CHAPTER FOUR
Types of Accommodations

Accommodations are a key component of effective educational programs for students with disabilities. Many students with disabilities need only small changes in the way they are instructed and assessed to participate successfully in general education classes. In this chapter, accommodations are organized into four categories:

- Presentation—how students receive information,
- Responding—how students show what they know,
- Setting—how the environment is made accessible for instruction and assessment, and
- Scheduling—how time demands and schedules may be adjusted.

A general description of the types of accommodations is provided for each category along with examples. The examples do not represent all possible accommodations. Students with disabilities may need accommodations that are unique and novel and have been shown to help them learn and demonstrate competence. Such accommodations are to be provided for the student and documented on their IEP or Section 504 plan. For example, a student who is easily agitated may use a music app for calming, focusing and self-regulating. This accommodation should be described on the student's individual plan.

Information about accommodations for statewide assessments is available for the statewide standardized assessments, English Language Arts and mathematics; statewide science assessment; EOC assessments; and ACCESS for ELLs 2.0. Please consult individual test administration manuals for more details. For students who participate in alternate assessments, the statewide standardized alternate assessment manual includes information about allowable adjustments to the standard method of administration. Links to test administration manuals, technical assistance papers and guidance documents are included in Appendix A.

Presentation Accommodations

Presentation accommodations make it possible for students to access information for instruction and assessment. Students with disabilities may require materials in specialized presentation formats if they are unable to see or read textbooks or hear the teacher. Students may need presentation supports to facilitate their ability to read, observe and listen in the classroom.

Specialized Presentation Formats

Specialized presentation formats are described as visual, tactile, audio and multisensory formats based on the way information is displayed or presented (National Center on Accessible Educational Materials, 2015). Examples include restructured print, braille,

large print, digital text (or e-text), audio, graphic-enhanced or symbolated text, captioned videos, images, tactile graphics, and manipulatives (FDOE, 2017, May 19).

Students with disabilities who cannot read standard print effectively may require accessible instructional materials. Instructional materials may consist of hardback or softback textbooks, electronic content, consumables, learning laboratories, manipulatives, electronic media, and computer courseware or software (FDOE, 2017, May 19). The IEP team determines the student's need for accessible instructional materials, the format of such materials and necessary accommodations.

The format of instructional materials provided to the student should be based on needs based on evaluations of how the student's disability affects involvement and progress in the mastery of Florida Standards. These needs are documented on the student's IEP. The identification of appropriate instructional materials involves a review of the student's language and reading levels, assessment of the organization or structure of the content, and consideration of the way the information is presented (e.g., visual, auditory or tactile) (FDOE, 2017, May 19).

A functional vision and learning media assessment is required every three years for students with a visual impairment to evaluate how the student accesses, or may need to learn to access, printed information. Objective data are gathered on reading skills, preferred format or mode for reading, and other ways the student gathers information, such as by listening. A learning media assessment is sometimes used with other students to assist in determining the effectiveness of possible accommodations related to learning media.

Districts have flexibility in acquiring accessible materials for their students (ss. 1003.4203 and 1006.38(15), F.S.). Through the bid process, districts can require that publishers make flexible digital versions, or they may reproduce instructional materials in the format needed by the student with a disability (FDOE, 2017, May 19). Districts are also required to identify district-level digital resource managers (e.g., local assistive technology specialist [LATS], regional-LATS, teachers of the visually impaired), who can assist in acquiring accessible instructional materials for students.

Primary resources for accessible instructional materials include digital, audio or Hypertext Markup Language books from the publishers; printed materials scanned into digital format; and online libraries. The Florida Electronic Library provides free public access to licensed online resources and virtual reference works (http://www.flelibrary.org/). The following additional resources are available in Florida:

- **Bookshare** provides accessible materials at no cost to eligible students; however, the materials may be purchased for students who are not eligible. Available formats include braille-ready format and Digital Accessible Information System (known as DAISY) books. A no-cost text reader developed by Don Johnston, Inc., is available. Qualifications are found at https://www.bookshare.org/cms/bookshare-me/who-qualifies.

