comparable Accommodation   | PBT Accommodation  | PBT Administration Guidelines   |
|--|--|---|
| <b>Mathematics Response</b> <ul style="list-style-type: none"> <li>• Speech-to-Text</li> <li>• Human Scribe/ Human Signer</li> </ul> | <b>Mathematics Response</b> <ul style="list-style-type: none"> <li>• Speech-to-Text</li> <li>• Human Scribe/ Human Signer</li> </ul> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>• Student's accommodation must have "Speech-to-Text" or "Human Scribe" listed in Pearson Access.</li> <li>• <u>Materials</u>: If student uses software, a separate computer will be needed in addition to the computer used to administer the test. An external device may also be brought to the assessment.</li> <li>• <u>Test Administrator Training</u>: Test Administrators providing the scribe accommodation must review: <ul style="list-style-type: none"> <li>○ <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a>.</li> </ul> </li> </ul> <p><b>During Testing:</b> A student dictates responses verbally, using an external speech-to-text device or by dictating. The student must be tested in a separate setting. The student must already be familiar with any external device used for this accommodation.</p> <p><b>After Testing:</b></p> <ul style="list-style-type: none"> <li>• Responses must be transcribed exactly as dictated/signed (e.g., the human scribe/signer may not change, embellish, or interpret a student's responses when transcribing) into the student's standard test booklet or answer document. Only transcribed responses will be scored.</li> <li>• Refer to <a href="#">Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses</a> for protocol.</li> <li>• Test Administrators are responsible for collecting all nonscorable student work created using assistive technology devices. Test-related content must be deleted from all devices. Nonscorable student work must be securely shredded.</li> </ul> |

| CBT Comparable Accommodation  | PBT Accommodation   | PBT Administration Guidelines   |
|---|---|---|
| General Administration Directions Read Aloud and Repeated in Student's Native Language <i>(by Test Administrator)</i> | General Administration Directions Read Aloud and Repeated in Student's Native Language <i>(by Test Administrator)</i> | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodation will list "Test Direction Native Language" in Pearson Access.</li> <li><u>Materials:</u> <ul style="list-style-type: none"> <li>A local translator fluent both in English and the student's native language may translate and read the directions in the language of the student</li> </ul> </li> <li><u>Test Administrator Training:</u> Test Administrators, or other qualified interpreters, providing the general administration directions in languages other than English must review the directions in advance in order to provide consistent transadaptations. Test Administrators providing this accommodation will ideally be literate and fluent in English, as well as in the student's native language; or may collaborate with a local translator, if available.</li> </ul> <p><b>During Testing:</b> The Test Administrator, or other qualified interpreter, reads aloud the general administration instructions in the student's native language. The student may request that directions be repeated. The student must be tested in a separate setting.</p> |
| General Administration Directions Clarified in Student's Native Language <i>(by Test Administrator)</i>               | General Administration Directions Clarified in Student's Native Language <i>(by Test Administrator)</i>               | <p><b>Before Testing:</b></p> <ul style="list-style-type: none"> <li>Student's accommodation will list "Test Direction Native Language" in Pearson Access.</li> <li><u>Test Administrator Training:</u> Test Administrators providing this accommodation should be literate and fluent in English, as well as in the student's native language.</li> </ul> <p><b>During Testing:</b> The Test Administrator clarifies general administration directions only in the student's native language. Test Administrators, or other qualified interpreters, providing this accommodation should ideally be literate and fluent in English, as well as in the student's native language; or Test Administrator may be assisted by a translator who speaks the language of the student, if available.</p>  |



## Appendix B: Test Administration Protocol for the Human Reader Accommodation for English Language Arts/Literacy (ELA/L) Assessments, and the Human Reader Accessibility Feature for Mathematics Assessments

In cases where a student requires a text-to-speech accommodation on the CCRS English language arts/literacy (ELA/L) and/or a text-to-speech accessibility feature on the CCRS mathematics assessments, but cannot participate in the computer-based assessment and takes the paper-based assessment instead, a Human Reader must provide the accommodation to the student. Human Readers who provide the accommodation to a student on the CCRS English language arts/literacy (ELA/L) or the accessibility feature on the CCRS mathematics assessments must follow these procedures during testing to ensure the standardization of the oral presentation of the assessments.

### Procedures for Human Readers Providing the Human Reader Accommodation for ELA/Literacy Assessments or the Human Reader Accessibility Feature for the Mathematics Assessments

1. Readers must be trained locally to administer each assessment, as indicated in the *BIE Test Administrator Manual (TAM)*. Readers must sign the Security Agreement in **Appendix B** of the *BIE TAM*.
2. Readers must read verbatim (word for word) only what is printed in the test book (or in rare cases, on the computer screen) without changing, emphasizing, or adding words. Readers may not clarify (except for test directions), provide additional information, assist, or influence the student's selection of a response in any way.
3. Readers must speak in a clear and consistent voice throughout the test administration, using correct pronunciation, and without vocal inflections that may provide clues to, or mislead, a student. Readers should be provided a copy of the test and the Test Administrator's directions two schools days prior to the start of testing, in order to become familiar with the words, terms, symbols, signs, and/or graphics that will be read aloud to the student.
4. Readers should emphasize only the words printed in boldface, italics, or capital letters and inform the student that the words are printed that way. No other emphasis or vocal inflection is permitted.
5. Readers may repeat passages, test items, and response options, as requested, according to the needs of the student. Readers should not rush through the test and should ask the student if they are ready to move to the next item.
6. Readers may not attempt to solve mathematics problems, or determine the correct answer to a test item while reading, as this may result in pauses or changes in inflection which may mislead the student.
7. Readers must attempt to maintain a neutral facial expression, neither smiling nor frowning during the test, which may be interpreted by the student as approval or disapproval of the student's answers.
8. Readers must be familiar with the student's IEP or 504 plan, and should know in advance which accommodations are required by the student, and for which test (ELA/Literacy and/or Mathematics) the student is designated to receive a Human Reader.
9. Readers must be aware of whether a student requires additional tools, devices, or adaptive equipment that has been approved for use during the test, such as a magnifier, closed circuit television (CCTV), abacus, braille, slate and stylus, etc.
10. If a reader is unsure how to pronounce an unfamiliar word, advise the student of the uncertainty and spell the word.
11. When reading a word that is pronounced like another word with a different spelling, the reader may spell the word after pronouncing it, if there is any doubt about which word is intended.



12. Readers must spell any words requested by the student.
13. When reading passages, readers must be aware of punctuation marks. Readers may read the passage, or selected lines a second time, with all punctuation marks indicated.
14. When test items refer to a particular line, or lines, of a passage, reread the lines before reading the question and answer choices. For example, the reader should say, "Question X refers to the following lines..." then read the lines to the student, followed by question X and the response options.
15. When reading selected response items, readers must be careful to give equal stress to each response option and to read all of them before waiting for a response.
16. If a reader is also scribing the student's responses, or if another adult will scribe, and the student designates a response choice by letter only ("D," for example), the reader must ask the student if he/she would like the response to be reread before the answer is recorded in the answer booklet.
17. If the student chooses an answer before the reader has read all the answer choices, the Human Reader must ask if the student wants the other response options to be read.
18. After the reader finishes reading a test item and all response options, the reader must allow the student to pause before responding. If the pause has been lengthy, say: "Do you want me to read the question or any part of it again?" When rereading questions, readers must avoid emphasis on words not bolded, italicized, or capitalized.
19. Readers must refer to [Appendix H: BIE ELA Audio Guidelines](#) and/or [Appendix I: BIE Mathematics Audio Guidelines](#) to ensure consistency in how items are read.

### **Procedures for Providing the Human Reader Accommodation for ELA/Literacy Assessments or the Human Reader Accessibility Feature for the Mathematics Assessments to a Small Group of Students**

Human Readers may read the test aloud to a small group of students, rather than individually, provided that each student has the Human Reader accommodation/accessibility feature listed in an IEP, 504 plan, or Personal Needs Profile (in the case of mathematics only).

#### **The following procedures must be followed:**

- Check BIE policies on the maximum allowable number of students in a Human Reader group.
- Students with the Human Reader accessibility feature for mathematics or Human Reader accommodation for ELA/literacy that need to be grouped together must be taking the same test form, since test questions will differ on each form of the test.
- Students not receiving the Human Reader accessibility feature for mathematics or the Human Reader accommodation for ELA/literacy may not be tested in the same location as students who are receiving the human accessibility feature for mathematics or Human Reader accommodation for ELA/literacy.



## Appendix C: Protocol for the Use of the Scribe Accommodation and for Transcribing Student Responses

Scribing a student's responses by an adult Test Administrator is a response accommodation that allows students to provide test responses to an adult Test Administrator who writes or types the responses directly onto the assessment for the student. Students receiving the scribe accommodation may respond to assessment items either:

- verbally,
- using a speech-to-text device or other augmentative/assistive communication device (e.g., picture/word board),
- signing (e.g., American Sign Language, signed English, Cued Speech),
- gesturing,
- pointing, or
- eye-gazing

**Note:** Scribing may include “dragging and dropping” selected response items, as appropriate.

The scribe accommodation is appropriate for students with a physical disability that *severely limits or prevents* the student's motor process of writing, typing, or recording responses during testing. This includes students with reduced ability to record responses due to pain, fracture, paralysis, loss of function, or loss of endurance, as well as students whose handwriting is indecipherable or illegible. Scribes are also an appropriate accommodation for students who have a documented disability in the area of written expression which results in significant interference in their ability to express their knowledge in writing/keyboarding, even after varied and repeated attempts to teach the student to do so.

If a student requires a scribe due to a recently-occurring, though temporary, illness or injury, an [Appendix F: Emergency Accommodations Form](#) must be completed and kept on file at the school.

If a student requires a scribe due to an ongoing inability to express his or her responses through writing/keyboarding, this should be documented in evaluation summaries from locally-administered diagnostic assessments, and must be listed in the student's IEP or 504 plan. The student should be receiving ongoing, intensive instruction and/or interventions to learn written expression, as deemed appropriate by the IEP team or 504 Plan Coordinator.

The use of a scribe is permitted in the following CCRS summative assessments:

- Mathematics
- English language arts/literacy (ELA/L) assessments for Evidence Based Selected Response, and Technology Enhanced Constructed Response items
- English Language arts/literacy (ELA/L) Assessments for Prose Constructed Responses. **Note:** For this accommodation, refer to selection and administration guidelines in the *BIE Accessibility Features and Accommodations Manual*

### Qualifications of the Scribe

Individuals who provide the scribe accommodation to a student must:

- be trained by the school or district, as indicated in the BIE Test Administrator Manuals;
- sign a BIE Security Agreement Form; and
- be fluent in receptive and expressive American Sign Language (ASL), signed English, or other sign system, for students who are deaf or hard of hearing.

Preferably, the scribe will already be familiar with and have experience scribing for the student. If the scribe is unfamiliar with the student, then scribe and student should have the opportunity to practice the scribing process together prior to taking the assessment.

### **Administering the Scribe Accommodation**

- A scribe may administer the scribe accommodation only to one student at a time during a test session. The student must be tested in a separate setting.
- The scribe must write legibly, if transcribing a student's response into a test book.
- The scribe must transcribe responses verbatim from the student, and may not prompt or question the student, or correct a student's responses. The scribe may ask the student to restate (or sign) words or parts, as needed.
- A student using a scribe must be given the same opportunity as other students to plan and draft a constructed response. The scribe may write an outline, plan, or draft exactly as directed by the student without any cueing and guidance to the student.
- The scribe should be informed of the preferred method or format for recording the student's response before the date of the assessment. During testing, the student may dictate constructed responses either:
  1. Directly to a human scribe who records the responses at the time they are given (computer- and paper-based testing)
  2. Into a speech-to-text converter (e.g., voice recognition software), augmentative communication device, or assistive technology device to be transcribed by the scribe at a later time into the online testing platform or unto a paper-based book/answer document). A student must be given the opportunity to review and edit his or her responses before they are finalized into the online testing platform or paper-based test book/answer document.
- When using a speech-to-text converter, augmentative communication device, or other assistive technology device, hard copies of the student's response must be printed out for transcription purposes unless the device being used does not have the capability to print. In cases where printing a response is not possible, scribing must take place as the student dictates or otherwise produces the response. All electronic files must be deleted immediately after the testing session.
- The scribe must allow the student to review the scribed response in order to make edits. If requested by the student, the scribe may read the scribed response back to the student. The student may dictate changes or edits to the scribe, and the scribe must make those changes exactly as dictated by student, even if a change is incorrect. All changes must be made during the test session.

### **Additional Guidelines for the English language arts/literacy (ELA/L) Assessment—Prose Constructed Responses**

#### **Capitalization and Punctuation**

For the English language arts/literacy (ELA/L) Assessment—Prose Constructed Responses only, the student is responsible for all capitalization and punctuation. This can be accomplished either after testing or during testing using one or more of the following Rules for Punctuation:

1. After dictation: The student can dictate the entire response at one time. The scribe will write/type the response without capitalization and punctuation. When the student is finished dictating, the scribe will show the response to the student. The student will tell the scribe which letters are to be capitalized and where punctuation should be added.



2. During dictation: The student may add capitalization and punctuate as he/she dictates.
  - a. For example, when stating the sentence “The fox ran.” The student will say, “Capital T, the fox ran, period”
  - b. If a sentence includes other punctuation, for example a comma, the student must indicate the comma. For example, when stating, “The boy bought apples, oranges, and bananas.” The student will say, “Capital T, the boy bought apples, comma, oranges, comma, and bananas, period”

Students must be given the opportunity to proofread their responses, even if they provide capitalization and punctuation during dictation.

### Rules for Capitalization

The scribe can automatically capitalize in these cases:

1. The scribe should capitalize the first letter of a sentence if the student has indicated the punctuation in the previous sentence. For example, if the student said, “Capital T, the fox ran, period. The fox jumped, period.” The scribe would write “The fox ran. The fox jumped.”
2. The first word in a new paragraph when students have indicated for the scribe to begin a new paragraph.

The student must specify capitalization in the following cases:

1. The first letter of a sentence, if the student has not indicated punctuation in the previous sentence. For example, if the student said, “Capital T, the fox ran, the fox jumped, period.” The scribe would write “The fox ran the fox jumped.”
2. Other capitalization (e.g., capitalization of proper nouns, acronyms, etc.)

### Scribe Parameters during the Assessment

The following scribing practices are acceptable:

- The scribe may ask “Are you finished?” Or “Is there anything you want to add or delete?”
- The scribe may respond to procedural questions asked by the student such as, “Do I have to use the entire space to answer the question?” The scribe may indicate “no.”
- If the student requests that the scribe read a response that was already dictated, the scribe must read what the student dictated previously in an even voice, being careful not to cue the student to errors.

The following scribing practices are unacceptable:

- The scribe cannot influence the student’s response in any way.
- The scribe cannot give the student specific directions, clues, or prompts; e.g., “First, set the equations equal to one another;” or “Make sure that the equation is set equal to zero.”
- The scribe cannot tell the student if his/her answer is correct or incorrect.
- The scribe cannot answer a student’s questions related to the content; e.g., “Is this the right way to set up the problem?” Or “Can you tell me what this word means?”
- The scribe cannot alert the student to mistakes he/she made during testing.

### Special Considerations When Scribing for a Student Who Uses Sign Language or Cued Speech

- The scribe for a student who signs their responses must be fluent in ASL, signed English, or other sign systems the student uses.
- When responses are dictated by a student using American Sign Language (or other signed system), the scribe may ask clarifying questions regarding the use of classifiers. Classifiers give descriptive information about a noun or verb such as location and kind.

- The scribe will write the student's responses in English. The transcription of ASL will not be done in a word-to-word format, but instead will be written in English without changing or enhancing the meaning of the content, adding information, or explaining concepts unknown to the student (e.g., student signs "HOUSE WHITE LIVE THERE ME." Scribe writes "I live in the white house.")
- Scribe must follow all other acceptable scribing practices.

### **Use of Speech-to-Text/Voice-Recognition Software/Devices**

Speech-to-text conversion, or voice recognition, software allows students to dictate responses into their computer microphone and have the responses converted to printed text. For this accommodation, students will use their own assistive technology devices at a separate computer station equipped with speech-to-text/voice recognition software in order to respond to multiple-choice, open-ended items, and extended responses on the CCRS summative assessments. Students who use voice recognition software routinely, and for whom this accommodation is listed in their IEP, may use speech-to-text/voice recognition software as an accommodation on the CCRS summative assessments. Students must become familiar with the software and must have opportunities to practice using it prior to testing. It is also important that students who use speech-to-text devices be given the opportunity to develop planning notes using speech-to-text, and to view what they produce via speech-to-text.

Upon completion of a test, the student's responses should be printed out and the guidelines for transcribing student responses followed.

### **Guidelines for Transcribing Student Responses (Paper-based testing only)**

Certain situations involving scribing of responses during administration of CCRS summative assessments may require a Test Administrator to transcribe a student's response in a standard, scorable test booklet or answer document. These situations may include:

- Answers were recorded in the wrong section of a Test Booklet or Answer Document, or in an incorrect Test Booklet or Answer Document.
- A student takes the test using a special test format that requires answers to be transcribed (e.g., large print).
- A student uses a speech-to-text converter, augmentative communication device, or assistive technology device to be transcribed by the scribe at a later time.
- As an accommodation, a student records answers in a test booklet, answer document, or on blank paper, instead of in the required Test Booklet or Answer Document.
- A Test Booklet or Answer Document becomes unusable (e.g., torn, wrinkled).

If a student's responses must be transcribed after test administration is completed, the following steps must be followed:

- At least two persons must be present during any transcription of student responses. One of these persons will be the transcriber, and the other will be an observer confirming the accuracy of the transcription. It is highly recommended that one of the individuals be an authorized LEA Test Coordinator or School Test Coordinator. BIE may have additional guidelines. Refer to **Appendix C** of the *Test Coordinator Manual* for additional information on BIE's policy.

The student's response must be transcribed verbatim into the Answer Document or Test Booklet. The student's original response in an Answer Document/Test Booklet should be returned with secure test materials. The LEA Test Coordinator or School Test Coordinator should write "DO NOT SCORE" or draw an "X" in large font on the front of the original Answer Document/Test Booklet. Do not cover the barcode. Return them with nonscorable test materials.



- Braille transcription: Only an eligible Test Administrator who is a certified Teacher of Students with Visual Impairment, including Blindness, or someone working under the direct supervision of an eligible Test Administrator who is a certified Teacher of Students with Visual Impairment, including Blindness may transcribe the student's responses onto the paper form of the CCRS summative assessments.
- Any original student responses that were printed from an assistive technology device or recorded separately on blank paper (or on other external devices) must be securely shredded.

## Procedures for Transcribing Student Responses for Computer-Based Testing

### Selected Response and Technology Enhanced Items

For selected response and technology enhanced items, student responses must be entered into TestNav during the test session by the Test Administrator. Once the student reaches the end of the test with all Selected Response and Technology Enhanced Items completed, the Test Administrator should have the student EXIT the test but not submit the test.

### Constructed Response Items

During administration of computer-based CCRS summative assessments, students who require use of a speech-to-text converter, augmentative communication device, or assistive technology device will need constructed responses transcribed into TestNav by a Test Administrator before the online testing window closes. In these situations, the following steps must be followed.

- As the student encounters constructed responses, he/she should use his/her device to respond to the questions. The student will then continue testing in TestNav, leaving these items unanswered in TestNav.
- Once the student reaches the end of the test, the Test Administrator should have the student EXIT the test but NOT submit the test.
- The Test Administrator must set the test to Resumed status within Pearson Access; refer to the Pearson Access User Guide for instructions on how to resume students.
  - If a student submits the test in error, the test submission must be undone to complete the transcription. Any user with an "Undo Test Submit" role within Pearson Access has permission to undo the test submission. Refer to **Appendix C** of the *Test Coordinator Manual* for BIE policy for guidance on who can undo the test submission.
- Once the test has been unlocked, the Test Administrator must log in to TestNav as the student and navigate to the items for transcription.
- At least two persons must be present during any transcription of student responses. One of the individuals must be an authorized Test Administrator.
- The student's responses must be transcribed verbatim into TestNav. (See note above about scribing signed responses in English).
- Once all items have been transcribed, the Test Administrator will submit the test.
- After transcription is complete, all original student responses that were printed from an assistive technology device must be securely shredded.



## Appendix D: Guidance for Selecting and Administering the Extended Time Accommodation

### What is the Extended Time Accommodation?

Extended time is a provision which expands the allowable length of time to complete assignments, tests, and activities, and may also change the way the time is organized. For BIE, this accommodation provides additional time for a student to complete the summative assessments beyond the time allotted for the test or test unit. Students with disabilities, students who are ELs, and students who are ELs with disabilities are eligible to receive the Extended Time Accommodation. The Extended Time Accommodation allows a student to have up to a single day to complete a single test unit. Single test units may not extend beyond one school day. (For exceptions, refer to [Appendix E: Unique Accommodation Request Form](#)).

### Who can benefit from the Extended Time Accommodation?

The extended time accommodation is most beneficial for students who routinely need more time than is generally allowed to complete activities, assignments, and tests. Extra time may be needed:

- To process written text (e.g., for a student who processes information slowly or has a Human Reader).
- To write (e.g., for a student with limited dexterity).
- To use other accommodations or augmentative devices (e.g., assistive technology, audio materials, or a scribe).
- For a student who needs frequent breaks that may extend the time needed to complete testing.

### Documenting the Extended Time Accommodation in a Student's Individualized Education Plan (IEP), 504 Plan, or if required by BIE, an EL Plan

For BIE purposes, extended time must be documented in a student's IEP, 504 plan, or if required by BIE, an EL plan based on data or observations of the student's performance in past assessments. Where possible, each student's IEP, 504, or if required by BIE, an EL plan should document the amount of extended time anticipated for CCRS summative assessments. Decisions regarding extended time should align with BIE policies. These decisions must be made on a case-by-case basis based on the student's needs and any other accommodations being provided for the assessment for which the extended time will be needed. Teams should consider whether the unit time provided will meet the student's needs prior to including a provision for extended time in student plans.

### Planning and Logistics for Administering the Extended Time Accommodation

Students who require this accommodation should need to take the test in a separate setting to minimize disruptions, especially if classrooms or the computer lab are scheduled for successive testing sessions. The planning process includes consideration of additional accommodations, available technology, physical space, and personnel coverage, all of which will need to be determined well in advance of testing.

### Procedure for Ending the Extended Time Accommodation with Students

Students with extended time accommodations must be given a unit in a continuous block of time and may not be brought back to that unit at a later time. If the accommodation extends into the student's schedule lunch, then the Test Administrator must either accompany the student to lunch and remain with him or her, or bring the student's lunch to the testing room. If the Test Administrator observes that the student is no longer productively engaged, an inquiry may be made regarding testing status. Once the extended time provision is exhausted, the Test Administrator should proceed to the next test unit or end the testing process.



## Appendix E: Unique Accommodation Request Form

**Directions:** If a student with a disability or an EL requires an accommodation (i.e., a “unique accommodation”) that is not listed in the *BIE Accessibility Features and Accommodations Manual*, and does not change the construct being measured by the test, the school may request the use of an accommodation not currently listed in this manual by using this form. If approved, the accommodation must be listed in the Individualized Education Program (IEP) or 504 plan for a student with a disability; and if required by BIE, an EL plan, for an EL.