- **Learning Ally** produces Florida-adopted audio books, including narrated books; provides training for eligible district staff, students and parents; and offers school memberships. Eligibility requirements are found at http://www.learningally.org.
- The **National Instructional Materials Access Center** provides instructional materials in specialized formats (e.g., braille, large print, digital text and audio) at no cost. The Florida Instructional Materials Center for the Visually Impaired (FIMC-VI) and the district digital rights manager can assist teachers with registering students and obtaining files. Eligibility requirements are available at http://www.fimcvi.org/nimas-florida/.
- **Described and Captioned Media Program** is a no-cost loan library for described and captioned media funded by the United States Department of Education. Eligibility requirements are included at https://dcmp.org.

Visual Formats

Students who may use visual formats include those who have a visual impairment and require enlarged print; students who are deaf or hard of hearing and use sign language; and students who have a print disability, including dyslexia.

Large-print text must be clear, with high contrast between the color of the print and the background color. The FIMC-VI assists districts with obtaining large-print materials for use in Florida's schools (FIMC-VI, n.d.). Regular print materials can be enlarged through photocopying or magnification. Text size can also be enlarged for most digital text.

Color contrast options provide different color combinations for background and text based on individual student needs and preferences. Color contrast options are often available for digital materials. Paper-based materials can use different colored paper and ink or tinted transparent overlays to provide options for contrast between background and text.

Signed presentation may be required for students who are deaf or hard of hearing and need assistance understanding printed material, especially when learning to read. In testing situations, signed presentation may be provided for directions, items and answer choices. The interpreter must use the same method of sign language as the student, such as American Sign Language, manually coded English or total communication.

Video recordings present stories or information as movies, giving students a visual and auditory way to access information. Videos should be **closed-captioned** with the dialogue displayed in text at the bottom of the screen. **Descriptive video** adds a verbal description of key visual elements, such as actions, gestures, facial expressions and scene changes to help individuals follow the story.

Closed captioning or **American Sign Language videos** may be provided for text presented in an auditory format. Apps may be used on the computer, tablet or smartphone that provide closed captioning or American Sign Language translation for speech.

Tactile Formats

Tactile materials provide information in a raised format accessed through touch. Students who have a visual impairment may use tactile formats.

Braille represents text using a raised-dot code read by touch with the fingertips. The current braille code for the United States has been designated as Unified English Braille (UEB). Students who were instructed in the old braille code, English Braille American Edition, should receive instruction in the new code.

Refreshable braille displays create temporary print-to-braille transformations. Braille characters are displayed on a flexible membrane by a series of movable pins. Refreshable braille displays are read one line of text at a time, which can affect the amount of time a person needs to read text.

Nemeth braille code conveys mathematical and scientific expressions in a tactile format. Nemeth code uses the same set of braille cells as literary braille; however, most cells have new meanings to express technical symbols (Texas School for the Blind and Visually Impaired, n.d.b.). The new braille code (UEB) also has mathematical symbols.

Tactile graphic images are provided in a raised format. Tactile images and symbols represent the content and concepts of graphic material (e.g., maps, charts, graphs, diagrams and illustrations). A tactile graphic is not a straight reproduction of the print graphic. It does not include symbols expected by visual readers, such as color and artistic embellishment.

Tools and equipment may have braille or tactile symbols. For example, calculators, clocks and rulers are available with braille or raised numerical symbols.

Haptics or haptic feedback may involve the use of touch in a user interface design of a computer, tablet or smartphone. Vibrations are activated to denote that a touchscreen button has been pressed. Other forms of haptic feedback can be provided by a resistive force in a joystick or input device (Mobile Burn, 2013). Some students may need other types of devices, such as a refreshable haptic display (Copeland, 2011, January).

Real objects may be used instead of printed images. For example, students may use real coins instead of a printed image. Students also may use real objects as a means of communication.

Auditory Formats

Students who are unable to read text may require presentation in an oral or auditory format. This may include students who have a visual impairment, as well as students who have a print disability.

A person can **read the text aloud** to the student. The reader should read to an individual student, not a group of students. The student can ask the reader to slow down or repeat text. When reading mathematics and science content, the reader gives the correct name or description of symbols and graphics. In testing situations, directions, test items and answer choices may be presented orally. Test items may not be reworded, summarized or simplified. The reader should use an even inflection so that auditory cues are not provided to the answers (Shyyan et al., 2016, August).

Recorded books and texts are produced as digital files. Audio files should be accompanied by a print or braille version of the text, particularly if graphic information is included. Classroom materials may be purchased in audio format. Instructions, assignments and lectures may be recorded in the classroom.