To request approval for a unique accommodation, both pages of this form must be submitted to BIE by the principal or designee or District Assessment Coordinator, as required by BIE, at least six weeks prior to testing to ensure a timely BIE response is received. A copy of this form must be kept in the student’s file and, if appropriate, retained at the district office.

|   |                   |
|---|-------------------|
| <b>Contact Information</b>  |                   |
| Name of Principal/Designee or District/LEA District Assessment Coordinator:   | Date:             |
| School Name:  | Telephone Number: |
| District/LEA Name:  | Fax Number:       |
| Signature:  | Email:            |
| <b>Student Information</b>  |                   |
| Name:   | Student ID #:     |
| Grade:  | DOB:              |
| Indicate type of plan: <input type="checkbox"/> IEP <input type="checkbox"/> 504 Plan <input type="checkbox"/> EL Plan <input type="checkbox"/> EL, without an EL Plan  |                   |
| <b>BIE Test Administration</b>  |                   |
| For which CCRS summative assessment are you seeking approval to use the unique accommodation:   |                   |
| Provide a brief description of the accommodation for which you are requesting approval:   |                   |
| Describe the evidence that supports the need for this accommodation, including how it is used by the student in the classroom or on other assessments:  |                   |
| Describe the planning needed for this accommodation on CCRS tests (e.g., school staff, space, specialized tools or equipment needed):   |                   |
| In submitting this form for approval, the principal/designee or assessment coordinator assures that: <ul style="list-style-type: none"><li>• This accommodation will be documented in the student’s IEP, 504 plan, and if required by BIE, an EL plan. In the case of an IEP, the parent/guardian of the student must sign the amended IEP prior to testing.</li><li>• The school team has met and considered all listed accommodations before proposing this unique accommodation.</li><li>• The proposed accommodation is used, as appropriate, for routine class instruction and assessment.</li></ul> |                   |





For BIE Use Only: Approval/Denial of Request

(This completed section will be returned to your school prior to testing.)

☐ This request has been approved.

☐ This request has been denied.

BIE Staff Name and Position: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



## Appendix F: Use of an Emergency Accommodation on a CCRS Summative Assessment

**Directions:** This form is appropriate in cases where a student needs a new accommodation immediately prior to the assessment due to unforeseen circumstances. Cases could include students who have a recently-fractured limb (e.g., fingers, hand, arm, wrist, or shoulder); whose only pair of eyeglasses has broken; or a student returning from a serious or prolonged illness or injury. If the principal (or designee) determines that a student requires an emergency accommodation on the day of the CCRS test, this form must be completed and maintained in the student's assessment file. **The parent must be notified that an emergency accommodation was provided.** Refer to **Appendix C** of the *Test Coordinator Manual* for BIE requirements for approving emergency accommodations. **Consult with your local district office for approval if required by BIE.** If appropriate, this form may also be submitted to the district assessment coordinator to be retained in the student's central office file.

|                    |                   |
|--------------------|-------------------|
| District/LEA Name: | Date:             |
| School Name:       | Telephone Number: |
| Student Name:      | Grade:            |
| Student ID #:      | DOB:              |

Name and Title of Person Completing this Form:

\_\_\_\_\_  
*Staff Member's Name*

\_\_\_\_\_  
*Title/Position*

Reason for needing an emergency test accommodation (attach documentation if needed):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe what the testing accommodation will be:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Who will administer the accommodation? \_\_\_\_\_

\_\_\_\_\_  
*Staff Member's Name*

\_\_\_\_\_  
*Title/Position*

\_\_\_\_\_  
*Principal Signature*

\_\_\_\_\_  
*Date*

\_\_\_\_\_  
*Local Accountability Coordinator Signature*  
*(if appropriate or required)*

\_\_\_\_\_  
*Date*



## Appendix G: Student Accommodation Refusal Form

**Directions:** If a student refuses an accommodation listed in his or her Individualized Education Program (IEP), 504 plan, or if required by BIE, an EL plan, the school should document in writing that the student refused the accommodation, and the accommodation must be offered and remain available to the student during testing. This form must be completed and placed in the student's file and a copy sent to the parent on the day of refusal. Principals (or designee) should work with Test Administrators to determine who, if any others, should be informed when a student refuses an accommodation documented in an IEP, 504 plan or if required by BIE, an EL plan.

|                                  |                    |
|----------------------------------|--------------------|
| Student Name: _____              | Date: _____        |
| Grade: _____                     | Student ID#: _____ |
| School Name: _____               |                    |
| School District/LEA: _____       |                    |
| CCRS Summative Assessment: _____ |                    |
| Test Administrator: _____        |                    |
| Accommodation(s) refused: _____  |                    |
| Reason for refusal: _____        |                    |
| _____                            |                    |
| _____                            |                    |
| Comments: _____                  |                    |
| _____                            |                    |
| _____                            |                    |

**Student's Signature (optional):** \_\_\_\_\_

**Signature of Test Administrator:** \_\_\_\_\_

**Keep this form on file at the school.  
A copy must be sent home to the parent.**



## Appendix H: BIE ELA Audio Guidelines

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## Introduction

This document provides recommended guidelines for the audio representation of English Language Arts (ELA) items from the New Meridian item bank that are included on state assessment forms. These are not intended to be stringent rules, but instead guidelines for creating read-aloud scripts and tags that help students access the content of items while continuing to adhere to the specific constructs being measured.

For each content element listed, this document provides (1) item examples, (2) the relevant Audio Guidelines, and (3) application of the Audio Guidelines to the example items.

For content that contains visual elements beyond text, two types of audio guidelines are presented: “Text Only” and “Text and Graphics.” The “Text Only” guidelines are for students who only need words and symbols read to them to access the content. Examples of “Text Only” users include students with language processing needs and English learners. The “Text and Graphics” guidelines are for students who need descriptions and graphics provided to them to access the content. “Text and Graphics” users include students who are visually impaired.

**Note:** The guidelines provided here are also included in appendices to multiple, state-specific Accessibility Features and Accommodations manuals. The standalone version of the guidelines is produced for situations in which representatives from multiple states review/determine the audio accessibility of items intended for use on shared forms.



## Visuals

### Guidelines for Text-to-Speech Descriptions

Use these guidelines to describe visuals for text-to-speech scripts:

Read the title.

Provide a general overview of the image. (i.e., A map of South America, a graphic organizer with a center circle and four circles radiating outward)

Begin with the main section of the image.

Describe the details in a succinct manner using grade-level appropriate vocabulary.

Omit minor details that are irrelevant (a box to the left of the person).

If facial expressions or body language are important, do not assume a student who is blind can interpret them. For example, it is better to describe a person as worried than to state that the person has furrowed brows.

When describing several people in an image, label each one clearly so they are not mixed up. (i.e., tall man, elderly man, little boy)

Describe only what is seen in the image. Do not provide interpretation or additional information.

## Inline Choice

### Example

Use the drop-down menus to complete the sentences about the video.

Before he moved to the houseboat, Cosmo  .  

|                               |
|-------------------------------|
| climbed many trees            |
| spent all of this time inside |
| asked many questions          |

When Melody tells him they will be moving to the boat, Cosmo  .  

|        |
|--------|
| jumps  |
| shakes |
| cries  |

Melody comforts him by saying that  .  

|                           |
|---------------------------|
| the sea is full of fish   |
| the boat is beautiful     |
| the world outside is safe |

### Audio Guideline

#### Text Only/Text and Graphics

Read the directions. Read the stem; then read all inline choice options.

### Application of Audio Guideline

Use the drop-down menus to complete the sentence about the video.

Before he moved to the houseboat, Cosmo climbed many trees, spent all this time inside, asked many questions.

When Melody tells him they will be moving to the boat, Cosmo jumps, shakes, cries.

Melody comforts him by saying that the sea is full of fish, the boat is beautiful, the world outside is safe.



## Classifications for Embedded Coding Scheme for Text Descriptions

An embedded code within the alt text will be included for all test items with visual elements. The embedded code will be classified as a 1 or 2. The description of each level is listed below:

[1] is not construct-relevant and can be eliminated (e.g., it is only there for engagement purposes). For example, a picture of an elephant added purely for engagement would have alt text that reads “elephant [1]” or “picture of an elephant [1].”

[2] is construct-relevant and can be represented using accompanying textual description. Example of text where reading the alt text and caption is construct-relevant: An icy stream is at the base of a hill. The hill is covered in snow while some dried vegetation protrudes or stands out. Four wolves are at the base of the hill next to the icy stream. An elk is in the icy stream standing in front of the wolves. The icy water reaches the upper part of the elk’s legs. As the wolves pace nearby, the elk finds safety in the icy stream.

Accessibility experts will be trained on this embedded coding scheme during the item tagging phase of item development.



## Dashes

### Example

Which central idea is represented in the scene of the video at 2:35–3:00, in which Napoleon releases the dogs?

### Audio Guideline

#### Text Only/Text and Graphics

When a dash is used in to determine a segment of a video, read the dash as “to.”

### Application of Audio Guideline

### Example

Which central idea is represented in the scene of the video at two thirty-five to three, in which Napoleon releases the dogs?



## Ellipses

### Example

Which detail in paragraph 7 has a similar effect as the answer to Part A?

- A. "... thoughts of classrooms and teachers . . ."
- B. "... pens that made dark, heavy marks."
- C. "She pictured herself. . . ."
- D. "... other girls her age."

### Audio Guideline

#### Text Only/Text and Graphics

When an ellipsis is used to signify missing text in a sentence, read as "pause 'dot, dot, dot' pause."

Note: Pauses in each application of the audio guidelines in this document are represented by an En Dash with a space on either side of the En Dash.

### Application of Audio Guideline

#### Example

Which detail in paragraph seven has a similar effect as the answer to Part A?

- A. – dot, dot, dot – thoughts of classrooms and teachers – dot, dot, dot –
- B. – dot, dot, dot – pens that made dark, heavy marks.
- C. She pictured herself – dot, dot, dot –
- D. – dot, dot, dot – other girls her age.

## Quotations and Quotation Marks

### Example

Which sentence from paragraph 4 provides evidence for the answer to Part A?

- A. "The study involved 60 people in their early 20s, screened for good memory ability."
- B. "The learning consisted of 72 images placed in specific locations on a tile-like screen and presented one at a time."
- C. "To create a value bias, each image had a superimposed number representing how important it was to remember this item and its location upon later testing."
- D. "Half of the images had high value assignments, while the rest had low values."

### Audio Guideline

#### Text Only/Text and Graphics

1. Quotation marks should be read as "quote" before the text and "end quote" after the text.
2. If the quotes surround the title of a work, do not say, "quote."
3. If both single and double quotes occur in a single passage, item, or paragraph, specify with "single quote," "end single quote," "double quote," and "end double quote."

### Application of Audio Guideline

#### Example

Which sentence from paragraph four provides evidence for the answer to Part A?

- A. A. quote - The student involved sixty people in their early twenties, screened for good memory ability. - end quote
- B. B. quote – The learning consisted of seventy-two images place in specific locations on a tile-like screen and presented one at a time. – end quote
- C. C. quote – To create a value bias, each image had a superimposed number representing how important it was to remember this item and its location upon later testing. – end quote
- D. D. quote – Half of the images had high value assignments, while the rest had low values. – end quote



## Emphasis for Bold and Italics

### Example 1

How does paragraph 37 **most** contribute to the overall structure of the passage?

- A. It signals that the point of view has changed from one character to another.
- B. It emphasizes the effect of the setting on the plot.
- C. It suggests a different conflict between the characters.
- D. It provides an explanation for the events that have occurred.

### Example 2

Which character trait **best** describes the peacock in *Juno and the Peacock*?

- A. helpless
- B. proud
- C. grateful
- D. curious

## Audio Guideline

### Text Only/Text and Graphics

Emphasize words that are underlined, bolded, italicized, or capitalized.

Pause before and after the emphasized word(s) to differentiate between emphasis and normal formatting.

Do not read differently or pause for italics, underline, or bold if they are being used for the directions before a passage or item and are not part of the prompt, question, or answers.

## Application of Audio Guideline

### Example 1

How does paragraph thirty-seven – most – contribute to the overall structure of the passage?

- A. It signals that the point of view has changed from one character to another.
- B. It emphasizes the effect of the setting on the plot.
- C. It suggests a different conflict between the characters.
- D. It provides an explanation for the events that have occurred.

### Example 2

Which character trait – best – describes the peacock in – Juno and the Peacock?

- A. helpless
- B. proud
- C. grateful
- D. curious

## Drag and Drop

### Example

Drag **two** details that help describe the setting into the boxes.

"And so it had been horseshoes all morning long." (paragraph 1)

"Taran's arms ached, soot blackened his face." (paragraph 1)

"Coll was stout and round and his great bald head glowed bright pink." (paragraph 3)

"We have no battles at Caer Dallben." (paragraph 12)

### Setting

|  |
|--|
|  |
|  |

### Audio Guideline

#### Text Only

Read the stem before reading the rest of the text.

#### Text and Graphics

Read the stem.

Read the options from left to right or top to bottom. Then give a very brief orientation that includes the attributes of the chart (number of columns, rows, etc.)

Read the chart in a logical manner that helps the student easily navigate the information. Either left to right or top to bottom.

Use common language throughout the item and the test when referring to charts and their attributes (columns, blanks, etc.).

### Application of Audio Guideline

#### Example

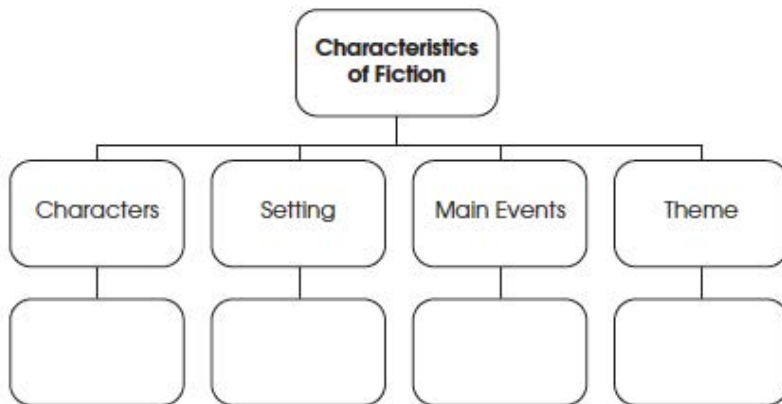
The title of the chart is Setting. There are two blank rows in the chart.

## Graphic Organizers

### Example 1

38. "We put the crushed cocoa beans into a chocolate pot."

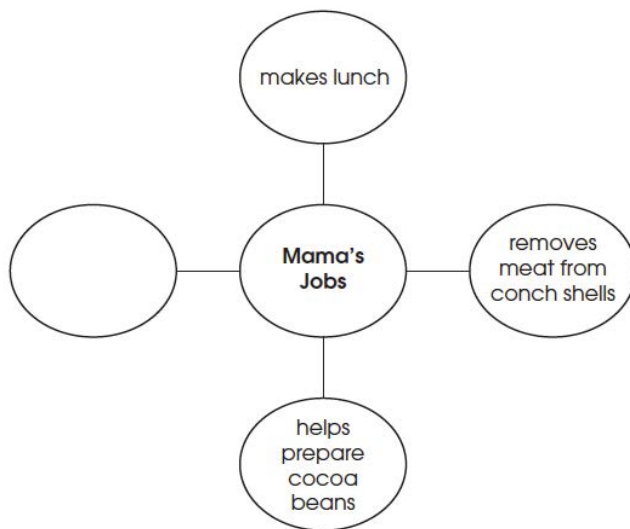
Which column in the graphic organizer below would include this detail?



- A. Characters
- B. Setting
- C. Main Events
- D. Theme

### Example 2

41.



According to information in the selection, which phrase should be added to the graphic organizer above?

- A. makes chowder from conchs
- B. hollows a log to make a canoe
- C. plants cacao trees in the shade
- D. crushes cocoa beans in a mortar

## Audio Guideline

### Text Only

Read the title of the graphic organizer, if available, before reading the rest of the text in the graphic organizer.

### Text and Graphics

If the organizer is structured like a table or has a structure similar to a table, refer to the Math Audio Guidelines document.

Begin by giving a very brief orientation that includes

- that it is a graphic organizer
- the attributes of the graphic organizer (number of cells, columns, rows, etc.)

Read the graphic organizer in a logical manner that helps the student easily navigate the information. While many graphic organizers can be read left to right, top to bottom, some are better read bottom to top or from the middle.

Use common language throughout the item and the test when referring to graphic organizer and their attributes (labels, blank cells, stems, etc.).

## Application of Audio Guideline

### Example 1

This is a graphic organizer with a cell labeled “Characteristics of Fiction” at the top. Below the top cell there are four columns and two rows. The first row has columns labeled “Characters,” “Setting,” “Main Events,” and “Theme.” Below each labeled cell is a blank cell.

### Example 2

This is a graphic organizer. Center cell, Mama’s Jobs; connecting cells, read clockwise from the top, makes lunch, removes meat from conch shells, helps prepare cocoa beans, blank.



## Different Types of Text

### Plays

#### Play, Example 1

Setting: Deep in the forest. Tall stool is center, shorter stool is left.

At Rise: Leopard is seated on tall stool, beating drum. Turtle enters left and slowly moves to center and sits on smaller stool.

Leopard (pounding drum and chanting): The forest is mine all night and all day. . .

Turtle (shouting over drum): Good morning, Leopard. I've been listening to your music. You have a fine sounding drum and a fine voice as well.

(Leopard stops pounding drum and looks up.)

#### Play, Example 2

Jay: Who's that? (Turning the flashlight on the man)

Louie: Get that light outta my face and go back to sleep, Kid.

Jay: There's nothing here to steal, Mister. I swear.

Louie: Is that you, Jay?

Jay: Yeah, who are you?

Louie: It's Uncle Louie.

Jay: Uncle Louie? No kidding? . . . Arty! It's Uncle Louie.

### Application of Audio Guideline

#### Example 1

Setting: - (Voice 1) - Deep in the forest. Tall stool is center, shorter stool is left.

At Rise: - (Voice 1) - Leopard is seated on tall stool, beating drum. Turtle enters left and slowly moves to center and sits on smaller stool.

Leopard - (Voice 1) - pounding drum and chanting: - (Voice 2) - The forest is mine all night and all day- dot – dot – dot -

Turtle - (Voice 1) - shouting over drum: - (Voice 2) - Good morning, Leopard. I've been listening to your music. You have a fine sounding drum and a fine voice as well. - (Voice 1) - Leopard stops pounding drum and looks up.

#### Example 2

Jay - (Voice 1) - Who's that? - (Voice 2) - Turning the flashlight on the man.

Louie - (Voice 1) - Get that light outta my face and go back to sleep, Kid.

Jay - (Voice 1) - There's nothing here to steal, Mister. I swear.

Louie - (Voice 1) - Is that you, Jay?

Jay - (Voice 1) - Yeah, who are you?

Louie - (Voice 1) - It's Uncle Louie.

Jay - (Voice 1) - Uncle Louie? No kidding? – dot – dot – dot - Arty! It's Uncle Louie.



## Sheepdog

- In the green field stand the scattered sheep,  
pretending innocence,  
and the Shepherd standing  
just beyond the field—
- 5 and at the Shepherd's feet, poised,  
the rough-coat collie dog, with one thought only.  
*It is the woolies.*  
Her eyes, one blue, one brown  
never leave them.
- 10 When the Shepherd's whistle  
releases her,  
she's off, like an arrow, running east,  
her bared teeth showing  
the wolf that still lives in her.
- 15 She circles wide, closing in,  
a black and white blur at  
the edge of a sheep's bad dream.  
But the Shepherd whistles, twice for *right*  
and once for *left*,
- 20 and the dog holds back,  
bringing order out of her own wildness,  
serving the man's need.
- By sundown,  
the circle is complete.
- 25 The sheep are penned.  
The tired Shepherd, the panting dog  
head for home, each  
more than they would be alone,  
the ring the dog marked, running,
- 30 symbol of their union.



## Audio Guideline

### Text Only

Read the poem paying attention to the layout of the stanzas. Do not reference given line numbers.

Use extended pauses for the start of a new stanza.

### Text and Graphics

Read the poem paying attention to the layout of the stanzas. Reference the line numbers associated with the first and last line of a stanza. For example, say, “Start of stanza line 12 . . . End of stanza line 18.”

Use extended pauses for the start of a new stanza or reference the new stanza if deemed necessary.

Use the above rules for emphasis.

## Application of Audio Guideline

### Example

In the green field stand the scattered sheep,  
pretending innocence,  
and the Shepherd standing  
just beyond the field  
and at the Shepherd’s feet, poised,  
the rough-coat collie dog, with one thought only.  
- *It is the woolies.* -

Her eyes, one blue, one brown  
never leave them. – End of stanza – line 9

Start of stanza – line 10 - When the Shepherd’s whistle  
releases her,  
she’s off, like an arrow, running east,  
her bared teeth showing  
the wolf that still lives in her.  
She circles wide, closing in,  
a black and white blur at  
the edge of a sheep’s bad dream.  
But the Shepherd whistles, twice for - right  
and once for - left,  
and the dog holds back,  
bringing order out of her own wildness,  
serving the man’s need. – end of stanza – line 22



start of stanza – line 23 - By sundown,  
the circle is complete.  
The sheep are penned.  
The tired Shepherd, the panting dog  
head for home, each  
more than they would be alone,  
the ring the dog marked, running,  
symbol of their union. – end of stanza – line 30 -

## Maps

### Example

(Part of a passage and section on Machu Picchu that references many of the countries, cities, and geographical features labeled)



### Audio Guideline

#### Text Only

Read the title of the map if available, then read the key, compass rose, and map from top to bottom, left to right as much as possible.

#### Text and Graphics

Read the title of the map if available, then read the key, compass rose, and map from top to bottom, left to right as much as possible.

For maps, a few words can be used to describe the map unless the item requires the student to use the map to answer the question.

### Application of Audio Guideline

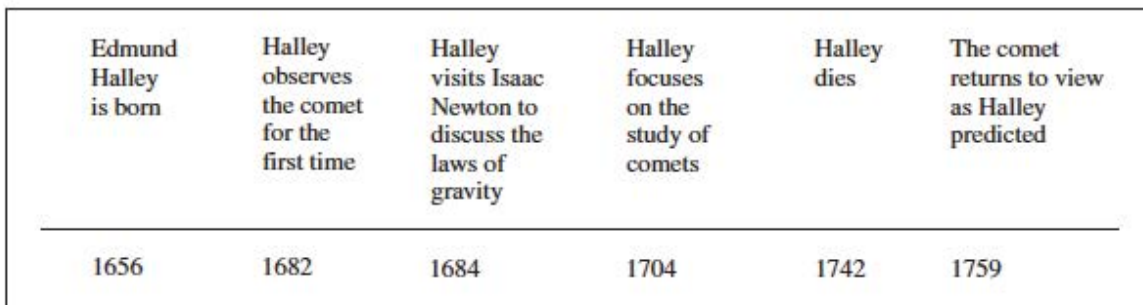
#### Example

A map showing a portion of South America: Ecuador; Amazon River; Urbamba River; Peru; Vilcabamba, Brazil; Machu Picchu; Andes Mountains; Cuzco, Bolivia; Atacama Desert; Chile; Argentina.

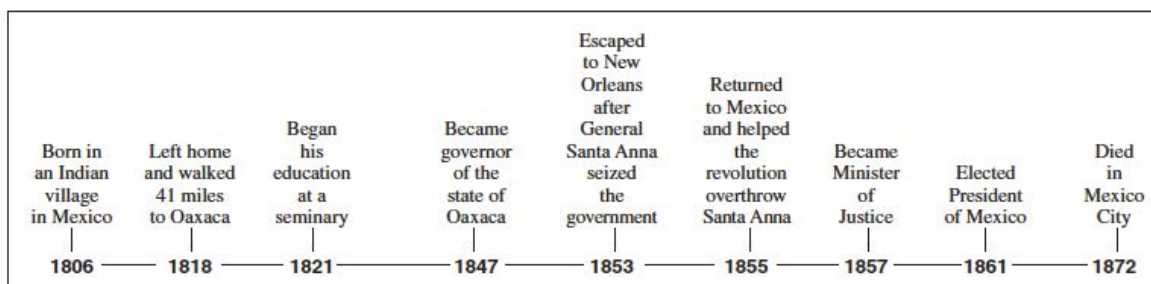
## Timelines

### Example 1

#### Timeline



### Example 2



### Audio Guideline

#### Text Only

Read the title of the timeline and text from top to bottom, column to column.

#### Text and Graphics

State that it is a timeline and read the title first or any brief note of what the timeline represents.

State the direction of the timeline and direction of reading.

Read the timeline in chronological order, keeping text with the corresponding date.

Read the date first, followed by the corresponding text that accompanies it.

### Application of Audio Guideline

#### Example 1

A timeline of Edmund Halley's life. From left to right, the timeline reads, sixteen fifty-six, Edmund Halley is born; sixteen eighty-two, Halley observes the comet for the first time; sixteen eighty-four, Halley visits Isaac Newton to discuss the laws of gravity; seventeen oh-four, Halley focuses on the study of comets; seventeen forty-two, Halley dies; seventeen fifty-nine, The comet returns to view as Halley predicted.

#### Example 2

A timeline of Benito Juarez's life. From left to right the timeline reads, eighteen oh-six, Born in an Indian village in Mexico; eighteen eighteen, Left home and walked forty-one miles to Oaxaca; eighteen twenty-one, Began his education at a seminary; eighteen forty-seven, Became governor of the state of Oaxaca; eighteen fifty-three, Escaped to New Orleans after General Santa Anna seized



the government; eighteen fifty-five, Returned to Mexico and helped the revolution overthrow Santa Anna; eighteen fifty-seven, Became Minister of Justice; eighteen sixty-one, Elected President of Mexico; eighteen seventy-two, Died in Mexico City.

## Pictures

### Example 1



Photo: © Linda Doane

**Isabella O'Brien of Dundas, Canada, patiently tries not to get burned as she solders components onto her circuit board.**

The radio's pieces didn't just snap into place. Each had to be soldered (SAAH\_derd) to the circuit board. Solder is a metal that melts easily. It is used to join together metal pieces. To attach a component to the circuit board, the students used a device called a soldering iron, which preheat parts to be joined.

### Example 2



© American Colony Photographers/National Geographic Society/Corbis

**A fig tree stripped of its foliage and bark from a locust plague**

## Audio Guideline

### Text Only

Read the embedded text, then read the caption and then read the passage.

### Text and Graphics

Before describing the picture, it should be determined whether the details of the picture are necessary to understanding and responding to the item(s). In many cases, the picture will be used to accompany a passage or reading excerpt as a piece of visual interest that is not essential in responding to the item. In this case, a very brief description may suffice.

In other cases, the caption or embedded text will describe the picture (Text Only Guideline) and only limited additional information is necessary.



## Application of Audio Guideline

### Example 1

#### Text Only

The caption reads “Isabella O’Brien of Dundas, Canada, patiently tries not to get burned as she solders components onto her circuit board.”

The radio’s pieces didn’t just snap into place. Each had to be soldered (SAAH\_derd) to the circuit board. Solder is a metal that melts easily. It is used to join together metal pieces. To attach a component to the circuit board, the students used a device called a soldering iron, which preheat parts to be joined.

### Example 2

#### Text and Graphics

A picture of a tree with no leaves. The caption reads “A fig tree stripped of its foliage and bark from a locust plague.”



## Boxed Sentences or Paragraphs

### Example

Nothing was different except the warm glow that was in my belly and my arms and my legs and my head and wouldn't go away.

Which of the following words is an adjective as it is used in the sentence?

### Audio Guideline

#### Text Only

Read the boxed sentence/word as is with a pause before and after to reflect a return to normal formatting.

#### Text and Graphics

Preface the boxed sentence/word by saying “boxed x” (x being sentence, word, paragraph, etc.).

Pause after reading the information in the box to indicate a return to normal formatting.

### Application of Audio Guideline

#### Example

Which of the following words is an adjective as it is used in the sentence?

Boxed sentence, - Nothing was different except the warm glow that was in my belly and my arms and my legs and my head and wouldn't go away. -

(Answer options are read.)

### References

*Smarter Balanced Assessment Consortium: ELA Audio Guidelines.*

<https://portal.smarterbalanced.org/library/en/ela-audio-guidelines.pdf>



## Appendix I: BIE Mathematics Audio Guidelines

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## Change History Log

| Date               | Version | Change Description   | Author               |
|--------------------|---------|--|----------------------|
| 4/19/12            | 1.0     | Visuals>Classifications for Embedded Coding Scheme for Text Descriptions; Symbols>Approximately equal; Symbols> Abbreviations (ft., km) (deletion)to ( $\approx$ );Numbers> Coordinate Pairs; Expressions/Equations/Operations> Trigonometry, Histograms, Box Plots, Scatter Plots (deletion); and Diagrams/Figures/Keys s>Line Plots (deletion)   | E. Zucker            |
| 5/9/13             | 1.1     | Symbols>Approximately equal to ( $\approx$ ), Dashes (deletion), Plus or Minus ( $\pm$ )>Application of Audio Guideline; Numbers> Fractions/Improper Fractions>Audio Guidelines and Application of Audio Guideline; Numbers>Decimal Points>Application of Audio Guidelines; Expressions/Equations/Operations >Multiplication > Audio Guidelines; Expressions/Equations/Operations>Parentheses>Audio Guideline; Expressions/Equations/Operations> Functions ( $f(x)$ )><br><br>Application of Audio Guidelines; Expressions/Equations/Operations> Histograms; Box Plots (deletion)  | E. Zucker            |
| 8/12/13<br>1/10/14 | 1.2     | Symbols>Approximately equal to ( ) (corrected script for example.); Numbers>Fractions/Improper Fractions (corrected script for Example 2); Numbers>Mixed Numbers (corrected script for Example 2); Numbers>Decimal Points (corrected script for Example 2); Expressions/Equations/Operations>Logs (corrected third paragraph in Audio Guidelines and corrected script for Example 2); Expressions/Equations/Operations>Radicals (corrected script for Example 2); Expressions/Equations/Operations>Functions ( ) (corrected script for Example 2); Expressions/Equations/Operations>System of Equations/Inequalities (added pause instructions to audio guidelines and updated examples 1 and 2); 1/10/14 Numbers>Probability (new subsection entered); Numbers>Fractions/Improper Fractions (example 5 and guideline added); Expressions/Equations/Operations>Variables/Letters (example 4 and guideline added) | K. Mickler/ J. Libby |
| 11.5.14            | 3.0     | Inequalities, function table, geometric figures with multiple lines examples added.  | H. Woodruff          |
| 10.8.15            | 3.2     | Added language to populate inline choice items – Refer to page 7.  | H Woodruff           |

|                      |      |  |   |
|----------------------|------|--|---|
| 07.22.16             | 3.3  | <p>Changed Coordinate Grid to Coordinate Plane; Symbols&gt; Text added to Audio Guidelines for Money; Section inserted for Other Greek Letters; Negative/Positive Numbers&gt;Text added to Audio Guidelines; Fractions/Improper Fractions&gt; Revision to Audio Guidelines text; Mixed Numbers&gt; Example 2 text revision; Roman Numerals&gt; Revision to Audio Guidelines Text; Time&gt; Added Example 4 and text for Application of Audio Guidelines for Example 4; Date&gt; Added Example 3, text for Audio Guidelines and Application of Audio Guidelines for Example 3; Ordered Pairs&gt; Revision to Application of Audio Guidelines text; Parentheses&gt; Revision to Audio Guidelines and Application of Audio Guidelines text Multiplication&gt;Revision to Audio Guidelines text; Mathematical Exponents&gt; Added Example 5; Deleted text under Audio Guidelines; Added text for Example 5 to Application of Audio Guidelines; Variables/Letters &gt; Revision to Audio Guidelines text Radicals&gt; Added Example 4, and text to Application of Audio Guidelines for Example 4; Absolute Values &gt; Revised Audio Guidelines text for Example 2; System of Equations/Inequalities &gt; Revised Application of Audio Guidelines text for Example 1; Tables&gt; Revision to Text and Graphics Application of Audio Guidelines text for Example 1 and 2; Tally Charts &gt; Revision to Application of Text and Graphics Guidelines text for Example; Bar Graphs &gt; Revision to Audio Guidelines, Text and Graphics Application of Audio Guidelines text; Box Plots &gt; Revision to Audio Guidelines, Text and Graphics Application of Audio Guidelines text; Scatter Plots &gt; Revision to title for Example 1, Audio Guidelines, Text and Graphics Application of Audio Guidelines Coordinate Planes &gt; Change all “grid” to “plane/s”; Revisions to Audio Guidelines and Application of Audio Guidelines text; Exponential/Linear Function Graphs&gt; Revision to Audio Guidelines text and Application of Audio Guidelines text for Example 1 and 2; Tree Diagram&gt; Revision to Audio Guidelines text and Application of Audio Guidelines text; Keys&gt; Revision to Audio Guidelines text and Application of Audio Guidelines text; Pictographs&gt; Revision to Application of Audio Guidelines text for Example; Coins and Dollars&gt; Revision to Application of Audio Guidelines text for Example; Spinners&gt; Application of Audio Guidelines text for Ex. 1</p> | R. Divakar                              |
| 11.17.17<br>12.07.17 | 4.0  | <p>Diagrams/Figures/Keys&gt; Geometric Figures&gt; Change “grid/s” to “plane/s”; Corrected the triangle symbols on pages 11 and 22. Reviewed and rolled over for 2018 by NMC. Approved by AAF OWG 12.07.17</p>   | NMC: A. Snyder                          |
| 10.25.18             | 5.0  | Posted for AAF and Content OWG review  | NMC: A. Snyder                          |
| 09.09.19             | 9.0  | White labeled for TFV  | NMC: A. Snyder                          |
| 10.22.19             | 9.0  | Updated the inline choice directions and added drag and drop guidelines  | NMC: A. Snyder                          |
| 11.21.19             | 9.0  | Approved by Math and AAF OWGs  | NMC: A. Snyder                          |
| 11.2020              | 10.0 | <p>Revised the structure, added examples to provide clarity, corrected grammar issues &amp; mathematical issues, removed unnecessary examples and guidelines based on evidence statements, and aligned guidelines &amp; applications. Approved by Math and AAF OWGs (11.10.20 and 11.18.20 respectively)</p>   | MOWG NMC: R. Hill and AAF OWG A. Snyder |



## Introduction

This document provides recommended guidelines for the audio representation of Mathematics (Math) items from the New Meridian item bank that are included on state assessment forms. These are not intended to be stringent rules, but instead guidelines for creating read-aloud scripts and tags that help students access the content of items while continuing to adhere to the specific constructs being measured.

For each content element listed, this document provides (1) the relevant Audio Guidelines, (2) item examples, and (3) application of the Audio Guidelines to the example items.

For content that contains visual elements beyond text, two types of audio guidelines are presented: “Text Only” and “Text and Graphics.” The “Text Only” guidelines are for students who only need words and symbols read to them to access the content. Examples of “Text Only” users include students with language processing needs and English learners. The “Text and Graphics” guidelines are for students who need descriptions and graphics provided to them to access the content. “Text and Graphics” users include students who are visually impaired.

**Note:** The guidelines provided here are also included in appendices to multiple, state-specific Accessibility Features and Accommodations manuals. The standalone version of the guidelines is produced for situations in which representatives from multiple states review/determine the audio accessibility of items intended for use on shared forms.

## Visuals

### Guidelines for Text-to-Speech Descriptions

Use these guidelines to describe visuals for text-to-speech scripts:

Read the title.

Provide a general overview of the image. (i.e., A map of South America, a graphic organizer with a center circle and four circles radiating outward)

Begin with the main section of the image.

Describe the details in a succinct manner using grade-level appropriate vocabulary.

Omit minor details that are irrelevant (a box to the left of the person).

If facial expressions or body language are important, do not assume a blind student can interpret them. For example, it is better to describe a person as worried than to state they have furrowed brows.

When describing several people in an image, label each one clearly so they are not mixed up. (i.e., tall man, elderly man, little boy)

Describe only what is seen in the image, do not provide interpretation or additional information.

### Reading Inline Choice Items

#### Audio Guideline

Read the problem and the directions. Read the first part of the stem; read all inline choice options then read the rest of the stem and all inline choices.

| Example  | Application of Audio Guidelines  |
|--|--|
| <p>Hank bought 5 meters of ribbon for \$4.</p> <p>Use the drop-down menus to complete the sentence.</p> <p>The ribbon costs <input type="text" value="Choose..."/> per <input type="text" value="Choose..."/>.</p> <p><input type="text" value="\$0.008"/><br/><input type="text" value="\$0.08"/><br/><input type="text" value="\$0.80"/></p> <p><input type="text" value="millimeter"/><br/><input type="text" value="centimeter"/><br/><input type="text" value="kilometer"/></p> | <p>Hank bought 5 meters of ribbon for \$4.</p> <p>Use the drop-down menus to complete the sentence.</p> <p>The ribbon costs \$0.008, \$0.08, \$0.80 per millimeter, centimeter, kilometer.</p> |

### Reading Drag and Drop Items

#### Audio Guideline

Read the problem and the directions. Answer choices are read as: "a box containing XXXX, a box containing XXXX, a box containing XXXX, a box containing the number XXXX."

For specific item type and structure check the appropriate section in this document.

| Example  | Application of Audio Guidelines |        |   |   |                      |   |   |                      |                      |                      |   |
|--|---------------------------------|--------|---|---|----------------------|---|---|----------------------|----------------------|----------------------|---|
| <p>A partially filled input-output table is shown. Complete the table so that it represents a function.</p> <p>Drag and drop each number from the list into the correct Input or Output box.</p> <p>1 5 8 10</p> <table border="1"> <thead> <tr> <th>Input</th><th>Output</th></tr> </thead> <tbody> <tr> <td>1</td><td>4</td></tr> <tr> <td><input type="text"/></td><td>6</td></tr> <tr> <td>5</td><td><input type="text"/></td></tr> <tr> <td><input type="text"/></td><td><input type="text"/></td></tr> </tbody> </table> | Input                           | Output | 1 | 4 | <input type="text"/> | 6 | 5 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <p>Answer choices are read as: a box containing the number 1, a box containing the number 5, a box containing the number 8, a box containing the number 10.</p> <p>Read the table from left to right beginning with the left column.</p> <p>Specific for Input/Output table read,</p> <p>The table has 2 columns and 4 rows. The first Column heading is Input. The second Column heading is Output.</p> <p>row 1 Input, 1, Output, 4 (pause)</p> <p>row 2 Input, blank, output 6 (pause)</p> <p>row 3 Input 5, Output blank, (pause)</p> <p>row 4 Input blank, Output blank.</p> |
| Input  | Output                          |        |   |   |                      |   |   |                      |                      |                      |   |
| 1  | 4                               |        |   |   |                      |   |   |                      |                      |                      |   |
| <input type="text"/>   | 6                               |        |   |   |                      |   |   |                      |                      |                      |   |
| 5  | <input type="text"/>            |        |   |   |                      |   |   |                      |                      |                      |   |
| <input type="text"/>   | <input type="text"/>            |        |   |   |                      |   |   |                      |                      |                      |   |

### Classifications for Embedded Coding Scheme for Text Descriptions

An embedded code within the alt text will be included for all test items with visual elements. Accessibility experts will be trained on this embedded coding scheme during the item tagging phase of item development. The embedded code will be classified as a 1, 2 or 3.

| The description of each level  | Example   |
|--|---|
| [1] is not construct-relevant and can be eliminated (e.g., it is only there for engagement purposes).  | a picture of an elephant added purely for engagement would have alt text that reads “elephant [1]” or “picture of elephant [1].”  |
| [2] is construct-relevant and can be represented using accompanying textual description.   | The graph title is Roller Rink costs. Key, dashed line represents Roller Rink A, solid line represents Roller Rink B. The x-axis is labeled number of people. The y-axis is labeled cost in dollars. The dashed line starts at zero people, sixty dollars and points to a little less than sixteen people, midway between one hundred and one hundred ten dollars. The solid line starts at zero people, a little less than ten dollars and points to a little more than fourteen people, a little less than one hundred ten dollars. [2] |
| [3] is construct-relevant and can be represented using accompanying textual description together with a tactile representation or physical manipulative. | The graph title is Roller Rink costs. Key, dashed line represents Roller Rink A, solid line represents Roller Rink B. The x-axis is labeled number of people. The y-axis is labeled cost in dollars. [3]  |



## Symbols

### Money

#### Audio Guidelines

Read dollars and cents if there is a decimal point.

Do not read shortcuts for numbers. For instance, \$0.25 should be read as twenty-five cents instead of a quarter and \$1.50 should be read as one dollar and fifty cents instead of a dollar and a half or one fifty.

This will allow a more standardized presentation of monetary quantities.

If the amount is less than one dollar, read “X cents” and do not read the zero (\$0.35 is “thirty-five cents” not “zero dollars and thirty-five cents”). Likewise, do not read “and zero cents” (\$4.00 is read “four dollars” and not “four dollars and zero cents”).

Read the number place value unless the question is measuring place value (refer to the large number section for details).

| Example | Application of Audio Guidelines            |
|---------|--|
| \$4.35  | Four dollars and thirty-five cents         |
| \$2.50  | Two dollars and fifty cents                |
| \$5,390 | Five thousand three hundred ninety dollars |

### Angles/Triangles ( $\angle$ and $\Delta$ )

Read angles and shapes by leading with “angle,” “shape,” etc. and then reading letters individually.

When reading a transformed angle or shape that uses “ ’ ” (one mark) describe as “prime,” “ ’ ’ ” (two marks), describe as “double prime” and “ ’ ’ ’ ” (3 marks) describe as “triple prime”.

Do not reference the case of the letter unless an item includes uppercase and lowercase letters. In this instance, refer to the uppercase letters’ guideline.

| Example         | Application of Audio Guidelines  |
|-----------------|----------------------------------|
| $\angle RST$    | Angle RST                        |
| $\Delta RST$    | Triangle RST                     |
| $\Delta R'S'T'$ | Triangle R prime S prime T prime |

### Ratio (:) )

#### Audio Guideline

Read as “the ratio x to y.”

Sometimes the ratio symbol is used for fractions. This can usually be determined by context. If this is the case, refer to the fraction guideline.

If the “the ratio of” is used in the item, read as “x to y” to avoid being redundant.

| Example | Application of Audio Guidelines |
|---------|---------------------------------|
| 3:2     | The ratio three to two          |

**Equal Signs (=)****Audio Guideline**

Read as “equals.”

| Example     | Application of Audio Guidelines |
|-------------|---------------------------------|
| $2 + 3 = 5$ | Two plus three equals five.     |

**Pi ( $\pi$ )****Audio Guideline**

Read as “pi.”

**Other Greek letters****Audio Guideline**

Read as the Greek letter in most cases, unless using the closest English letter is clearer.

| Example  | Application of Audio Guidelines   |
|--|---|
| $\sin \alpha = 0.5$                            | sine alpha equals zero point five   |
| <b>Density Formula</b><br>$\rho = \frac{m}{V}$ | <p>“<math>\rho</math>” is the Greek letter rho, should be read “P equals fraction with ...” since (a) there is no “P” in the formula, (b) the Greek letter closely resembles the English letter, and (c) use of the word “rho” is likely to be more distracting than helpful for text-to-speech users, since English readers may not know what a “rho” is. It is advisable to avoid formulas like this in item development (a “D” replaces the rho in some US textbooks), but given an item with uncommon Greek letters (other than alpha, beta, delta, theta, and perhaps a few others as may be determined on a case-by-case basis), math content specialists have found it most helpful in the past to use the closest English equivalent.</p> |

**Approximately equal to ( $\approx$ )****Audio Guideline**

Read as “is approximately equal to.”

| Example            | Application of Audio Guidelines                    |
|--------------------|--|
| $\pi \approx 3.14$ | Pi is approximately equal to three point one four. |

**Inequality Symbols ( $<$ ,  $\leq$ ,  $>$ ,  $\neq$ )****Less than ( $<$ )****Audio Guideline**

Read as “is less than.”

If there is more than one “less than” sign in a string, then read the whole relationship together.  
Read the last part as “is less than.”

**Less than or equal to ( $\leq$ )****Audio Guideline**

Read as “is less than or equal to.”

## Greater than (>)

### Audio Guideline

Read as “is greater than.”

If there is more than one “greater than” sign read the whole relationship together. Start the last part as “is greater than.”

## Greater than or equal to ( $\geq$ )

### Audio Guideline

Read as “is greater than or equal to.”

## Not equal to ( $\neq$ )

### Audio Guideline

Read as “is not equal to.”

| Inequality Symbol                   | Example     | Application of Audio Guidelines          |
|-------------------------------------|-------------|--|
| Less than (<)                       | $3 < 5$     | Three is less than five.                 |
|                                     | $x < y < z$ | x is less than y is less than z.         |
| Less than or equal to ( $\leq$ )    | $2x \leq 6$ | Two x is less than or equal to six.      |
| Greater than (>)                    | $7 > 5$     | Seven is greater than five.              |
|                                     | $x > y > z$ | x is greater than y is greater than z.   |
| Greater than or equal to ( $\geq$ ) | $3x \geq 6$ | Three x is greater than or equal to six. |
| Not equal to                        | $2x \neq 7$ | Two x is not equal to 7.                 |

## Dashes (–)

### Audio Guideline

When the dash is used to reference material or as a group of conditions, use “through” for consecutive and non-consecutive numbers.

| Example   | Application of Audio Guidelines |
|-----------|---------------------------------|
| Pages 3–7 | Pages three through seven       |

## Temperatures ( $^{\circ}\text{F}$ and $^{\circ}\text{C}$ )

### Audio Guideline

Read as “degrees Fahrenheit” and “degrees Celsius.”

| Example              | Application of Audio Guidelines |
|----------------------|---------------------------------|
| $35^{\circ}\text{F}$ | Thirty-five degrees Fahrenheit  |
| $25^{\circ}\text{C}$ | Twenty-five degrees Celsius     |



## Parallel Line Segments ( $\parallel$ )

### Audio Guideline

Read as “is parallel to.”

| Example                                   | Application of Audio Guidelines                      |
|---|--|
| $(\overline{RS} \parallel \overline{XY})$ | Line segment $RS$ is parallel to line segment $XY$ . |

## Perpendiculars ( $\perp$ )

### Audio Guideline

Read as “is perpendicular to.”

| Example                             | Application of Audio Guidelines                           |
|-------------------------------------|---|
| $\overline{EF} \perp \overline{GH}$ | Line segment $EF$ is perpendicular to line segment $GH$ . |

## Abbreviations

### Audio Guideline

Present abbreviations by speaking the whole word the abbreviation represents.

If the item measures the ability to identify the meaning of the abbreviation, then read the abbreviation letter by letter.

If speaking the abbreviation violates the construct being measured, then read letter by letter.

If the item has measurements that are all uppercase or lowercase, then it is not necessary to reference the cases.

| Example   | Application of Audio Guidelines  |
|---|--|
| 3ft.  | Three feet   |
| What is the correct abbreviation for kilometer?<br>A. kl<br>B. K<br>C. km<br>D. klm | What is the correct abbreviation for kilometer?<br>A. lower-case k lower case l,<br>B. upper-case K<br>C. lower-case k lower-case m<br>D. lower-case k lower-case l lower-case m |
| $4\text{cm}^2$  | Four square centimeters  |
| $5\text{cm}^3$  | Five cubic centimeters   |

## Measurements with marks for units

### Audio Guideline

Present measurements by speaking the whole word the symbol represents.

| Example | Application of Audio Guidelines |
|---------|---------------------------------|
| 6"      | Six inches                      |
| 12'     | Twelve feet                     |

## Number Symbol (#)

### Audio Guideline

Read as “number.”

Rule refers only to when the symbol is being used to signify “number” as opposed to other non-mathematical uses of the symbol (for example, the pound key and the hash key).

| Example           | Application of Audio Guidelines |
|-------------------|---------------------------------|
| Refer to step #5. | Refer to step number five.      |

## Empty/Unknown Boxes ( $\square$ , $\square$ )

### Audio Guideline

Refer to an empty box in a formula or equation as “blank.”

Refer to a box with a question mark in it as “question mark.”

| Example            | Application of Audio Guidelines    |
|--------------------|------------------------------------|
| $4 + 2x = \square$ | Four plus two x equals blank.      |
| $3 + y = \square$  | Three plus y equals question mark. |

## Arc Notation ( $\frown$ )

### Audio Guideline

Read as “arc.”

| Example        | Application of Audio Guidelines |
|----------------|---------------------------------|
| $\widehat{RT}$ | Arc RT                          |

## Infinity ( $\infty$ )

### Audio Guideline

Read as “infinity.”

| Example  | Application of Audio Guidelines                                |
|--|--|
| As $x \rightarrow \infty$ , $f(x) \rightarrow -\infty$ | As x approaches infinity, f of x approaches negative infinity. |

## Percent (%)

### Audio Guideline

Read as “percent.”

| Example | Application of Audio Guidelines |
|---------|---------------------------------|
| 35%     | Thirty-five percent             |



## Line Segment, Line, and Ray

### Audio Guideline

Read as “line segment,” “line,” or “ray” when they appear above letters or numbers.

| Type         | Example                   | Application of Audio Guidelines |
|--------------|---------------------------|---------------------------------|
| Line segment | $\overline{FG}$           | Line segment $FG$               |
| Line         | $\overleftrightarrow{JK}$ | Line $JK$                       |
| Ray          | $\overrightarrow{LM}$     | ray $LM$                        |

## Similar to ( $\sim$ )

### Audio Guideline

Read as “is similar to.”

| Example                            | Application of Audio Guidelines               |
|------------------------------------|---|
| $\triangle EFG \sim \triangle JKL$ | Triangle $EFG$ is similar to triangle $JKL$ . |

## Therefore ( $\therefore$ )

### Audio Guideline

Read as “therefore.”

| Example                              | Application of Audio Guidelines                                |
|--------------------------------------|--|
| $A = B$ and $B = C \therefore A = C$ | $A$ equals $B$ and $B$ equals $C$ , therefore $A$ equals $C$ . |

## Congruent ( $\cong$ )

### Audio Guideline

Read as “is congruent to.”

| Example                       | Application of Audio Guidelines           |
|-------------------------------|---|
| $\angle FGH \cong \angle JKL$ | Angle $FGH$ is congruent to angle $JKL$ . |

## Factorial (!)

### Audio Guideline

Read as “factorial.”

| Example  | Application of Audio Guidelines |
|----------|---------------------------------|
| $5! = x$ | Five factorial equals $x$ .     |

## Plus or Minus Symbols ( $\pm$ )

### Audio Guideline

Read as “plus or minus.”

| Example                          | Application of Audio Guidelines                        |
|----------------------------------|--|
| The margin of error is $\pm 0.8$ | The margin of error is plus or minus zero point eight. |

## Subscript

### Audio Guideline

Read as “x subscript y.”

| Example  | Application of Audio Guidelines   |
|--|---|
| $x_1$  | $x$ subscript <i>one</i>  |
| $A_i$ represents the maximum amount of interest. | When the variable is the letter A. Read as “the letter A subscript <i>i</i> represents the maximum amount of interest.” |



## Numbers

### Negative/Positive Numbers

#### Audio Guideline

Read as “negative.” Do not read the negative sign as a minus sign.

In most cases, consecutive negatives that are intended to show the negative of a negative will be represented with a set of parentheses. If this is the case, then refer to the parentheses section.

If the negative of a negative does not include parentheses, read as “negative (pause) negative.”

Two consecutive negatives should not be read as “negative negative X” if the operation is focused on subtraction. In this case, read as “minus negative X.” Note that this rule refers to numbers only. If, instead of a number, X is actually a variable or expression that includes variables, refer to the section entitled “Variables/Letters” below for the correct reading of expressions like  $-y$ .

If a positive sign precedes a number and is not part of an operation, then read as “positive.”

| Example  | Application of Audio Guidelines   |
|--|---|
| $-4$   | Negative four   |
| $4 - -5$   | Four minus negative five  |
| What is the distance between $+4$ and $-3$ on the number line? | What is the distance between positive four and negative three on the number line? |

### Large Whole Numbers

#### Audio Guideline

For items not measuring place value, read large numbers by referencing each digit’s place value.

If the item measures place value knowledge, read the number digit by digit using commas.

If reading the number as a whole number violates the construct being measured, read the number digit by digit.

| Example  | Application of Audio Guidelines  |
|--|--|
| 103,457  | One hundred three thousand, four hundred fifty-seven<br>Note: Use this application unless cueing occurs; then use the application in Example 2.              |
| The state of Virginia covers one hundred two thousand, five hundred fifty-eight square kilometers of land. Which shows this number?<br><br>A. 1,258<br>B. 12,558<br>C. 102,558<br>D. 1,200,558 | A. one comma two five eight<br>B. one two comma five five eight<br>C. one zero two comma five five eight<br>D. one comma two zero zero comma five five eight |



## Fractions

### Audio Guideline

Read fractions as “numerator of \_\_\_\_ (pause) and denominator of \_\_\_\_”.

When a fraction has an operation in the numerator or denominator (addition, subtraction, multiplication, division or exponents) denote the numerator and denominator using the guideline above and use appropriate pauses based on the guidelines in this document.

When an operation follows a fraction, pause between the fraction and the next operation.

### Special guidelines for common fractions unless the guideline violates the construct being measured.

Read common fractions by presenting the numerator as the number it represents and the denominator as the ordinal number using two words for the whole presentation.

If the denominator is 2, read as half or halves, e.g. read  $\frac{1}{2}$  as one-half and read  $\frac{5}{2}$  as five halves.

If the denominator is between 3 and 10 inclusively, read as third, fourth, fifth, sixth, seventh, eighth, ninth, or tenth.

If the denominator is greater than 10, then read the number without reading it as ordinal, e.g., read denominator as eleven, instead of eleventh.

| Example  | Application of Audio Guidelines   |
|--|---|
| $\frac{1}{2} + \frac{3}{8}$                    | One-half plus three-eighths   |
| $\frac{3}{14} + \frac{15}{100} - \frac{x}{2y}$ | Fraction with numerator of 3 (pause) and denominator of 14 (pause) plus fraction with numerator of fifteen (pause) and denominator of one hundred (pause) minus fraction with numerator of x (pause) and denominator of two y |
| $\frac{3x+y}{z}$                               | Fraction with numerator of three X plus Y (pause) and denominator of Z  |
| $\frac{6}{3}$                                  | Six-thirds  |
| $\frac{3x}{5} + x$                             | Fraction with numerator of three x (pause) and denominator of 5 (pause) plus x.   |

## Mixed Numbers

### Audio Guideline

Read with “and” between the whole number and the fraction.

Use fraction audio guidelines for reading fraction portion of mixed numbers.

| Example          | Application of Audio Guidelines  |
|------------------|--|
| $4\frac{3}{4}$   | Four and three fourths   |
| $5\frac{13}{28}$ | Five and (pause) fraction with numerator of thirteen (pause) and denominator of 28 |



## Decimal Points

### Audio Guideline

Describe the series of numbers or digits, and include the decimal using the word “point”. Read numbers from left to right. Do not include place value information, if providing place value information violates the construct being measured.

When there are more than six digits in the number or there is a comma in the number pause before continuing.

Read “repeating” where “...” or a line over a digit or digits represents the digit or digits that repeats.

| Example     | Application of Audio Guidelines  |
|-------------|--|
| 40.65       | Forty point six five   |
| 3,450.084   | Three thousand pause four hundred fifty point zero eight four          |
| 0.000000002 | Zero point zero zero zero (pause) zero zero zero (pause) zero zero two |
| 0.333...    | Zero point three repeating   |
| 5.1818      | Five point one eight repeating one eight                               |

## Time

### Audio Guideline

Read the time literally without using shortcuts or reading the time in reference to a different version of time (e.g., noon, quarter of six, ten after five).

Read a.m. and p.m. without adding language about the time of day (e.g., “in the morning” or “at night.”)

| Example   | Application of Audio Guidelines |
|-----------|---------------------------------|
| 6:30      | Six thirty                      |
| 9 a.m.    | Nine a m                        |
| 5:45      | Five forty-five                 |
| 5:00 p.m. | Five o'clock p m                |

## Date

### Audio Guideline

Read years as they would be read in plain language usage. For years after 1999, read “two thousand six” (for example) before 2010 and “twenty twelve” for years after 2009. However, when years comprise the axis of a graph or a sequence of table cells, maintain consistency in going from 2009 ... 2010 ... 2011 and use either convention (both are acceptable usage), except do not use the “two-thousand” style for years after 2019. For years after 2099, use the same style as for years between 1900 and 1999.

Read months as the full name even if abbreviations are presented in text.

Read days as you would when reading a date instead of reading the day as number (e.g., “second” instead of “two,” “third” instead of “three,” or “fourth” instead of “four”).

| Example  |              |              |              |              | Application of Audio Guidelines            |  |  |  |  |      |      |      |      |      |       |              |              |              |              |       |             |              |              |              |  |
|--|--------------|--------------|--------------|--------------|--|--|--|--|--|------|------|------|------|------|-------|--------------|--------------|--------------|--------------|-------|-------------|--------------|--------------|--------------|--|
| 1976   |              |              |              |              | Nineteen seventy-six                       |  |  |  |  |      |      |      |      |      |       |              |              |              |              |       |             |              |              |              |  |
| Feb. 5, 2003   |              |              |              |              | February fifth, two thousand three         |  |  |  |  |      |      |      |      |      |       |              |              |              |              |       |             |              |              |              |  |
| <table><tr><th colspan="5">Population of Two Cities from 1975 to 2025</th></tr><tr><th>City</th><th>1975</th><th>2000</th><th>2010</th><th>2025</th></tr><tr><td>Tokyo</td><td>26.6 million</td><td>34.4 million</td><td>36.9 million</td><td>37.1 million</td></tr><tr><td>Delhi</td><td>4.4 million</td><td>15.7 million</td><td>21.9 million</td><td>28.6 million</td></tr></table> |              |              |              |              | Population of Two Cities from 1975 to 2025 |  |  |  |  | City | 1975 | 2000 | 2010 | 2025 | Tokyo | 26.6 million | 34.4 million | 36.9 million | 37.1 million | Delhi | 4.4 million | 15.7 million | 21.9 million | 28.6 million | ... city ... nineteen seventy-five ... two thousand ... two thousand ten ... twenty twenty-five ... (Refer to the section entitled “Tables” for more information.) |
| Population of Two Cities from 1975 to 2025   |              |              |              |              |  |  |  |  |  |      |      |      |      |      |       |              |              |              |              |       |             |              |              |              |  |
| City   | 1975         | 2000         | 2010         | 2025         |  |  |  |  |  |      |      |      |      |      |       |              |              |              |              |       |             |              |              |              |  |
| Tokyo  | 26.6 million | 34.4 million | 36.9 million | 37.1 million |  |  |  |  |  |      |      |      |      |      |       |              |              |              |              |       |             |              |              |              |  |
| Delhi  | 4.4 million  | 15.7 million | 21.9 million | 28.6 million |  |  |  |  |  |      |      |      |      |      |       |              |              |              |              |       |             |              |              |              |  |

## Ordered Pairs

### Audio Guideline

Read coordinate pairs as “ordered pair X, Y.”

| Example            | Application of Audio Guidelines             |
|--------------------|---|
| Point R is (−2, 4) | Point R is ordered pair negative two, four. |

## Probability

### Audio Guideline

“P(text)” is the notation for probability. When reading a probability, do not read parentheses as “open parenthesis/closed parenthesis.” Read as “P of” word in parentheses “is” remaining text.

| Example                          | Application of Audio Guidelines    |
|----------------------------------|------------------------------------|
| $P(\text{orange}) = \frac{1}{6}$ | Probability of orange is one-sixth |



## Expressions/Equations/Operations

### Multiplication

#### Audio Guideline

Read the multiplication symbol as “times” when it appears in a math item.

When a number, symbol, or another set of parentheses appears before a set of parentheses, read the number or symbol as is and “open parenthesis” before what is within the parentheses. When multiple sets of parentheses appear consecutively, read as “open parenthesis” and “closed parenthesis.”

If there are two variables or a variable and a number consecutively, do not read “times” to represent implied multiplication.

| Example          | Application of Audio Guidelines   |
|------------------|---|
| $3 \times 5 = X$ | Three times five equals $X$ .   |
| $xy + 4x = 10$   | $xy$ plus four $x$ equals ten.  |
| $(3 + x)(y - 2)$ | Open parenthesis three plus $x$ , closed parenthesis, (pause) open parenthesis $y$ minus two, closed parenthesis. |
| $5(x + 1)$       | Five open parenthesis $x$ plus one closed parenthesis   |

### Addition

#### Audio Guideline

Read as “plus.”

| Example     | Application of Audio Guidelines |
|-------------|---------------------------------|
| $4 + 2 + 3$ | Four plus two plus three        |

### Subtraction

#### Audio Guideline

Read as “minus.”

| Example | Application of Audio Guidelines |
|---------|---------------------------------|
| $5 - 3$ | Five minus three                |

## Division

### Audio Guideline

Read as “divided by.”

If the item presents the remainder as “R” read as “remainder” unless the item is measuring the meaning of “R.” In this case, read it as “R.”

| Example               | Application of Audio Guidelines      |
|-----------------------|--------------------------------------|
| $12 \div 4$           | Twelve divided by four               |
| What is $57 \div 5$ ? | What is fifty-seven divided by five? |
| A. 10 R7              | A. ten, remainder seven              |
| B. 11 R2              | B. eleven, remainder two             |
| C. 12                 | C. twelve                            |

## Parentheses

### Audio Guideline

Read the parentheses by referring to the opening of the parentheses using the language “open parenthesis” and the closing of the parentheses using the language “closed parenthesis.”

It is important to reference the close of the parentheses to be clear on when the parenthetical expression ends.

When reading an equation or expression with multiple parts and sets of parentheses, pause to help differentiate between sections.

Read brackets using the same language as parentheses in the first guideline.

| Example                          | Application of Audio Guidelines  |
|----------------------------------|--|
| $3(x + y) = 6$                   | Three (pause) open parenthesis x plus y closed parenthesis (pause) equals six.   |
| $2(x + 3) + \frac{(y-2)}{3} = 9$ | Two (pause) open parenthesis x plus three closed parenthesis (pause) plus (pause) fraction with numerator of open parenthesis y minus two closed parenthesis (pause) and denominator of three (pause) equals nine. |
| $(x + 4)[(x + 4) - (x - 2)]$     | Open parenthesis x plus four closed parenthesis (pause) open bracket, open parenthesis, x plus four closed parenthesis (pause) minus open parenthesis x minus two closed parenthesis (pause) close bracket.        |

## Mathematical Exponents

### Audio Guideline

Read the base first—the base can be either a numeral or a variable.

If the exponent has a value of 2, then read “squared.” If the exponent has a value of 3, read “cubed;” otherwise, read “raised to the \_\_\_ power” where \_\_\_ denotes either the ordinal of the number (fourth, fifth, negative seventy-fifth, etc.) if the exponent is an integer or the expression, as specified elsewhere in these guidelines, if the exponent is anything other than an integer.

To indicate a return to the base, use a pause.

Read fraction exponents following the fractions rule.

| Example                           | Application of Audio Guidelines  |
|-----------------------------------|--|
| $y = x^2$                         | y equals x squared.  |
| $y = 4^5 + 2$                     | y equals four raised to the fifth power (pause) plus two.  |
| $y = 2^{x+5} + 3$                 | y equals two raised to the x plus five power (pause) plus three.   |
| $16^{\frac{3}{2}} = 8^2$          | Sixteen raised to the three halves power equals eight squared.   |
| $3^{5.5} = (z + 8)^{\frac{x}{2}}$ | Three raised to the five point five power equals open parenthesis Z plus 8 closed parenthesis, raised to the fraction with numerator of x (pause), and denominator of 2 power. |

## Variables/Letters

### Audio Guideline

Read lowercase variables in a math item without referring to case.

If uppercase variables are used in a math item along with lowercase variables, then specify both cases using the language “lowercase” and “uppercase.”

If an uppercase variable appears in a math item without a lowercase variable, then do not specify uppercase.

If a variable is preceded by a negative sign, read as “opposite of” pause then read the variable, rather than the “negative of” the variable.

| Example  | Application of Audio Guidelines  |
|--|--|
| $x + y = 3$  | x plus y equals three.   |
| In the triangle, what is the measurement of angle A that is opposite side a? | In the triangle below, what is the measurement of angle uppercase A that is opposite side lowercase a? |
| $N + 4$  | N plus four  |
| $-x^2$   | Opposite of (pause) x squared  |

## Logs

### Audio Guideline

Read “log” followed by the base, the word “of,” and then the number or variable.

If the log is shown without an explicit base, then read as “log” and the number or variable shown. Do not interpret the implied base of 10 if it is not written.

Read “ln x” as “natural log of x.”

| Example   | Application of Audio Guidelines   |
|---|---|
| $\log_{10} 100 = 2$   | Log base ten of one hundred equals two.   |
| If $\log 2 \approx 0.301$ and $\log 3 \approx 0.477$ , what is the approximate value of $\log 72$ ?<br>A. 0.051<br>B. 7.778<br>C. 0.861<br>D. 1.857 | If log two is approximately equal to zero point three zero one and log three is approximately equal to zero point four seven seven, what is the approximate value of log seventy-two? |
| ln x  | Natural log of x  |

## Radicals

### Audio Guideline

For radicals with an implied radical index of two, read as “the square root of x.”

For radicals with a radical index of three, read as “the cube root of x.”

For radicals with a number for a radical index other than two or three, start by reading the index as “the nth root of.”

If the radical index is a variable, read as “the x root of y.”

When multiplying numbers by radicals (e.g.,  $3\sqrt{2}$ ), say “x times the square root of y.”

When the radicand (what is under the line that extends from the radical symbol) has more than one term then the radicand should be referenced as the quantity e.g.  $\sqrt[3]{2x - y}$  should be read the cube root of the quantity 2x minus y instead of the cube root of 2x minus y.

| Example                                  | Application of Audio Guidelines   |
|--|---|
| $\sqrt{2}$                               | The square root of two  |
| $\sqrt[4]{144} = \sqrt[4]{288}$          | The fourth root of one hundred forty-four equals the x root of two hundred eighty-eight.  |
| $\sqrt[m]{x + y}$                        | The m root of quantity x plus y   |
| $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ | X equals, fraction with numerator of, opposite of B, plus or minus the square root of the quantity, B squared minus four A C (pause), and denominator of two A. |

## Absolute Values

### Audio Guideline

Read as “the absolute value of.”

Pause if an absolute value is part of a larger expression or equation.

| Example   | Application of Audio Guidelines                   |
|-----------|---|
| $ -16 $   | The absolute value of negative sixteen            |
| $ 2 + 7 $ | The absolute value of the quantity two plus seven |
| $ x  + 1$ | The absolute value of x (pause) plus one.         |

## Functions ( $f(x)$ )

### Audio Guideline

For function notation in general, read the first letter shown then the word “of,” followed by the variable and/or number in parentheses.

When the expression inside the parentheses is more complex or includes another function, use the same rule of reading the letter first, then the word “of,” followed by the variable or expression in parentheses.

When the inverse of a function is presented, read it as “the inverse of  $f$  of  $x$ ”.

| Example                         | Application of Audio Guidelines                                     |
|---------------------------------|---|
| $f(x) = 5$                      | $f$ of $x$ equals five  |
| $f(x + 1)$                      | $f$ of open parenthesis $x$ plus one closed parenthesis             |
| $f(g(x))$                       | $f$ of $g$ of $x$   |
| $f^{-1}(x) = -\frac{2}{3}x - 2$ | The inverse of $f$ of $x$ equals negative two-thirds $x$ minus two. |

**For function tables where one column/row is paired with one row/column:**

The table should be read as it is organized, as  $(x, y)$  pairs, according to the [Tables](#) section of this document. (If the orientation of the table lends itself to reading the table information column by column and this is a more logical manner to present the table, then do so.)

**Input/Output Tables:** If reading each row as an ordered pair violates the construct being measured then read the table has two columns and  $XX$  rows. The first Column heading is Input. The second Column heading is Output. Read row 1, Input, *value or blank*, output *value or blank*, pause, row 2 *input value or blank*, output *value or blank* and so on.

| Example   | Application of Audio Guidelines |        |    |    |             |    |    |             |  |             |  |
|---|---------------------------------|--------|----|----|-------------|----|----|-------------|--|-------------|--|
| <table><tr><td>x</td><td>y</td></tr><tr><td>3</td><td>14</td></tr><tr><td>7</td><td>30</td></tr><tr><td>9</td><td>38</td></tr></table>  | x                               | y      | 3  | 14 | 7           | 30 | 9  | 38          | The table has two columns and three rows. The first column heading is, x; the second column heading is, y. First row, 3, 14; second row, 7, 30; third row, 9, 38.    |             |  |
| x   | y                               |        |    |    |             |    |    |             |  |             |  |
| 3   | 14                              |        |    |    |             |    |    |             |  |             |  |
| 7   | 30                              |        |    |    |             |    |    |             |  |             |  |
| 9   | 38                              |        |    |    |             |    |    |             |  |             |  |
| <table><tr><td>x</td><td>3</td><td>7</td><td>9</td></tr><tr><td>y</td><td>14</td><td>30</td><td>38</td></tr></table>  | x                               | 3      | 7  | 9  | y           | 14 | 30 | 38          | The table has two rows and three columns. The first-row heading is, x; the second-row heading is, y. First column, 3, 14; second column, 7, 30; third column, 9, 38. |             |  |
| x   | 3                               | 7      | 9  |    |             |    |    |             |  |             |  |
| y   | 14                              | 30     | 38 |    |             |    |    |             |  |             |  |
| <p>A partially filled input-output table is shown. Complete the table so that it represents a function.</p> <p>Drag and drop each number from the list into the correct Input or Output box.</p> <div><div>1</div><div>5</div><div>8</div><div>10</div></div> <table><tr><th>Input</th><th>Output</th></tr><tr><td>1</td><td>4</td></tr><tr><td><div></div></td><td>6</td></tr><tr><td>5</td><td><div></div></td></tr><tr><td><div></div></td><td><div></div></td></tr></table> | Input                           | Output | 1  | 4  | <div></div> | 6  | 5  | <div></div> | <div></div>  | <div></div> | <p>The table has 2 columns and 4 rows. The first Column heading is Input. The second Column heading is Output.</p> <p>row 1 Input, 1, Output 4 (pause)</p> <p>row 2 Input blank, output 6 (pause)</p> <p>row 3 Input 5, Output blank, (pause)</p> <p>row 4 Input blank, Output blank</p> |
| Input   | Output                          |        |    |    |             |    |    |             |  |             |  |
| 1   | 4                               |        |    |    |             |    |    |             |  |             |  |
| <div></div>   | 6                               |        |    |    |             |    |    |             |  |             |  |
| 5   | <div></div>                     |        |    |    |             |    |    |             |  |             |  |
| <div></div>   | <div></div>                     |        |    |    |             |    |    |             |  |             |  |



## System of Equations/Inequalities

### Audio Guideline

Start by reading “system of equations” or “system of inequalities.” Then read the information in the system starting from the top to the bottom; reference the row position and insert a pause between rows.

Read equations and inequalities according to equation and inequality guidelines above.

| Example  | Application of Audio Guidelines  |
|--|--|
| $\begin{cases} x + y = 4 \\ x - y = 2 \end{cases}$ <p>What is the solution to the system of equations?</p>   | <p>System of equations. Top row, x plus y equals four (pause) bottom row, x minus y equals two. What is the solution to the system of equations?</p>   |
| <p>Which point lies in the solution set for the system</p> $\begin{cases} 2y - x \geq -6 \\ 2y - 3x < -6 \end{cases} ?$ <p>A. <math>(-4, -1)</math><br/>           B. <math>(3, 1)</math><br/>           C. <math>(0, -3)</math><br/>           D. <math>(4, 3)</math></p> | <p>Which point lies in the solution set for the system, top row, two y minus x is greater than or equal to negative six (pause) bottom row, two y minus three x is less than negative six.</p> |

## Trigonometry

### Audio Guideline

Read the abbreviated versions of trigonometry functions in full words unless doing so does violates the construct being measured.

Sin reads as “sine”.

Cos reads as “cosine”.

Tan reads as “tangent”.

Cot reads as “cotangent”.

Sec reads as “secant”.

Csc reads as “cosecant”.

Use the Greek alphabet in reading trigonometric functions and items. The most used letter is theta ( $\theta$ ).

| Example                         | Application of Audio Guidelines                         |
|---------------------------------|---|
| $\sin 15^\circ = \cos 75^\circ$ | Sine fifteen degrees equals cosine seventy-five degrees |
| $\tan \theta = -1$              | Tangent theta equals negative 1                         |

## Tables and Graphs (Text Only & Text & Graphics)

### Tables

#### **Audio Guideline**

##### **Text Only**

Read the table title only. Allow for all content elements in the table to be read on demand.

##### **Text and Graphics**

Read the table title, and then state the number of rows and columns. Then read the column headings from left to right followed by reading the information in each row from left to right.

If the orientation of the table lends itself to reading table information column by column and this is a more logical manner to present the table, then do so.

Read the units of measure for each cell unless they are specified in the table.

When reading a data table that has blank cells, skip over them if they are unnecessary to answer the question. Blank cells should be read if this information is essential to answer the item.

Remain consistent with the style of reading from table to table. Using a standardized version will help students better understand the patterns of the descriptions.

Many charts that are set up in a table format can be read in the manner described. Determine the layout of such charts before deciding the best way to read the information being presented.

| Example             |                     | Application of Audio Guidelines for Text and Graphics   |
|---------------------|---------------------|---|
| Seashell Collection |                     | The table title is Seashell Collection. The table has two columns and three rows. The first column heading is Size, the second column heading is Number of Seashells; first row, Small, three seashells; second row, Medium, six seashells; third row, Large, four seashells. |
| Size                | Number of Seashells |   |
| Small               | 3                   |   |
| Medium              | 6                   |   |
| Large               | 4                   |   |

### Tally Charts

#### **Audio Guideline**

##### **Text Only**

Read the tally chart title only. Allow for all content elements in the chart except for the tally marks to be read on demand.

##### **Text and Graphics**

Read the tally chart title, column headings, and row headings.

Read the number of tally marks only if it does not violate the construct being measured. If reading tally marks does violate the construct being measured, tactile representation is required to make this item accessible to blind students and some low-vision students.

| Example  | Application of Audio Guidelines for Text and Graphics |                 |        |  |         |  |        |  |         |  |  |
|--|---|-----------------|--------|--|---------|--|--------|--|---------|--|--|
| <table border="1"> <thead> <tr> <th>Name</th><th>Number of Votes</th></tr> </thead> <tbody> <tr> <td>Tigers</td><td>      </td></tr> <tr> <td>Rockets</td><td>   </td></tr> <tr> <td>Sharks</td><td>      </td></tr> <tr> <td>Bobcats</td><td>    </td></tr> </tbody> </table> | Name  | Number of Votes | Tigers |  | Rockets |  | Sharks |  | Bobcats |  | <p>The tally chart has two columns and four rows. The first column heading is Name, and the second column heading is Number of Votes; first row, Tigers, six votes; second row, Rockets, three votes; third row, Sharks, seven votes; fourth row, Bobcats, four votes.</p> |
| Name   | Number of Votes                                       |                 |        |  |         |  |        |  |         |  |  |
| Tigers   |   |                 |        |  |         |  |        |  |         |  |  |
| Rockets  |   |                 |        |  |         |  |        |  |         |  |  |
| Sharks   |   |                 |        |  |         |  |        |  |         |  |  |
| Bobcats  |   |                 |        |  |         |  |        |  |         |  |  |

## Bar Graphs

### Audio Guideline

#### Text Only

Read the bar graph title. Allow for all words and numbers on the bar graph to be available to be read on demand.

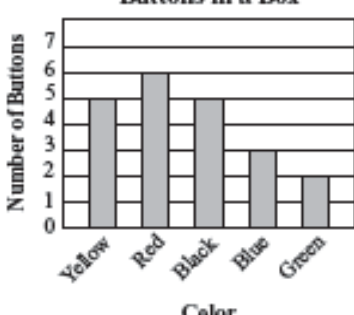
#### Text and Graphics

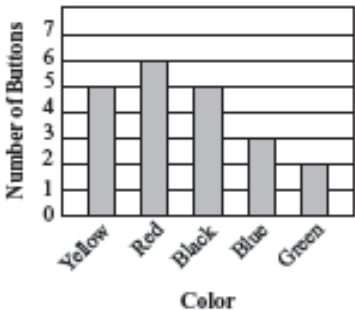
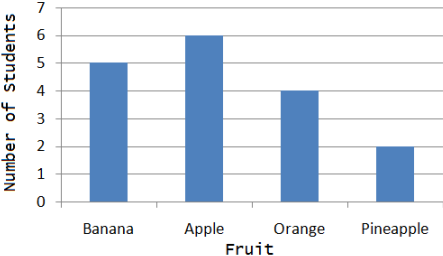
Read the bar graph title first, followed by the horizontal label and the vertical label as long as horizontal and vertical are grade level appropriate vocabulary words. Avoid using x-axis and y-axis when describing bar graphs unless specified. Do not read values on either axis until describing the bars.

Describe each bar, being careful to consider the question, so as not to violate the construct being measured. In each description, use the units of measure for the values of the labels, if applicable.

If a bar is between two horizontal lines, then do not estimate or approximate numbers. Instead, use more general language such as “a little less than,” “a little more than,” and “midway between.”

If the item measures the student’s ability to identify the number associated with the bar, then describe the graph without noting the heights of the bars. In this case, tactile representation is required to make this item accessible to blind students and some low-vision students.

| Example  | Application of Audio Guidelines for Text and Graphics |                   |        |   |     |   |       |   |      |   |       |   |  |
|--|---|-------------------|--------|---|-----|---|-------|---|------|---|-------|---|--|
| <p style="text-align: center;"><b>Buttons in a Box</b></p>  <table border="1"> <thead> <tr> <th>Color</th> <th>Number of Buttons</th> </tr> </thead> <tbody> <tr> <td>Yellow</td> <td>5</td> </tr> <tr> <td>Red</td> <td>6</td> </tr> <tr> <td>Black</td> <td>5</td> </tr> <tr> <td>Blue</td> <td>3</td> </tr> <tr> <td>Green</td> <td>2</td> </tr> </tbody> </table> | Color   | Number of Buttons | Yellow | 5 | Red | 6 | Black | 5 | Blue | 3 | Green | 2 | <p>Description of graph:</p> <p>The bar graph title is Buttons in a Box. The horizontal label is Color, and the vertical label is Number of Buttons; Yellow bar, five buttons; Red bar, six buttons; Black bar, five buttons; Blue bar, three buttons; Green bar, two buttons.</p> |
| Color  | Number of Buttons                                     |                   |        |   |     |   |       |   |      |   |       |   |  |
| Yellow   | 5   |                   |        |   |     |   |       |   |      |   |       |   |  |
| Red  | 6   |                   |        |   |     |   |       |   |      |   |       |   |  |
| Black  | 5   |                   |        |   |     |   |       |   |      |   |       |   |  |
| Blue   | 3   |                   |        |   |     |   |       |   |      |   |       |   |  |
| Green  | 2   |                   |        |   |     |   |       |   |      |   |       |   |  |

| Example   | Application of Audio Guidelines for Text and Graphics  |
|---|--|
| <p data-bbox="435 233 616 260"><b>Buttons in a Box</b></p>  <p data-bbox="261 621 675 648">How many red buttons are in the box?</p>  | <p data-bbox="743 216 1345 275">(Note: this item specifically asks students to identify the value associated with a bar)</p> <p data-bbox="743 287 1375 373">The bar graph title is Buttons in a Box. The horizontal label is Color and shows five colors: Yellow, Red, Black, Blue, and Green. The vertical label is Number of Buttons.</p> |
| <p data-bbox="261 663 707 749">Kate asked the students in her class what their favorite fruit was. The results of her survey are shown in the graph below.</p> <p data-bbox="363 777 608 798"><b>Students' Favorite Fruits</b></p>  | <p data-bbox="743 663 1375 779">The bar graph title is Students' favorite fruits. The horizontal axis label is Fruit, and the vertical axis is label is Number of students. Four bars are shown, from left to right, banana, apple, orange, pineapple.</p>   |

## Histograms

### Audio Guideline

#### Text Only

Read the histogram title. Allow for all words and numbers on the histogram to be available to be read on demand.

#### Text and Graphics

Read the histogram title first, followed by the horizontal label and the vertical label. Avoid using x-axis and y-axis when describing histogram unless specified. Do not read values on either axis until describing the bars.

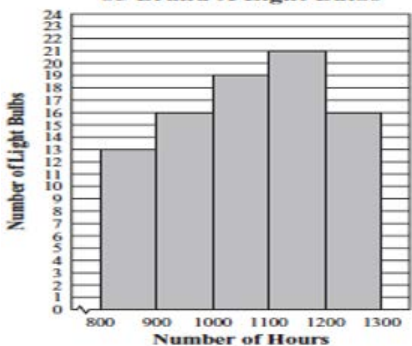
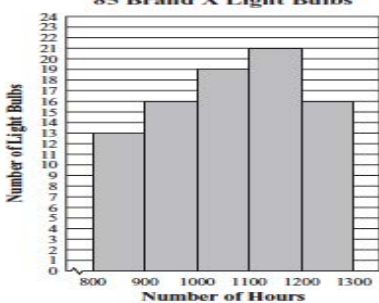
Describe each bar, being careful to consider the question, so as not to violate the construct being measured. In each description, use the units of measure for the values of the labels, if applicable.

Describe each bar range on the horizontal axis, being careful to consider the question, so as not to violate the construct being measured. In each description use the units of measure labels on the horizontal and vertical axes, if applicable.

If a bar is between two horizontal lines, then do not estimate or approximate numbers. Instead, use more general language such as “a little less than,” “a little more than,” and “midway between.”

If the item measures the student's ability to identify the number associated with the bar, then describe the graph without noting the heights of the bars. In this case, this item is not accessible to blind and some low-vision students without tactile representation.

If there are a large number of bars (more than 10) consider associating bars together or focusing on trends or more general frequency in your description.

| Example  | Application of Audio Guidelines for Text and Graphics   |
|--|---|
| <p>Abe tested 85 Brand X light bulbs to determine their life spans. The histogram below shows the results of his test.</p> <p style="text-align: center;"><b>Life Spans of<br/>85 Brand X Light Bulbs</b></p>  <p>What was the total number of Brand X light bulbs that had life spans greater than or equal to 1000 hours?</p>   | <p>The histogram title is Life Spans of Eighty-Five Brand X Light Bulbs. The horizontal label is Number of Hours and the vertical label is Number of Light Bulbs; bar one, eight hundred through eight hundred ninety nine hours, thirteen light bulbs; bar two, nine hundred through nine hundred ninety nine hours, sixteen light bulbs; bar three, one thousand through one thousand ninety nine hours, nineteen light bulbs; bar four, one thousand one hundred through one thousand one hundred ninety nine hours, twenty one light bulbs; bar five, one thousand two hundred through one thousand two hundred ninety nine hours, sixteen light bulbs.</p> |
| <p><b>13</b> Abe tested 85 Brand X light bulbs to determine their life spans. The histogram below shows the results of his test.</p> <p style="text-align: center;"><b>Life Spans of<br/>85 Brand X Light Bulbs</b></p>  <p>What was the total number of Brand X light bulbs that had life spans greater than or equal to 1000 hours?</p> <p>A. 72<br/>B. 56<br/>C. 51<br/>D. 21</p> | <p>(item specifically asks student to read information from one of the bars)</p> <p>The histogram title is Life Spans of Eighty-Five Brand X Light Bulbs. The horizontal label is Number of Hours and the vertical label is Number of Light Bulbs. Five bars show the number of light bulbs with a life span of eight hundred through eight hundred ninety nine hours, nine hundred through nine hundred ninety nine hours, one thousand through one thousand ninety nine hours, one thousand one hundred through one thousand one hundred ninety nine hours, one thousand two hundred through one thousand two hundred ninety nine hours.</p>                  |

## Line and Piece-wise Linear Graphs

### Audio Guideline

#### Text Only

Read the graph title only. Allow for all words and numbers in the graph area to be available to be read on demand.

#### Text and Graphics

For all graphs, read the title first.

Read the Key title and then key section (refer to Key rule specifically).

Read the axis labels.

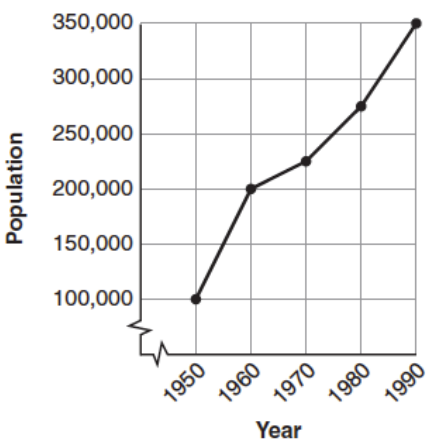
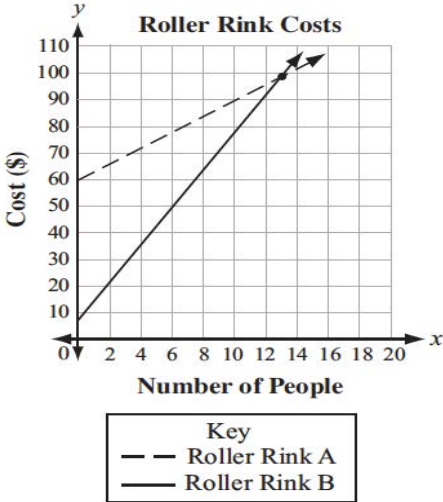
When describing the graph, be as concise as possible while providing the necessary information to understand and answer the question.

If a line or point being described falls between two marked x- (horizontal) or y-(vertical) axis values, then do not estimate or approximate numbers. Instead, use more general language such as “a little less than,” “a little more than,” and “midway between.”

It is not necessary to describe the visual attributes of the graph unless there is an explicit need, such as a key that references line types or an item referencing the attributes or if doing so would help the student in reading a tactile or a magnified version of the test.

If the description violates the construct being measured, then consider amending it to give less specific information. In this case, tactile representation is required to make this item accessible to blind students and some low-vision students.

When possible, reference the starting and ending point of the line segments or starting points of rays to provide context to the student.

| Example   | Application of Audio Guidelines for Text and Graphics  |
|---|--|
| <p style="text-align: center;"><b>Population of Denton</b></p>    | <p>The graph title is Population of Denton. The horizontal label is Year, and the vertical label is Population. The piecewise linear graph starts at nineteen fifty, one hundred thousand, rises to nineteen sixty, two hundred thousand, then nineteen seventy, midway between two hundred and two hundred fifteen thousand, then nineteen eighty, midway between two hundred fifty and three hundred thousand, and ends at nineteen ninety, three hundred fifty thousand.</p>  |
| <p style="text-align: center;"><b>Roller Rink Costs</b></p>  <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;">Key</p> <p>--- Roller Rink A</p> <p>— Roller Rink B</p> </div> | <p>The graph title is Roller Rink Costs. Key, dashed line represents Roller Rink A, solid line represents Roller Rink B. The x-axis is labeled Number of People. The y-axis is labeled Cost (in dollars). The dashed line starts at zero people, sixty dollars and moves up through midway between twelve and fourteen people, one hundred dollars and fourteen people, a little more than one hundred dollars. The solid line starts at zero people, a little less than ten dollars and moves up through between twelve and fourteen people, one hundred dollars and fourteen people, a little less than one hundred ten dollars.</p> |

## Box Plots

### Audio Guideline

#### Text Only

Read the box plot title. Allow for all words and numbers on the box plot to be available to be read on demand.

#### Text and Graphics

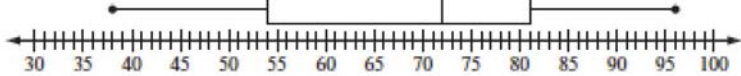
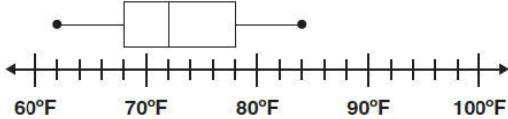
Start by reading the title of the plot and reference that it is a box plot. Read the box titles or any other words on the plot if applicable.

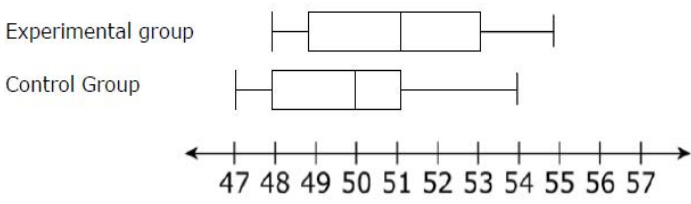
Read the information along the bottom of the graph from left to right.

Describe the graph elements using specific box plot terminology—including whiskers, quartiles, box, and median—unless doing so violates the construct being measured.

If the item measures knowledge of the box plot or if the description violates the construct being measured, then describe the box plot without using specific terminology such as whiskers, quartiles, or median. In this case, tactile representation is required to make this item accessible to blind students and some low-vision students.

If a line or point being described falls between two marked values, then do not estimate or approximate number. Instead use more general language such as “a little less than,” “a little more than,” and “midway between.”

| Example   | Application of Audio Guidelines for Text and Graphics Application of Audio Guidelines  |
|---|--|
| <p>The box plot shows the distribution of the daily high temperatures, in degrees Fahrenheit, in the town of Clifton during the year 2004.</p> <p style="text-align: center;"><b>Daily High Temperatures (in degrees Fahrenheit)</b></p>  <p>Based on the box plot, in which of the intervals of temperatures is it most likely that exactly 50% of the daily high temperatures are located?</p> | <p>The title of the box plot is Daily High Temperatures (in degrees Fahrenheit). The number line ranges from thirty degrees Fahrenheit to one hundred degrees Fahrenheit. The whiskers range from thirty-eight degrees to ninety-six degrees and the box ranges from fifty-four to eighty-one degrees with a median of seventy-two degrees.</p>  |
| <p>The box plot represents the daily high temperatures at a beach in April.</p> <p style="text-align: center;"><b>Daily High Temperatures</b></p>  <p>What was the median daily high temperature?</p>  | <p>The title of the box plot is Daily High Temperatures. The number line ranges from sixty degrees Fahrenheit to one hundred degrees Fahrenheit with markers every ten degrees. The whiskers range from sixty-two degrees to eighty-four degrees and the box ranges from sixty-eight degrees to seventy-eight degrees with an interior vertical line segment at seventy-two degrees.</p> |

| Example  | Application of Audio Guidelines for Text and Graphics<br>Application of Audio Guidelines  |
|--|---|
| <p style="text-align: center;"><b>Heights of Plants (cm)</b></p>  | <p>The title of the box plot is Heights of Plants (centimeters). The number line ranges from 47 to 57 with markers every whole number. For the experimental group, the whiskers range from 48 centimeters to 55 centimeters and the box ranges from 49 centimeters to 53 centimeters with a median of 51 centimeters. For the control group, the whiskers range from 47 centimeters to 54 centimeters and the box ranges from 48 centimeters to 51 centimeters with a median of 50 centimeters.</p> |

## Scatter Plots

### Audio Guideline

#### Text Only

Read the title of the scatter plot. Allow for all words and numbers on the scatter plot to be available to be read on demand.

#### Text and Graphics

For scatter plots, start by reading the title and axes labels. Include the horizontal and vertical ranges if necessary, to access the item. The axes may or may not be labeled x and y. In some cases, the rightmost extension of the horizontal axis and/or topmost extension of the vertical axis has no value specified. When specifying the ranges, use either the greatest number listed or the actual value at the rightmost or topmost extension of the axes, whichever is more appropriate.

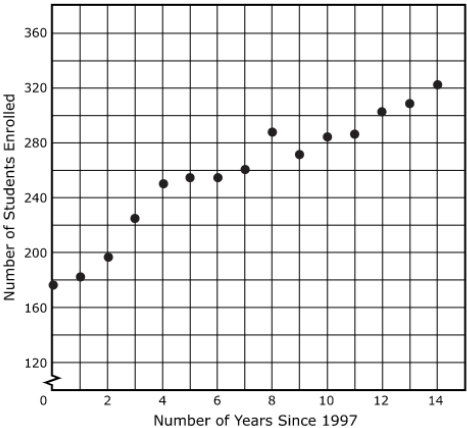
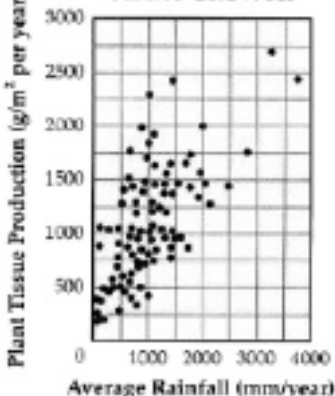
For a scatter plot with fewer than ten data points, reference each data point. Include units of measure while describing data points only if deemed relevant.

If a line or point being described falls between two marked values do not estimate or approximate numbers. Instead use more general language such as “a little less than,” “a little more than,” and “midway between.”

If a scatter plot has more than ten data points, then focus on the change of concentration. When possible, read at least a few data points (first and last point and points throughout the scatter preferably) to put the plot into context.

For some items with scatter plots, tactile representation is required to make the item accessible to blind students and some low-vision students.



| Example  | Application of Audio Guidelines for Text and Graphics   |
|--|---|
| <p data-bbox="384 216 544 243">Shipping Shoes</p> <p data-bbox="347 268 608 296"><b>Middle School Enrollment</b></p>  | <p>The graph is a scatter plot titled “Middle School Enrollment.” The horizontal axis is labeled Number of Years Since 1997 and ranges from zero to fifteen in increments of one. The vertical is labeled Number of Students Enrolled and ranges from zero to three hundred eighty in increments of twenty. The scatter plot has a beginning point at zero, a little less than one hundred eighty and an end point at fourteen a little more than three hundred twenty. There is a point at three, a little more than two hundred twenty, a point at seven two hundred sixty and a point at twelve a little more than three hundred.</p>  |
| <p data-bbox="395 774 576 823"><b>RAINFALL AND PLANT GROWTH</b></p>    | <p>The graph is a scatter plot titled Rainfall and Plant Growth. The horizontal axis is labeled Average Rainfall, in units of millimeters per year and ranges from zero to four thousand and is marked in increments of five hundred. The vertical axis is labeled Plant Tissue Production in units of grams per meter squared per year, ranging from zero to three thousand and is marked in increments of two hundred fifty. The graph has approximately eighty-five points scattered in a pattern beginning in the lower-left corner where Plant Tissue Production and Average Rainfall are the lowest. The pattern extends toward the upper-right corner where Plant Tissue Production and Average Rainfall are the highest. The majority of points are concentrated in the lower-left corner and diminishes in concentration as the pattern extends toward the upper-right corner.</p> |

## Coordinate Plane

### Audio Guideline

#### Text Only

Start by reading the title of the coordinate plane. Allow for all words and numbers on the coordinate plane to be available to be read on demand.

#### Text and Graphics

Read the title of the coordinate plane and state that this item contains a two-dimensional coordinate plane.

Read the range of each axis. In some cases, the extensions of the x- and/or y-axis have no value specified. When specifying the ranges, use either the greatest (or least for bottom and left extensions) number listed or the actual value at the furthest extension of the axes, whichever is more appropriate.

Read the points or words on the coordinate plane in a logical manner referencing their location without violating the construct being measured. Read in the same order that is provided in the text

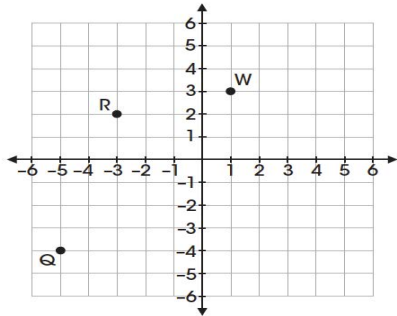
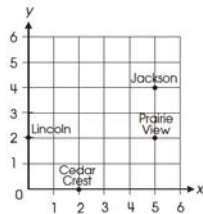
of the item which is either clockwise or counterclockwise so that corresponding vertices align if there are multiple figures.

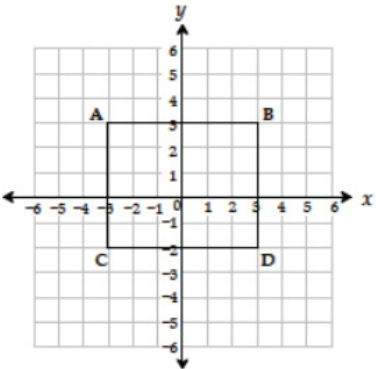
If a line or point being described falls between two marked x- or y-axis values, then do not estimate or approximate numbers. Instead, use more general language such as “a little less than,” “a little more than,” and “midway between.”

If reading the location of the points violates the construct being measured, do not read the point, but reference that they are on the grid. In this case, tactile representation is required to make the item accessible to blind students and some low-vision students.

If there is a shape on the grid, then read the type of shape or name of it as provided in the text of the item, and then reference vertices and other points, if relevant. If referencing the axis points violates the construct being measured, then provide a description of the shape without these points.

If an empty grid is presented in an item as part of the prompt, question, or answer then read the title and the x- and y- axes scale.

| Example   | Application of Audio Guidelines for Text and Graphics  |
|---|--|
| <p>23. Points Q, R, and W are plotted on the coordinate grid.</p>  <p>Where should point Z be plotted so that parallelogram QRWZ is formed?</p> <p>A. <math>(-2, -6)</math><br/>         B. <math>(-1, -3)</math><br/>         C. <math>(3, -2)</math><br/>         D. <math>(2, -1)</math></p>                                 | <p>A coordinate plane with x- and y-axes ranging from negative six to six; point Q, negative five, negative four; point R, negative three, two; and point W, one, three.</p> |
| <p>18. Mr. Yang is driving to the school located at <math>(2, 0)</math> on the coordinate grid.</p>  <p>Which school is located at <math>(2, 0)</math>?</p> <p><input type="radio"/> A. Cedar Crest<br/> <input type="radio"/> B. Jackson<br/> <input type="radio"/> C. Lincoln<br/> <input type="radio"/> D. Prairie View</p> | <p>A coordinate plane with x- and y-axes ranging from zero to six. The grid shows the location of the four schools: Jackson, Prairie View, Cedar Crest, and Lincoln.</p>     |

| Example  | Application of Audio Guidelines for Text and Graphics   |
|--|---|
| <p>Use the diagram below to answer question 7.</p>  <p>7. Which ordered pair identifies the location of vertex C?</p> <p>A <math>(-3, -2)</math><br/>         B <math>(-3, 3)</math><br/>         C <math>(3, -2)</math><br/>         D <math>(-2, -3)</math></p> | <p>A coordinate plane with x- and y-axes ranging from negative six to six. Rectangle ABCD is shown on the grid.</p> |

## Graphs of Non-linear Functions

### Audio Guideline

#### Text Only

Start by reading the title of the graph. Allow for all words and numbers on the graph to be available to be read on demand.

#### Text and Graphics

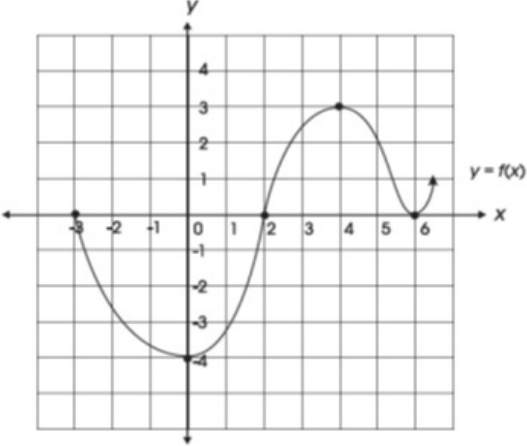
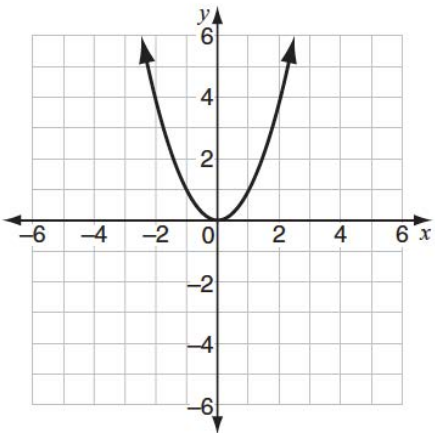
Read the title of the graph.

Read the range of each axes and any words or symbols that are on the graph. In some cases, the extensions of the x- and/or y-axis have no value specified. When specifying the ranges, use either the greatest (or least for bottom and left extensions) number listed or the actual value at the furthest extension of the axes, whichever is more appropriate.

Describe the shape of the graph. Use relevant points including starting and ending points or x or y intersection points to aid the description.

If a graph or point being described falls between two marked x- or y-axes values, then do not estimate or approximate numbers. Instead use more general language such as “a little less than,” “a little more than,” and “midway between.”

If reading the location of any points violates the construct being measured, then do not read these points. If describing the shape or direction of the graph violates the construct, then do not read the details of the shape of the graph. In this case, tactile representation is required to make the item accessible to blind students and some low-vision students.

| Example  | Application of Audio Guidelines for Text and Graphics   |
|--|---|
| <p>31. The graph of the function <math>f(x)</math> is shown below.</p>  <p>Which of the following is NOT a zero of <math>f(x)</math>?</p>   | <p>A graph showing the function <math>y</math> equals <math>f</math> of <math>x</math>. The <math>x</math>-axis ranges from negative four (or three) to seven (or six), and the <math>y</math>-axis ranges from negative six (or negative four) to five (or four). The graph is in the shape of a wave. The graph starts at negative three zero, goes through zero negative four, then two zero, then four three, then six zero, and ends with an arrow pointing up at a midway between six and seven, one.</p> |
| <p>10 Look at this graph of <math>y = x^2</math>.</p>  <p>If <math>y = x - 2</math> is graphed on the same coordinate plane, at how many points would the two graphs intersect?</p> <p>A. 0<br/>B. 1<br/>C. 2<br/>D. 3</p> | <p>A graph showing <math>y</math> equals <math>x</math> squared. The <math>x</math>-axis range is from negative six to positive six. The <math>y</math>-axis range is from negative six to six. The graph is a parabola that starts with an arrow at midway between negative two and negative three, six, and then the graph moves down through zero zero, and goes up and ends with an arrow midway between two and three, six.</p>  |

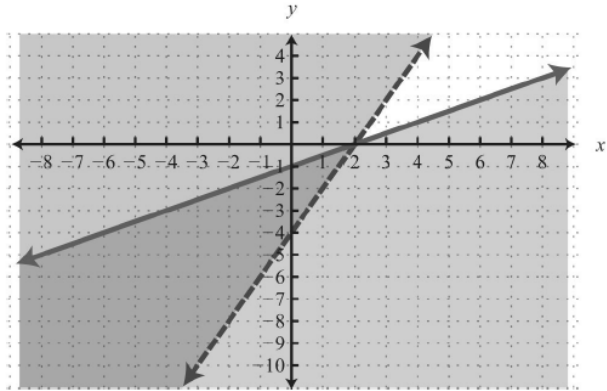
## Graphs of a System of inequalities

### Audio Guideline

#### Text and Graphics

When reading a system of inequalities, read the range of each axes and any words or symbols that are on the graph. State the type of graph and the number of graphs, e.g. one line and one parabola are graphed, as long as it does not violate the construct being measured. Describe whether or

not each constraint is dotted or solid. Describe the shaded area using “above” and “below” with appropriate colors. Use “left” and “right” when a graph is vertical.

| Example  | Application of Audio Guidelines for Text and Graphics  |
|--|--|
| <p>Which graph represents the solution to this system of inequalities?</p> $y > 2x - 4$ $3x - 6y \geq 6$  | <p><b>Text and Graphics</b></p> <p><b>A system of inequalities and a graph such as this would be described as follows:</b></p> <p>Which graph represents the solution to this system of inequalities, top row, Y is greater than 2 X minus 4; bottom row, 3 X minus 6 Y is greater than or equal to 6.</p> <p>A graph showing two lines and three shaded regions. The x axis ranges from negative 9 to 9. The y axis ranges from negative 11 to 5. A solid line starts at negative 9, a little less than negative 5; rises to zero, negative 1; then 2, zero; and ends at 9, a little more than 3. The area below the solid line is shaded gray. A dashed line starts at a little less than negative 3, negative 11; rises to zero, negative 4; then 2, zero; and ends at a little more than 4, 5. The area above the dashed line is shaded gray. The area of overlap is shaded darker gray.</p> |

## Diagrams/Figures/Keys

### Tree Diagram

#### Audio Guideline

##### Text Only

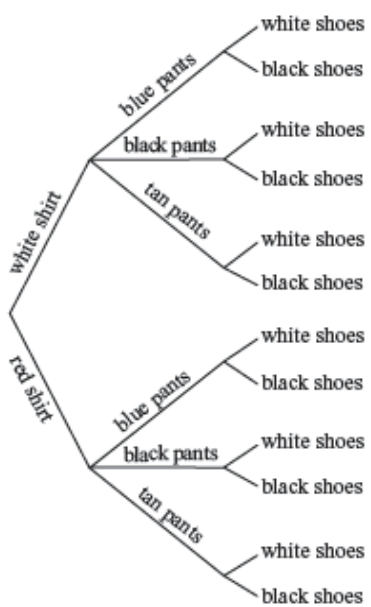
Read the tree diagram title. Allow for all words and numbers on the tree diagram to be available to be read on demand.

##### Text and Graphics

Read the tree diagram title and brief description along with stating the direction of the tree diagram.

Start with the innermost parts of the tree and describe the different limbs in an order that is easy to follow.

Describe all the elements of the tree diagram with standardized language.

| Example  | Application of Audio Guidelines  |
|--|--|
| <p><b>11</b> The tree diagram below shows all of the outfits Jay can choose to wear today. An outfit has one color of shirt, one color of pants, and one color of shoes.</p>  <p>What is the total number of possible outfits with a white shirt?</p> <p>A. 9<br/>B. 6<br/>C. 3<br/>D. 1</p> | <p>A tree diagram showing outfit combinations of shirts, pants, and shoes. The diagram displays information from left to right starting with shirts on the leftmost branches. On the top half of the tree, white shirt branches to blue pants, black pants, and tan pants. Each of these pants branches stems to the outermost branches of white shoes and black shoes. On the bottom half of the tree, red shirt branches to blue pants, black pants, and tan pants. Each of these pants branches stems to the outermost branches of white shoes and black shoes.</p> |

## Keys

### Audio Guideline

#### Text Only

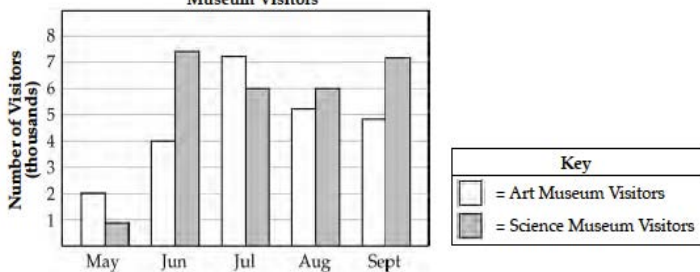
Read the word Key after reading the graph/diagram title. Allow for all words and numbers in the key to be available to be read on demand.

#### Text and Graphics Guidelines

Read the graph/diagram title and then the key.

Describe the key in detail, including shapes, shades, and so on. Use “represents” to associate icon with text. (e.g., –10 miles. Dashed line represents ten miles.)

Read the graph/diagram using the key symbols. (e.g., May, white bar, two; May, gray bar, a little less than one)

| Example   | Application of Audio Guidelines for Text and Graphics |                                     |                                     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |   |
|---|---|-------------------------------------|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|---|
| <div><p style="text-align: center;"><b>Museum Visitors</b></p><table><caption>Museum Visitors Data (Estimated)</caption><tr><th>Month</th><th>Art Museum Visitors (thousands)</th><th>Science Museum Visitors (thousands)</th></tr><tr><td>May</td><td>2.0</td><td>1.0</td></tr><tr><td>Jun</td><td>4.0</td><td>7.5</td></tr><tr><td>Jul</td><td>7.2</td><td>6.0</td></tr><tr><td>Aug</td><td>5.2</td><td>6.0</td></tr><tr><td>Sept</td><td>4.8</td><td>7.2</td></tr></table></div> | Month   | Art Museum Visitors (thousands)     | Science Museum Visitors (thousands) | May | 2.0 | 1.0 | Jun | 4.0 | 7.5 | Jul | 7.2 | 6.0 | Aug | 5.2 | 6.0 | Sept | 4.8 | 7.2 | <p>The bar graph title is Museum Visitors. In the Key, the white bar represents Art Museum Visitors, while the gray bar represents Science Museum Visitors. The horizontal axis shows five months; the vertical axis is labeled Number of Visitors (thousands); May, white bar, two; May, gray bar, a little less than one; June, white bar, four; June, gray bar, midway between seven and eight; July, white bar, a little more than seven; July, gray bar, six; August, white bar, a little more than five; August, gray bar, six; September, white bar, a little less than five; September, gray bar, a little more than seven.</p> |
| Month   | Art Museum Visitors (thousands)                       | Science Museum Visitors (thousands) |                                     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |   |
| May   | 2.0   | 1.0                                 |                                     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |   |
| Jun   | 4.0   | 7.5                                 |                                     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |   |
| Jul   | 7.2   | 6.0                                 |                                     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |   |
| Aug   | 5.2   | 6.0                                 |                                     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |   |
| Sept  | 4.8   | 7.2                                 |                                     |     |     |     |     |     |     |     |     |     |     |     |     |      |     |     |   |

## Line Plots

### Audio Guideline

#### Text Only

Read the line plot title. Allow for all words and numbers on the line plot and on the key to be available to be read on demand.

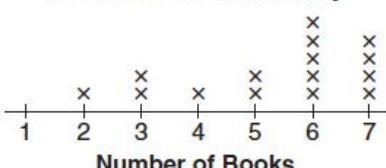
#### Text and Graphics

Read the title of the line plot, the key, and then the horizontal label.

Use the key symbol to describe the line plot instead of interpreting the symbol.

If there are no x's or symbols above a number, then read this as zero instead of skipping it.

Be careful not to violate the construct being measured. Read the range of numbers on the horizontal axis without reading the data, if necessary. In this case, tactile representation is required to make the item accessible to blind students and some low-vision students.

| Example   | Application of Audio Guidelines for Text and Graphics  |
|---|--|
| <p><b>16</b> Look at this line plot.</p> <p style="text-align: center;"><b>Books We Read in May</b></p>  <p style="text-align: center;"><b>Number of Books</b></p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"><b>Key</b></p> <p>x represents 1 student</p> </div> | <p>The title of the line plot is Books We Read in May. The key shows that an x represents one student. The number line title is Number of Books and ranges from one to seven in increments of one; at line plot one, zero x's are shown; at line plot two, one x is shown; at line plot three, two x's are shown; at line plot four, one x is shown; at line plot five, two x's are shown; at line plot six, five x's are shown; and at line plot seven, four x's are shown.</p> |

## Shaded Figures (Grids, Bars, and Shapes)

### Audio Guideline

#### Text Only

Read the title of the shaded figure. Allow for all words and numbers in the figure to be available to be read on demand.


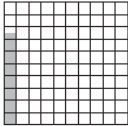
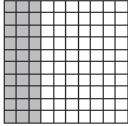
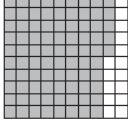
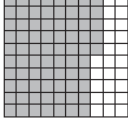
#### Text and Graphics

Read the title if there is one, and then describe the dimensions of the figure first. If possible, read the dimensions of the figure (ten by ten) instead of just the number of boxes.

Explain how many boxes are shaded, but do not use "x of y boxes are shaded". This creates the fraction for the student and will often violate the construct being measured.



When students should use information from the figures to determine the number of boxes shaded, do not state the total number of boxes shaded, e.g., read seven columns of ten boxes shaded, instead of seventy boxes.

| Example  | Application of Audio Guidelines for Text and Graphics  |
|--|--|
| <p>❶ A fraction of the fish shown below are shaded gray.</p>  <p>Which grid is shaded gray to represent a fraction with the same value?</p> <p>A. </p> <p>B. </p> <p>C. </p> <p>D. </p> | <p>A fraction of the fish shown below is shaded gray. The graphic shows four fish. Three of them are shaded gray.</p> <p>Which grid below is shaded gray to represent a fraction with the same value?</p> <p>A. ten by ten box grid with seven boxes shaded</p> <p>B. ten by ten box grid with three columns of ten boxes shaded</p> <p>C. ten by ten box grid with eight columns of ten boxes shaded and five additional boxes shaded</p> <p>D. ten by ten box grid with seven columns of ten boxes shaded and five additional boxes shaded</p> |

## Pictographs

### Audio Guideline

#### Text Only

Read the title of the pictograph. Allow for all words and numbers in the pictograph or key to be available to be read on demand.

#### Text and Graphics
































Start by reading the title of the pictograph and then the key.

If the pictograph is in a table format, then refer to the table guidelines.

If the pictograph is in a graph format, then refer to the graph guidelines.

Reference the picture being used in general terms without describing it in detail. Use the key to read the pictograph without interpreting it. When describing a pictograph, reference “picture of x,” since the scale may not be one to one.

In some cases, tactile representation is required to make the item accessible to blind students and some low-vision students.

| Example  | Application of Audio Guidelines for Text and Graphics   |                |        |   |        |   |        |   |           |   |   |
|--|---|----------------|--------|---|--------|---|--------|---|-----------|---|---|
| <p style="text-align: center;"><b>Dogs at the Park</b></p> <table> <tr> <th>Type of Dog</th><th>Number of Dogs</th></tr> <tr> <td>Beagle</td><td> </td></tr> <tr> <td>Collie</td><td>  </td></tr> <tr> <td>Poodle</td><td></td></tr> <tr> <td>Dalmatian</td><td>   </td></tr> </table> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;"><b>Key</b></p> <p> represents 1 dog</p> </div> | Type of Dog   | Number of Dogs | Beagle |   | Collie |    | Poodle |  | Dalmatian |     | <p>The pictograph title is Dogs at the Park. The Key shows a picture of a dog represents one dog. The table has two columns and four rows; column heading one is Type of Dog; column heading two is Number of Dogs; row one, Beagle, picture of two dogs; row two, Collie, picture of three dogs; row three, Poodle, picture of one dog; row four, Dalmatian, picture of four dogs.</p> |
| Type of Dog  | Number of Dogs  |                |        |   |        |   |        |   |           |   |   |
| Beagle   |     |                |        |   |        |   |        |   |           |   |   |
| Collie   |      |                |        |   |        |   |        |   |           |   |   |
| Poodle   |    |                |        |   |        |   |        |   |           |   |   |
| Dalmatian  |     |                |        |   |        |   |        |   |           |   |   |

## Figures/Illustrations

### Audio Guideline

#### Text Only

Read the title of the figure/illustration or any caption that is being used in the title format. Allow for all words and numbers in the pictograph or key to be available to be read on demand.

#### Text and Graphics

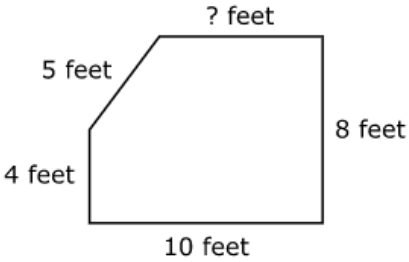
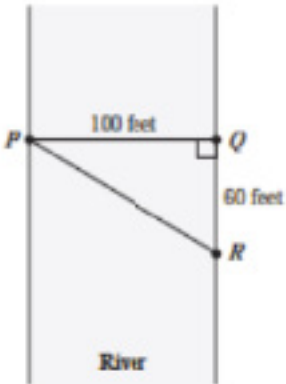
Read the title of the figure or illustration. Include the caption in the description if it is not included in the surrounding text.

Read any scale before describing parts of the figure.

Remember that the goal is to help the student understand the pertinent information in the diagram. Try to include descriptions of all shapes and figures. Do not to overload the student with descriptions that are overly wordy or not needed to answer the question. Separate the information into pieces using sentences, bullet points, or lists. Use similar language to describe all parts of the diagram or illustration. Standardized language will help ensure comprehension.

Do not use definitions or parts of definitions that are part of the construct being measured. If the description could violate the construct being measured, then adjust the description to be vague.

In some cases, tactile representation is required to make the item accessible to blind students and some low-vision students.

| Example   | Application of Audio Guidelines for Text and Graphics   |
|---|---|
| <p>The shape shown has a perimeter of 34 feet.</p>  <p>What is the length of the side that is missing a number?</p>  | <p>The shape shown has a perimeter of 34 feet.</p> <p>A five-sided shape is shown. The length of each side is labeled as follows:</p> <p>question mark feet,<br/>eight feet,<br/>10 feet,<br/>4 feet, and<br/>5 feet</p> <p>What is the length of the side that is missing a number?</p>  |
| <p><b>40</b> Triangle <math>PQR</math> in the diagram below represents Pam's trip across a river.</p>  <p>In the diagram, <math>\overline{PQ}</math> represents her planned trip across the river, and <math>\overline{PR}</math> represents her actual trip across the river.</p> <p>Based on the dimensions in the diagram, which of the following is closest to the length of <math>\overline{PR}</math>?</p> <p>A. 104 feet<br/>B. 117 feet<br/>C. 120 feet<br/>D. 160 feet</p> | <p>Example 2</p> <p>A diagram showing a rectangular section of a river is illustrated. Triangle <math>PQR</math> shows Pam's trip across the river with all three points of the triangle touching a side of the river. Point <math>P</math> is on the left side of the river, and points <math>Q</math> and <math>R</math> are on the right side of the river. Point <math>Q</math> is the vertex of a right angle. The distance from <math>P</math> to <math>Q</math> is one hundred feet. The distance from <math>Q</math> to <math>R</math> is sixty feet.</p> |

## Number Lines

### Audio Guideline

#### Text Only

Read the title of the number line only or any caption that is being used in the title format. Allow all letters, words, and number on the number line to be available on demand.

#### Text and Graphics

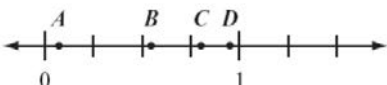
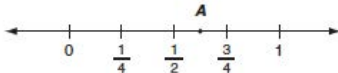
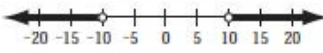
Start by reading the title of the number line.

Read the range on the bottom along with the increments displayed.

Read the letters or words on the number line along with their location. Be careful not to violate the construct being measured in doing so. In some cases, tactile representation is required to make the item accessible to blind students and some low-vision students.

If a point being described falls between two marked values, then do not estimate or approximate numbers. Instead, use more general language such as “is located a little after,” “is located a little before,” “is closer to,” and “is midway between.”

For bolded number lines, describe which parts are bolded.

| Example  | Application of Audio Guidelines for Text and Graphics   |
|--|---|
| <p>Which point on the number line below best represents 0.8?</p>  <p>A. point A<br/>B. point B<br/>C. point C<br/>D. point D</p>   | <p>A number line is shown with points A, B, C, and D and three equally spaced tick marks between the values of zero and one. Point A is located between zero and the first tick mark, and is closer to zero; point B is located between the second and third tick marks, and is much closer to the second tick mark; while point C and point D are closer to the value one.</p> |
| <p>Look at this number line.</p>  <p>Point A is halfway between <math>\frac{1}{2}</math> and <math>\frac{3}{4}</math>. What fraction does point A represent? Show your work or explain how you know.</p>                  | <p>A number line shows zero and one with three tick marks in between: one-fourth, one-half, and three-fourths. Point A is marked midway between one-half and three-fourths.</p>   |
| <p><b>37</b> The graph below is the solution of which of the following inequalities?</p>  <p>A. <math> x  &gt; 10</math><br/>B. <math> x  &lt; 10</math><br/>C. <math>x &gt; 10</math><br/>D. <math>x &lt; -10</math></p> | <p>A number line shows from negative twenty to positive twenty in increments of five. An open circle is located at negative ten. A bold line extends left from negative ten to a bolded arrow on the left end.</p> <p>An open circle is located ten. A bold line extends right to a bolded arrow on the right end.</p>  |

## Spinners

### Audio Guideline

#### Text Only

Read the title of the spinner only. Allow for all letters, words, and numbers on the spinner to be available on demand.

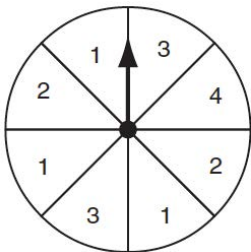
#### Text and Graphics

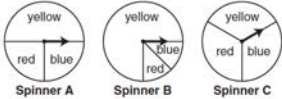
Read the title of the spinner and reference it as a spinner.

Read any words, symbols, or numbers in the spinner, starting at the top and moving clockwise.

If necessary, describe the sizes of each section. Be sure not to violate the construct being measured in doing so. In some cases, tactile representation is required to make the item accessible to blind students and some low-vision students.

When describing the size of sections, do not estimate or approximate a specific size if it is not labeled. Instead, use more general language such as “less than,” “more than,” and “half of.” Exceptions are for one-fourth, one-third, one-half, two-thirds, and three-fourths that are immediately apparent.

| Example  | Application of Audio Guidelines for Text and Graphics  |
|--|--|
| <p>10 Look at this spinner.</p>  <p>On what number is the arrow <b>least</b> likely to land?</p> <p><input type="radio"/> A. 1</p> <p><input type="radio"/> B. 2</p> <p><input type="radio"/> C. 3</p> <p><input type="radio"/> D. 4</p> | <p>Grades 7 and lower: A spinner is divided into eight sections of the same size. One number in each section is shown. From the top moving clockwise, the sections read three, four, two, one, three, one, two, one.</p> <p>Grades 8 and higher: A spinner divided into eight congruent sections. One number in each section is shown. From the top moving clockwise, the sections read three, four, two, one, three, one, two, one.</p> |

| Example   | Application of Audio Guidelines for Text and Graphics |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |
|---|---|-----------|--------|----|------|----|-----|----|-------|-----------|--------|----|------|---|-----|---|---|
| <p>15 Look at these spinners.</p>  <p>Julie, Greg, and Lori each used a different spinner to record the results of 40 spins.</p> <p>a. This table shows Julie's results.</p> <p><b>Julie's Spinner Results</b></p> <table> <tr> <th>Color</th><th>Frequency</th></tr> <tr> <td>yellow</td><td>12</td></tr> <tr> <td>blue</td><td>14</td></tr> <tr> <td>red</td><td>14</td></tr> </table> <p>Which spinner did Julie <b>most likely</b> use? Show your work or explain how you know.</p> <p>b. This table shows Greg's results.</p> <p><b>Greg's Spinner Results</b></p> <table> <tr> <th>Color</th><th>Frequency</th></tr> <tr> <td>yellow</td><td>30</td></tr> <tr> <td>blue</td><td>5</td></tr> <tr> <td>red</td><td>5</td></tr> </table> <p>Which spinner did Greg <b>most likely</b> use? Show your work or explain how you know.</p> <p>c. Lori used the remaining spinner. Make a table to show the <b>most likely</b> results of Lori's 40 spins. Explain your reasoning.</p> | Color   | Frequency | yellow | 12 | blue | 14 | red | 14 | Color | Frequency | yellow | 30 | blue | 5 | red | 5 | <p>There are three spinners shown labeled Spinner A, Spinner B, and Spinner C. Each spinner is divided into three sections. In Spinner A, one-half of the spinner is labeled yellow, one-fourth of the spinner is labeled blue, and one-fourth of the spinner is labeled red. In Spinner B, three-fourths of the spinner is labeled yellow, and the other part is divided evenly and labeled blue and red. In Spinner C, about one-third of the spinner is labeled yellow, about one-third of the spinner is labeled red, and about one-third of the spinner is labeled blue.</p> |
| Color   | Frequency   |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |
| yellow  | 12  |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |
| blue  | 14  |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |
| red   | 14  |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |
| Color   | Frequency   |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |
| yellow  | 30  |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |
| blue  | 5   |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |
| red   | 5   |           |        |    |      |    |     |    |       |           |        |    |      |   |     |   |   |

## Coins and Dollars

### Audio Guideline





#### Text and Graphics

Describe the money using standard language (penny, dime, quarter, or dollar).

Be sure to read each currency symbol as a symbol and not to interpret the value. (e.g., two quarters instead of fifty cents, or three dimes instead of thirty cents).

If reading the currency symbols violates the construct being measured, tactile representation is required to make the item accessible to blind students and some low-vision students.

See Symbols Money Section of this document.

| Example  | Application of Audio Guidelines for Text and Graphics   |
|--|---|
| <p>5 Cindy had \$1.00. Then she bought a pencil for \$0.37. How much money does she have now?</p> <p><input type="radio"/> A. </p> <p><input type="radio"/> B. </p> <p><input type="radio"/> C. </p> <p><input type="radio"/> D. </p> | <p>A. shows two quarters, one dime, and three pennies.</p> <p>B. shows two quarters, two dimes, and three pennies.</p> <p>C. shows three quarters and two pennies.</p> <p>D. shows one one-dollar bill, one quarter, one dime, and two pennies.</p> |

### Numbered/Step Diagrams/Patterns

### Audio Guideline

#### Text Only

Read the title of the diagram only. Allow for all letters, words, and numbers on the diagram to be available to be read on demand.

#### Text and Graphics

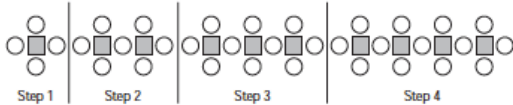
Read the title of the diagram and a brief orientation of what the diagram shows.

In logical order (left to right or top to bottom), read the steps or diagram numbers along with a description of the figures in each step.

Describe the figures with enough detail to understand the item. Unless necessary, do not detail the specific characteristics of the figures being used. (e.g., color, size, location, shape, etc.)

If the description violates the construct being measured (e.g., if the question asks, “How many circles are in step 1?”), then adjust the description to be vague.

In this case, tactile representation is required to make the item accessible to blind students and some low-vision students.

| Example  | Application of Audio Guidelines for Text and Graphics Application of Audio Guidelines  |
|--|--|
| <p><b>9</b> Don made a pattern using circles and squares. The first four steps of his pattern are shown below.</p>  <p>Step 1      Step 2      Step 3      Step 4</p> <p>If Don continues his pattern, what is the total number of circles he will need to make Step 10?</p> <p>A. 30<br/>B. 31<br/>C. 38<br/>D. 40</p> | <p>A diagram shows four steps of a pattern using circles and squares. Step one shows a square and four circles, step two shows two squares and seven circles, step three shows three squares and ten circles, and step four shows four squares and thirteen circles.</p> |

## Geometric Figures

### Audio Guideline

#### Text Only

Read the title of the shape(s) only. Allow for all labels of sides or angles to be available on demand.

#### Text and Graphics

Simple shapes (any 2D shape with eight sides or fewer): Reference simple shapes as is unless the item is measuring identification of a shape. If the item contains a simple shape, reference it without description. If there are unique attributes to the shape, describe those attributes in as few words as possible. Be sure to reference labels of sides, angles, and so on, as long as doing so does not violate the construct being measured.

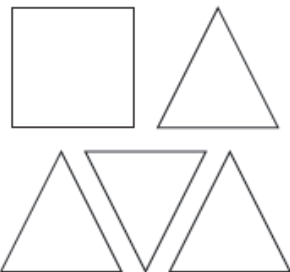
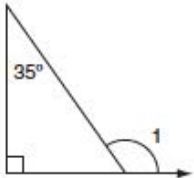
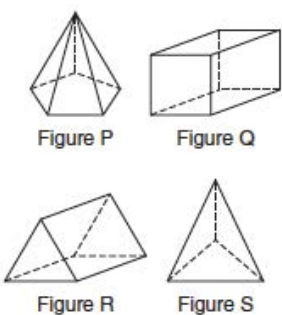
3D shapes/figures: Reference the type of figure.

If relevant and does not violate the construct being measured, describe the figure including the number of faces. In some cases, if a certain description would violate the construct, tactile representation is required to make the item accessible to blind students and some low-vision students.

Be sure to reference labels of faces, angles, and so on.



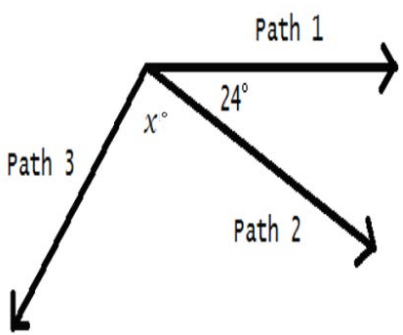
Refer to the coordinate plane section for reading shapes on coordinate planes.

| Example  | Application of Audio Guidelines for Text and Graphics   |
|--|---|
| <p>These shapes are the 5 faces of a three-dimensional figure.</p>  <p>What is the three-dimensional figure?</p> <p>A. cube<br/>B. cone<br/>C. prism<br/>D. pyramid</p>   | <p>A square and four triangles that have the same size and shape are shown.</p>   |
| <p>Look at this diagram.</p>  <p>What is the measure of <math>\angle 1</math>?</p> <p>A. <math>55^\circ</math><br/>B. <math>115^\circ</math><br/>C. <math>125^\circ</math><br/>D. <math>135^\circ</math></p>   | <p>A diagram shows a right triangle. The triangle shows a right angle in the left bottom corner, a thirty-five-degree angle at the top, with no angle reference in the bottom-right corner. A ray extends from the right angle and forms an angle on the outside of the triangle at the bottom right corner. Outside the bottom-right corner of the triangle there is a symbol marking an exterior angle labeled one.</p> |
| <p>Look at these figures.</p>  <p>Figure P      Figure Q</p> <p>Figure R      Figure S</p> <p>Which two figures have the same number of faces?</p> <p>A. Figure P and Figure Q<br/>B. Figure S and Figure R<br/>C. Figure P and Figure R<br/>D. Figure S and Figure Q</p> | <p>Four figures are shown. Figure P is a pentagonal pyramid, Figure Q is a rectangular prism, Figure R is a triangular prism, and Figure S is a triangular pyramid.</p>   |

## For geometric figures with multiple lines

### Audio Guidelines

Diagrams with internal angles should generally be described clockwise, beginning at the 12:00 position or a logical point of origin in the diagram or in the order that is provided in the text of the item.

| Example  | Application of Audio Guidelines for Text and Graphics   |
|--|---|
| <p>Bicyclists at National Park can choose one of three bike paths from the visitors' center, as shown in this diagram.</p>  | <p>A diagram shows three rays, each originating at the same point. The first ray, drawn horizontally to the right, is labeled Path 1. The second ray, labeled Path 2, is drawn downward and toward the right. The angle formed by Path 1 and Path 2 has a measure of 24 degrees. The third ray, labeled Path 3, is drawn downward and to the left. The angle formed by Path 2 and Path 3 has a measure of <math>x</math> degrees.</p> |

### References

Smarter Balanced Assessment Consortium: Mathematics Audio Guidelines

<https://portal.smarterbalanced.org/library/en/mathematics-audio-guidelines.pdf>

## Appendix J: Legal Background

### Federal Legislation

#### The Elementary and Secondary Education Act

ESEA explicitly calls for the participation in high-quality, yearly student academic assessments of all students [20 USC § 6311(b)(3)(C)(i)]. It also requires that these assessments provide for the reasonable adaptations and accommodations for students with disabilities – as defined in IDEA [20 USC § 1401(3)]– necessary to measure the academic achievement of such students relative to BIE academic content and BIE student academic achievement standards [20 USC § 6311(b)(3)(C)(ii)].

Federal provisions for inclusion and accommodation of ELs in CCRS summative assessment and accountability systems are included in ESEA, which requires the participation of all students, including ELs and ELs with disabilities, in standards-based instruction and assessment initiatives Every Student Succeeds Act (ESSA).

Through the ESEA federal legislation, in addition to other BIE and local district initiatives, assessments aimed at increasing accountability provide important information with regard to:

- How successful schools are including all students in standards-based education;
- How well students are achieving standards; and
- What needs to be improved upon for specific groups of students.

There are several elements in the ESEA that hold schools accountable for educational results:

- Academic content standards (what students should learn) and academic achievement standards (how well students should learn the content) form the basis of BIE accountability systems. CCRS assessments are the primary (though not necessarily exclusive) tool for determining whether schools have been successful in having students attain the knowledge and skills defined by the content standards. BIE must include at least 95 percent of students in these assessments, with the following two exceptions:
  - ELs in their first year in a U.S. school are not required to participate in the English language arts Title 1 assessment, and are not counted in the accountability system for ELA and mathematics; and
  - Up to one percent of the total number of students participating in CCRS assessments, and who take alternate assessments based on alternate achievement standards, are not required to take the standard Title 1 assessments and may be counted as proficient on the alternate assessments in BIE's accountability system.
- BIE must provide assessments in reading/language arts and mathematics for all students, including in grades 3-8 and once in high school; science at least once in elementary, middle, and high school; and English language proficiency for students designated as ELs.
- CCRS summative assessments include annual ELA/Literacy and mathematics assessments in grades 3–11.)
- The accountability system is intended to measure the improvement of schools, districts, and BIE in achieving standards for all students and designated subgroups each year.



- Schools, districts, and BIE are held accountable for improvements on an annual basis through public reporting and ultimately through consequences if accountability goals are not achieved.

## Students with Disabilities

### Individuals with Disabilities Education Improvement Act of 2004

IDEA requires the participation of students with disabilities in state and district-wide assessments. Specific IDEA requirements include that:

Children with disabilities are included in general state and district-wide assessment programs, with appropriate accommodations, where necessary [14 USC § 1412(a)(16)(A)]. The term ‘individualized education program’ or ‘IEP’ means a written statement for each child with a disability that is developed, reviewed, and revised in accordance with this section and that includes ... a statement of any individual modifications in the administration of state or district-wide assessments of student achievement that are needed in order for the child to participate in such assessment; and if the IEP team determines that the child will not participate in a particular state or district-wide assessment of student achievement (or part of such an assessment), a statement of why that assessment is not appropriate for the child; and how the child will be assessed [14 USC § 1412(d)(1)(A)(v) and (vi)].

For more information, see <http://www.ed.gov/policy>.

### Section 504 of the Rehabilitation Act of 1973

Section 504 prohibits discrimination against individuals with disabilities who seek access to programs and activities provided by entities that receive financial assistance from the federal government, including organizations that receive U.S. Department of Education funding. In the public school setting, students with disabilities protected by Section 504 have the right to the aids and services required to meet their educational needs to the same extent as other students. The Act states that:

No otherwise qualified individual with a disability in the United States, as defined in 20 USC § 794(a) of this title, shall, solely by reason of her or his disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under and program or activity conducted by any Executive agency.

In school settings, Section 504 legislation guarantees and protects the rights of students with disabilities who may not have an IEP, but are still considered individuals with disabilities. The definition of a student with a disability is much broader under Section 504 than it is under the IDEA. Under Section 504, in order for a student to have a qualifying disability, a student must have a physical, sensory, or mental impairment that substantially limits one or more major life activities. The determination of a substantial limitation is made on a case-by-case basis by a group of knowledgeable persons who draw upon a variety of information in making the determination [34 C.F.R. § 104.35 (c)].

For more information on Section 504, see: <http://ed.gov/policy/rights/reg/ocr/edlite-34cfr104.html> and <http://www2.ed.gov/about/offices/list/ocr/504faq.html>.

### Students Who Are ELs

The terms EL, English language learner (ELL), and Limited English Proficient (LEP) are used interchangeably. Although federal law and regulations use the term LEP, BIE uses the term “English learner” throughout this document in an effort not to label learners in terms of their deficiencies or

limitations.

Definition of “English Learner”<sup>21</sup>

The *Elementary and Secondary Education Act (ESEA)* provides an explicit definition of what constitutes a “Limited English Proficient” student, as follows:

“...an individual — (A) who is aged 3 through 21; (B) who is enrolled or preparing to enroll in an elementary school or secondary school; (C)(i) who was not born in the United States or whose native language is a language other than English; (ii)(I) who is a Native American or Alaska Native, or a native resident of the outlying areas; and (II) who comes from an environment where a language other than English has had a significant impact on the individual’s level of English language proficiency; or (iii) who is migratory, whose native language is a language other than English, and who comes from an environment where a language other than English is dominant; and (D) whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual — (i) the ability to meet the State’s proficient level of achievement on State assessments described in section 1111(b)(3); (ii) the ability to successfully achieve in classrooms where the language of instruction is English; or (iii) the opportunity to participate fully in society.”

## Federal Legislation, Policies and Court Cases Ensuring Equal Access for ELs

### Title VI of the Civil Rights Act of 1964

42 U.S.C. Section 2000d<sup>22</sup> states that:

No person in the United States shall, on the basis of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

### Equal Educational Opportunities Act of 1974 (EEOA)<sup>23</sup>

EEOA of 1974 requires BIE and school districts to provide an equal educational opportunity to students learning English. BIE and districts must take “appropriate action” to “overcome language barriers,” which usually means teaching academic content in the language students understand, while also teaching them English. It prohibits discrimination against faculty, staff, and students, including racial segregation of students, and requires school districts to take action to overcome barriers to students’ equal participation.

### Office of Civil Rights 1970 Memorandum<sup>24</sup>

This memorandum:

- Requires school districts to take affirmative steps to rectify language deficiencies in order to open its instructional program to national origin minority group students, where inability to speak and understand English excludes the students from effective participation in the district’s educational program.
- Prohibits school districts from assigning EL students to special education classes on the basis of criteria which essentially measure or evaluate English language skills.

<sup>21</sup> Assessment consortia are currently collaborating to develop a comprehensive definition of “English learner,” based on the work (in process) of H. Gary Cook and Rober Linquanti.

<sup>22</sup> Retrieved from the internet at <http://www2.ed.gov/about/offices/list/ocr/eeolep/index.html>.

<sup>23</sup> Retrieved from the internet at <https://www.gpo.gov/fdsys/pkg/USCODE-2010-title20/pdf/USCODE-2010-title20-chap39-subchapl-part2-sec1703.pdf>.

<sup>24</sup> Retrieved from the internet at <https://www2.ed.gov/about/offices/list/ocr/docs/lau1970.html>.



- Forbids specialized programs for EL students to operate as an educational dead-end or permanent track.
- Requires school districts to adequately notify language-minority parents of school activities that are called to the attention of other parents. Such notice in order to be adequate may have to be provided in a language other than English.

### **Lau v. Nichols (1974)**

The Office of Civil Rights established a policy for the provision of equal educational opportunities for ELs based on Title VI of the Civil Rights Act of 1964. This policy was described in a memorandum in 1970:

*Where the inability to speak and understand the English language excludes national origin minority group children from effective participation in the educational program offered by a school district, the district must take affirmative steps to rectify the language deficiency in order to open its instructional program to these students.*

This memorandum does not inform districts of the steps they must take to ensure equal opportunities for ELs. However, it does state that Title VI of the Civil Rights Act of 1964 is violated if:

- students are excluded from effective participation in school because of their inability to speak and understand the language of instruction;
- students are inappropriately assigned to special education classes because of their lack of English skills;
- programs for students whose English is less than proficient are not designed to teach them English as soon as possible, or if these programs operate as a dead end track; or
- parents whose English is limited do not receive school notices or other information in a language they can understand.

This policy was tested in the Supreme Court Case, *Lau v. Nichols*. In 1974, the Supreme Court upheld this law, supporting the premise that if students cannot understand the language of instruction, they do not have access to an equal opportunity education. The Supreme Court said the following:

*There is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education.*

Therefore, equal education is only possible when students are able to understand the language of instruction.

### **Castañeda v. Pickard (1981)**

This case established the Castañeda standards, a three-prong set of evaluation criteria for the adequacy of a district's program for EL students:

1. Is the program based on an educational theory recognized as sound by some experts in the field or considered by experts as a legitimate experimental strategy?
2. Are the programs and practices, including resources and personnel, sufficient to implement the district's chosen program effectively?
3. Does the school district evaluate its programs and make adjustments where needed to ensure language barriers are actually being overcome?



### **Recently-Arrived Students Who Are ELs**

Federal 2007 non-regulatory guidance on the *Assessment and Accountability of Recently Arrived and Former Limited English Proficient (LEP) Students* clarifies the definition of a recently-arrived EL student:

The regulations define a recently arrived LEP student as a LEP student who has attended schools in the United States for less than 12 months ... During the period within which an LEP student may be a recent arrival to the United States (during his/her first 12 months attending schools in the U.S.) a State may exempt such a student from one administration of the CCRS reading/language arts assessment. (p. 4)

Recently arrived ELs are required to participate in mathematics assessments, but states may exclude their results from accountability determinations for their first year in a U.S. school. Therefore, districts should make reasonable efforts to determine the date of enrollment of an EL in a U.S. school and whether the student has been given this exemption previously. The policy allowing first-year EL exemption from the CCRS ELA/Literacy assessment does not apply to the state-required English language proficiency (ELP) assessment; all ELs in grades K-12 must take the state-required ELP assessment, regardless of time in a U.S. school.



## Appendix K: Human Signer Guidelines

### Test Administration Protocol for the Human Signer Accommodation for English Language Arts/Literacy (ELA/L) Assessments, and the Human Signer Accessibility Feature for Mathematics Assessments

In cases where a student requires a sign language accommodation on the CCRS English language arts/literacy (ELA/L) assessments and/or a sign language accessibility feature on the CCRS mathematics assessments, and for whom the American Sign Language (ASL) video accommodation is not appropriate, a human signer must be provided. Human signers for CCRS summative assessments must follow these procedures during testing to ensure the standardization of the signed presentation to the students.

### Procedures for Human Signers Providing the Human Signer Accommodation for the ELA/Literacy Assessments or the Human Signer Accessibility Feature for the Mathematics Assessments

1. Signers must be trained on test administration policies by local Test Coordinators, as indicated in the BIE Test Administrator Manuals (TAM). Signers must sign the Security Agreement in the BIE TAM.
2. Signers should use signs that are conceptually accurate (except for SEE2 users), with or without simultaneous voicing, translating only the content that is printed in the test book or on the computer screen without changing, emphasizing, or adding information. Signers may not clarify (except for test directions), provide additional information, assist, or influence the student's selection of a response in any way. Signers must do their best to use the same signs if the student requests a portion repeated.
3. Signers must sign (or sign and speak when using Sim-Com [Simultaneous Communication]) in a clear and consistent manner throughout test administration, using correct production, and without inflections that may provide clues to, or mislead, a student. Signers should be provided a copy of the test and the administrative directions prior to the start of testing (check BIE policy for the amount of time allowed), in order to become familiar with the words, terms, symbols, signs, and/or graphics that will be read aloud to the student.
4. Signers should emphasize only the words printed in boldface, italics, or capital letters and inform the student that the words are printed that way. No other emphasis or inflection is permitted.
5. Signers may repeat passages, test items, and response options, as requested, according to the needs of the student. Signers should not rush through the test and should ask the student if they are ready to move to the next item.
6. Signers may not attempt to solve mathematics problems, or determine the correct answer to a test item while signing, as this may result in pauses or changes in inflection which may mislead the student.
7. Signers must use facial expressions consistent with sign language delivery and must not use expressions which may be interpreted by the student as approval or disapproval of the student's answers.



8. Test Administrators must be familiar with the student's Individualized Education Plan (IEP) or 504 plan, and should know in advance which accommodations are required by the student, and for which test (ELA/Literacy and/or Mathematics) the student is designated to receive a human signer. Test Administrators must be aware of whether a student requires additional tools, devices, or adaptive equipment that has been approved for use during the test, such as a magnifier, closed circuit television (CCTV), abacus, braille, slate, stylus, etc., and if use of these tools impacts the translation of the test, the signer should be made aware of this.
9. Upon review of the test, if a human signer is unsure how to sign and/or pronounce an unfamiliar word, the signer should collaborate with an ASL-fluent content expert (if available) which sign is most appropriate to use. If the signer is unable to obtain this information before the test, the signer should advise the student of the uncertainty and spell the word.
10. When using an ASL sign that can represent more than one concept or English word, the signer must adequately contextualize the word, in order to reduce ambiguity. The signer may also spell the word after signing it, if there is any doubt about which word is intended.
11. Signers must spell any words requested by the student during the test administration.
12. When test items refer to a particular line, or lines, of a passage, resign the lines before signing the question and answer choices. For example, the signer should sign, "Question X refers to the following lines..." then sign the lines to the student, followed by question X and the response options.
13. When signing selected response items, signers must be careful to give equal emphasis to each response option and to sign options before waiting for the student's response.
14. When response choices will be scribed, the signer should inform the student at the beginning of the test that if the student designates a response choice by letter only ("D", for example), the signer will ask the student if he/she would like the response to be signed again before the answer is recorded in the answer booklet or the computer-based test.
15. If the student chooses an answer before the signer has signed all the answer choices, the human signer must ask if the student wants the other response options to be signed.
16. After the signer finishes signing a test item and all response options, the signer must allow the student to pause before responding. If the pause has been lengthy, ask: "Do you want me to sign the question or any part of it again?" When signing questions again, signers must avoid emphasis on words not bolded, italicized, or capitalized.
17. Signers should refer to the BIE ASL Glossary for technical vocabulary (signs used on the ASL video accommodation) for consistency in providing the accommodation.

### **Procedures for Providing the Human Signer Accommodation for ELA/Literacy Assessments or the Human Signer Accessibility Feature for the Mathematics Assessments to a Small Group of Students**

Human signers may sign the test to a small group of students, rather than individually, provided that each student has the human signer accommodation/accessibility feature listed in an IEP, 504 plan, or Student Registration/Personal Needs Profile (in the case of mathematics only). See BIE policy for clarification.



The following procedures must be followed:

- Check BIE policies on the maximum allowable number of students in a human signer small group.
- Students with the human signer accessibility feature for mathematics or human signer accommodation for ELA/literacy that will be grouped together must be administered the SAME TEST FORM, since test questions will differ on each form of the test.
- Students not receiving the human accessibility feature for mathematics or human signer accommodation for ELA/literacy may not be tested in the same location as students who are receiving the human signer accessibility feature for mathematics or human signer accommodation for ELA/literacy.

### **Sign-System-Specific Procedures**

Human signers must deliver the accommodation in the language or communication mode used by the student according to the student's IEP or 504 plan.

#### **American Sign Language (ASL)**

Human signers delivering the accommodation via ASL must use appropriate ASL features (including signs, sentence structure, non-manual markers, classifiers, etc.) while protecting the construct being measured by the assessment. Although it is necessary for a human signer to use appropriate non-manual markers to ensure proper delivery of test content in ASL, the human signer must be careful not to cue students while doing so.

#### **English-Based Sign Systems (SEE2, CASE, Sim-Com, etc.)**

Human signers delivering the accommodation via an English-based signing system must use the features of the communication mode used by the student. Human signers delivering the test in Signing Exact English (SEE2) should use the rules of that signing system (e.g. specific signed vocabulary, prefixes, suffixes, etc.). Human Signers delivering the test in other English-based signing systems (CASE, Sim-Com, etc.) should use the rules of those signing systems (conceptually accurate signs, English word order, etc.), with or without simultaneous voicing.

### **BIE Mathematics Sign Language Glossary**

Human signers should refer to the online BIE Mathematics Sign Language Glossary for guidance on how to deliver mathematics symbols and terms. The guidance provided in the glossary is the same as what has been used in development of the ASL video accommodated CCRS summative assessments and provides a standardized approach for students who use sign language accommodations. The glossary provides signs that can be used for both ASL and English-Based Sign Systems.<sup>25</sup>

<sup>25</sup> The BIE Mathematics Sign Language Glossary was released in October of 2015.

## Appendix L: CCRS Summative Assessments for Students with Visual Impairment, Including Blindness

### CCRS Summative Assessments and Students with Visual Impairment, Including Blindness

#### I. Purpose of this Guidance

The College and Career Ready Standards (CCRS) Summative Assessments are provided online, in regular print, large print and braille. This document is for Test Coordinators, Test Administrators, test transcribers and teachers to clarify issues and potential questions for students with visual impairments, including blindness. Given the innovative approach to the CCRS summative assessments, students with visual impairments who receive instructional and assessment accommodations, and those professionals that work with them, will need to plan ahead for testing to ensure that students have all necessary tools and materials available to complete assessment tasks. All accommodations must be documented in the student's Individualized Education Program (IEP) or 504 plan.

#### II. Frequently Asked Questions (FAQ)

##### 1. Who is an Eligible Test Administrator?

In general, the following individuals may serve as a Test Administrator:

- Individuals employed by the Local Education Agency (LEA) as teachers
- LEA and school-level administrators
- Other certified educational professionals

Refer to Appendix C: BIE Policy Addendum in the *Test Coordinator Manual* for Test Administrator qualifications for BIE. Eligible Test Administrators and proctors must attend training and follow test procedures and protocol.

##### 2. What is included in the braille/large print versions of the tests? What additional materials do I need?

Large print and braille versions of the tests are used by students who have this presentation format identified in their IEPs or 504 plans for instruction and assessment. Charts in Section III of the BIE Test Administrator Manual identify the materials packaged with each large print and braille test and additional needed materials. Additional materials needed must be documented in the student's IEP or 504 plan, except for the following items:

- Test Administrator Manual
- No. 2 pencils with erasers
- Blank scratch paper
  - Blank scratch paper may include: abacus, slate, stylus, Braille Math Window or Brannan Cubarithm.
- Highlighter
- Graph paper
- Calculator
  - Use of a grade-level appropriate calculator is available to all students during designated portions of the mathematics assessment.
  - Students who have calculators identified as a needed accommodation



in an IEP or 504 plan may use the calculator on all portions of the mathematics assessment.

- The calculator currently available in TestNav is not accessible with screen readers. Students who use a screen reader should use calculators they use during instructional activities as long as it meets BIE's calculator policy.
- Refer to the [BIE Calculator Policy](#) for specific information on grade-level appropriate calculators.

3. What if a student requires a combination of Human Reader, braille, and large print (i.e., dual or multi-media)?

Pearson will distribute materials in the following hierarchy:

- Read Aloud Kits
- Large Print Kits
- Braille Kits

Considering the above, if a student requires both large print and braille versions of the assessment and is registered prior to the deadline for paper materials distribution, Pearson will generate a materials order for large print ONLY. Test Coordinators will need to order the additional required materials via additional orders.

4. What special issues exist regarding the use of optical or electronic magnification of the test?

Electronic magnification systems enlarge print materials in black/white or color combinations. Magnification for viewing text and graphics can be increased up to 800% with option for changing font colors, background colors, using a line marker, etc. They come in a variety of models – desktop or handheld, near or distance, stand alone or connected to a computer. Electronic magnification systems provide students with access to all printed materials, and the size of the print can be customized for the task. Students who require magnification by using an electronic magnification system can use a regular paper-based test book.

- If the electronic magnification system used by the student has the ability to capture images, these images must be deleted at the end of the test session.
- Graphics enlarged on an electronic magnification system may be problematic for some students with low vision. When an image is magnified, the student may not be able to see the whole graphic at once. If the student has difficulty with graphics, a large print test should be ordered. Large print is the regular print book enlarged to 150% which is equivalent to 18 point font size.

5. What special issues should be considered regarding students with a visual impairment, including blindness who may take the online test?

For any student taking the online test, it will be delivered using TestNav 8.

### Screen readers

A screen reader is a software application, separate from text-to-speech embedded in TestNav, which conveys web content through audio. Screen readers are appropriate for students who are experienced with using the software, including those who are blind or have a visual impairment. BIE and Pearson have gone to great lengths to ensure that the TestNav system is accessible to all students. While the testing experience may work with a variety of access technology, at this time it has been tested

and optimized to work with **Windows 7**, the **Firefox** web browser and optimizing to **JAWS 17**. Students who take the CCRS summative assessments online using a screen reader must be able to independently navigate the online testing environment. Professionals who work with students who are screen reader users are encouraged to work with students during instructional activities to ensure that they have independent computer-access skills. The skills used to navigate the CCRS summative assessments are the same needed to access a variety of internet resources, including the ability to navigate by regions and headings and the ability to use keyboard shortcuts and lists, such as link lists. See a more comprehensive list of prerequisite skills in Section IV of this document.

Additionally, at this time only the English language arts/literacy (ELA/L) CCRS summative assessments will be fully accessible with screen readers and braille displays. Work is underway to make the mathematics assessments accessible, but current assistive technology limitations prohibit the transadaptation of math into Nemeth code for display on refreshable braille devices. Students who rely on the use of Nemeth code for math should take the Paper Based Assessment braille version of the math assessment.

As with all students taking a CCRS summative assessment, students with a visual impairment, including blindness are encouraged to use the BIE practice tests which include screen reader, large print or access to Braille Ready Files (.brf) to download a braille practice test. [Practice Tests and Sample Items](#) are currently posted on the BIE web site.

For more information about prerequisite skills, refer to the Technology Skills Checklist below.

### **Refreshable Braille Display**

Students who use a screen reader can also access the English language arts/literacy (ELA/L) CCRS summative assessments using a refreshable braille display. Students who choose to take advantage of refreshable braille during the CCRS summative assessment should be comfortable and independent with using a refreshable braille display in instructional activities prior to using one in an assessment environment. As stated above, students and professionals are encouraged to use the Practice Tests in order to become familiar and comfortable with the CCRS Computer Based Assessments.

For more information about prerequisite skills, refer to the Technology Skills Checklist below.

### **Screen enlargement**

The online CCRS summative assessments come with a built-in magnifier that can be used by all students at any time during the assessment period. This magnifier is intended to enlarge small areas of the screen so that a student can get a closer look at a visual image such as a picture or graphic. The built-in magnifier cannot be increased or decreased and students will not be able to select answers or interact with the text that is magnified with the built-in tool. For students with a visual impairment that require screen enlargement for access, it is recommended that they use third-party access technology, such as ZoomText or MAGic or other third-party access technology that conforms with UAAG (User Agent Accessibility Guidelines), and supports content that is coded to comply with the Web Content Accessibility Guidelines (WCAG) and the Accessible Rich Internet Applications (ARIA) recommendations from the World



Wide Web Consortium (W3C). Again, any third-party access technology used during the assessment should be familiar to the student and used during instruction. Students may also use screen enlargement capabilities that are built into web browsers. Note, that some graphical information may become “pixelated” at very high magnification. Students and teachers should explore the Practice Items with enlargement in order to determine the efficacy of using the browser-based enlargement in a testing environment.

For students who will use screen enlargement software with a Human Reader, refer to the *BIE Accessibility Features and Accommodations Manual*, [Appendix B: Test Administrator Protocol for the Human Reader Accommodation for English Language Arts/Literacy \(ELA/L\) Assessments](#), and the [Human Reader Accessibility Feature for Mathematics Assessments](#).

For more information about prerequisite skills, refer to the Technology Skills Checklist below.

### **Color contrast**

The TestNav system provides a built-in method for changing the color contrast settings and is available to all students. Currently, the available choices are Black on Cream, Black on Light Blue, Black on Light Magenta, White on Black, Light Blue on Dark Blue or Gray on Green. Color contrast settings can also be adjusted through a screen enlargement program, such as ZoomText or MAGic.

### **Brailers and Braille Note-takers**

Students who are accustomed to using a brailier, slate and stylus or a braille note-taker to produce work during instructional activities will be able to do so with the online test. In these cases, the student will produce their answers and transcribe them into TestNav or have them transcribed into the TestNav.

#### **6. Who can transcribe the tests?**

Only an Eligible Test Administrator who is a certified Teacher of Students with Visual Impairment, including Blindness or someone working under the direct supervision of an Eligible Test Administrator who is a certified Teacher of Students with Visual Impairment, including Blindness may transcribe the student’s responses into the test booklet, answer document or online form of the CCRS summative assessments.

Answers written on braille paper must be transcribed onto the standard-size paper form of the CCRS summative assessment or into TestNav. If responses are written on an electronic braille note-taker, they should be printed and transcribed into a standard-size paper test booklet, answer document or into TestNav. The file in the electronic braille note-taker must be deleted following successful transcription of the student’s responses. **Note:** A student response can be embossed for their reviews, after which copies must be securely shred after transcription.

### III. Testing Materials

| English Language Arts/Literacy (ELA/L) |   |   |  |
|--|---|---|--|
| Materials                              | Large Print   | Braille   | Online   |
| Included with the Test                 | <ul style="list-style-type: none"> <li>• Instructions for Large Print Administration, including Test Administrator scripts</li> <li>• Large Print Test Booklet</li> <li>• Standard Print Test Booklet or Answer Document for transcription</li> </ul> | <ul style="list-style-type: none"> <li>• Instructions for Braille Administration, including Test Administrator scripts</li> <li>• Braille test booklet or answer document with embedded tactile graphics (certain forms)</li> <li>• Picture descriptions</li> <li>• Standard Print Test Booklet or Answer Document for transcription</li> </ul> | <ul style="list-style-type: none"> <li>• Tactile graphics – must be ordered separately as an Additional Order</li> </ul>   |
| Additional Materials Needed            | <ul style="list-style-type: none"> <li>• Test Administrator Manual</li> <li>• No. 2 pencils with erasers</li> <li>• Blank scratch paper</li> <li>• Highlighter</li> <li>• Other materials included in the student's IEP or 504 plan</li> </ul>        | <ul style="list-style-type: none"> <li>• Test Administrator Manual</li> <li>• No. 2 pencils with erasers</li> <li>• Other materials included in student's IEP or 504 plan, such as braille writing devices</li> </ul>   | <ul style="list-style-type: none"> <li>• Test Administrator Manual</li> <li>• No. 2 pencils with erasers</li> <li>• Other materials included in student's IEP or 504 plan, such as braille writing devices</li> <li>• Student's preferred access technology</li> </ul> |



| Mathematics            |  |  |   |
|------------------------|--|--|---|
| Materials              | Large Print  | Braille  | Online  |
| Included with the Test | <ul style="list-style-type: none"> <li>• Instructions for Large Print Administration, including Test Administrator Scripts</li> <li>• Large Print Test Booklet</li> <li>• Standard Print Test Booklet or Answer Document for transcription</li> <li>• Large Print Mathematics Reference Sheet</li> </ul> | <ul style="list-style-type: none"> <li>• Instructions for Braille Administration, including Test Administrator Scripts</li> <li>• Braille test booklet or answer document with embedded tactile graphics</li> <li>• Standard Print Test Booklet or answer document for transcription</li> <li>• Braille Mathematics Reference Sheet</li> </ul> | <ul style="list-style-type: none"> <li>• Tactile graphics – must be ordered separately (when the Computer- based test becomes accessible to screen reader and refreshable braille display users)</li> </ul> |



|                             |   |  |   |
|-----------------------------|---|--|---|
| Additional Materials Needed | <ul style="list-style-type: none"> <li>• Test Administrator Manual</li> <li>• No. 2 pencils with erasers</li> <li>• Blank scratch paper</li> <li>• Highlighter</li> <li>• Regular classroom compass<sup>26</sup></li> <li>• Grade-level appropriate large print ruler – measures in US customary and metric</li> <li>• Grade-level appropriate large print protractor</li> <li>• Grade-level appropriate calculator – four-function, scientific or graphing</li> <li>• Other materials included in the student’s IEP or 504 plan</li> </ul> | <ul style="list-style-type: none"> <li>• Test Administrator Manual</li> <li>• No. 2 pencils with erasers</li> <li>• Braille writing devices, such as a Perkins Braille or an electronic braille note-taker</li> <li>• Grade-level appropriate braille ruler – measures in US customary and metric</li> <li>• Grade-level appropriate braille protractor</li> <li>• Grade-level appropriate tactile compass</li> <li>• Grade-level appropriate calculator – four-function, scientific or graphing</li> <li>• Braille materials that can be used as scratch paper</li> <li>• Cranmer Abacus</li> <li>• Braille Math Window</li> <li>• Brannan Cubarithm</li> </ul> | <ul style="list-style-type: none"> <li>• Test Administrator Manual</li> <li>• No. 2 pencils with erasers</li> <li>• Blank scratch paper or braille materials that can be used as scratch paper</li> <li>• Cranmer Abacus</li> <li>• Braille Math Window</li> <li>• Brannan Cubarithm</li> <li>• Grade-level appropriate tactile compass</li> <li>• Grade-level appropriate braille ruler – measures in US customary and metric</li> <li>• Grade-level appropriate braille protractor</li> <li>• Grade-level appropriate calculator – four-function, scientific or graphing</li> <li>• Other materials included in the student’s IEP or 504 plan</li> <li>• Student’s preferred access technology</li> </ul> |
|-----------------------------|---|--|---|

### Student Accommodation Layout File and Ordering Braille, Large Print and Tactile Graphics

The student accommodation layout file is used to gather information regarding a student’s testing condition, materials, or accessibility features and accommodations that are needed to take a CCRS summative assessment. Any paper based accessibility feature or accommodation which requires materials to be shipped will need to be requested in the Student Registration File import. (e.g., Large

<sup>26</sup> A compass is an allowable material for the grade 8 Mathematics, Geometry, Integrated Mathematics I, Integrated Mathematics II, and Integrated Mathematics III assessments. The compass is not a required tool but can be made available to students if they use the tools regularly during instruction. Geometry tools are not allowed for grades 3–7, Algebra I, and Algebra II.



Print, with Tactile Graphics, Human Reader or Human Signer for ELA/L Kits, and Paper Test for Online Students). All students who require braille (tactile graphics are included with the braille test booklet or answer document) and large print test must be ordered through the student registration file import process. All students who are taking the online assessments and use screen readers for ELA/L or mathematics must have tactile graphics populated in their student accommodation layout file and an additional order must be placed within Pearson Access.

#### **IV. Technology Skills Checklist**

Accessibility of testing materials for all students is an important part of the CCRS summative assessments. For a student with visual impairment, including blindness to take the online test, he or she will need to have a minimum level of skills with computer technology and the assistive technology he or she uses to access instructional materials. The following is a list of skills a student should be using regularly during instructional activities and be proficient with on the day of testing in order to independently access the CCRS summative assessment online. Students should, at a minimum, be able to complete these tasks independently and should be given multiple opportunities to practice using the BIE Practice Tests and the BIE Sample Items available on the BIE portal.

##### **Screen Reader**

- Use arrow keys to navigate
- Navigate by headings
- Access and use the Headings List
- Access and use the Links List
- Activate Links using keyboard commands
- Activate Buttons
- Adjust voice settings
- Select text using keyboard commands
- Copy text to clipboard
- Paste text from clipboard
- Access edit fields
- Use check boxes
- Use radio buttons
- Enter and exit forms mode
- Navigate, locate and read text on a webpage
- Navigate and understand a table

##### **Refreshable Braille Display**

- Complete all of the functions listed under Screen Reader
- Use corresponding commands to run a screen reader with a supported refreshable braille display

##### **Screen Magnification**

- Adjust color and contrast settings
- Adjust magnification settings
- Use text-to-speech when needed
- Use find features to efficiently find information