A **screen reader** uses text-to-speech software to convert digital text into synthesized voice output for text displayed on a screen (American Foundation for the Blind, 2017c). The screen reader generally allows customization of voice, speech, volume and speed. Specialized software can support mathematical language, such as graphs and formulas, e.g., Math Talk or Scientific Notebook interfaces with Dragon Naturally Speaking and speech-to-text software (http://metroplexvoice.com).

Equipment with **auditory output** includes talking clocks, calculators, scales, thermometers, voltmeters and timers. Light probes and special adapters are available that transform visual and digital signals into audio outputs.

Paper-Based Presentation Options for Computer and Online Programs

Many instructional materials and assessments are available as computer-based programs with embedded accommodations, such as text-to-speech and masking. A student with a disability who is unable to access the instructional materials or assessment because a necessary accommodation is not available on the computer may use paper-based materials (FDOE, 2017a,b). Materials may be provided in regular print, large print and braille; with one item or fewer items per page and increased spacing between items. Students may also use other accommodations to support their use of paper-based materials (see Supports for Visual Enhancement in the following subsection).

Presentation Supports

Presentation supports facilitate a student's use of standard print, graphic materials or spoken language when reading or listening to explanations and discussions.

Supports for Visual Enhancement

Students who have difficulty with visual acuity, visual perception or attention span may benefit from tools and techniques that help focus their attention.

Magnification equipment enlarges printed material or objects. Students may use eyeglass-mounted magnifiers, free-standing or handheld electronic or nonelectronic magnifiers, and magnifying bars. Computers, tablets and smartphones generally have display enlargement (zoom) or screen magnification software. Special lenses can be attached to smartphones and tablets to assist in magnification. Video magnifiers or closed circuit television (CCTV) systems use a stand-mounted or handheld video camera to display a magnified image onto a video monitor, television screen or computer monitor (American Foundation for the Blind, 2017a).

Reduced glare or direct lighting increases the visibility of print material.

Minimized visual distraction helps students who have difficulty directing attention. Materials should be provided with simple backgrounds, predictable visual layout, and separate displays of text and graphics.

Colored transparencies or overlays may enhance contrast and reduce glare to increase legibility of printed materials. **Colored transparent filters** can also be placed over a computer screen if embedded optional digital contrast filters are not enabled or available. A student may use glasses with specially colored lenses for this purpose.

Visual cues with color, bold type or highlighting direct a student's attention to selected elements of printed materials.

A **straightedge, blank card or card with a cutout window** can be used to isolate one or more lines of text at a time. Cards can also be used to mask or cover portions of an assignment. The cards help direct visual attention and may improve tracking and reading speed. The cards serve the same purpose as the **masking** tool embedded in computer programs. The tool allows the user to temporarily cover portions of the screen to direct attention to an uncovered item.

Positioning tools can be used to place reading materials at the proper distance and position for reading. Examples include a special tilt-top desk, slant board, book stand or paper holder.

Materials and workbooks can be secured to the work area so they do not move around unnecessarily. A rubber mat can be placed on top of the desk or clamps, and large binder clips or removable tape can be used to anchor materials.

Supports for Word Recognition

Students who have difficulty with word recognition and decoding may need presentation supports to help them increase fluency and gain information from printed text.

Leveled books use sentences and vocabulary that are less complex than grade-level materials. It is important to make sure that the content addresses grade-level standards.

Digital text allows flexible output for alternate presentation formats (e.g., enlarged print, highlighting, multiple contrast options, auditory or braille). Digital text can display

structural (e.g., header and sidebar) and semantic (e.g., summary, key questions and vocabulary) elements using electronic tags.

Portable scanning devices read individual words aloud with a definition to help students increase word recognition proficiency. Examples include a reading pen, handheld scanning translator, and electronic dictionary or thesaurus.

Personal word lists help students recognize and remember words they encounter in text.

Repeated reading helps students increase word recognition and fluency. The student reads passages aloud multiple times, and the teacher, peer or others give help with unknown words and feedback (Schumm, 1999).

Supports for Comprehension

Students who have difficulty with reading comprehension may need presentation supports. Supports may help students with limited vocabulary and background knowledge or difficulty with verbal reasoning and abstract concepts. Supports for comprehension can help students identify, understand and integrate ideas presented in text.

Preview of important vocabulary or key points in the text helps students anticipate topics and related content.

Advance organizers involve a preview of the objectives, topics and subtopics, questions, or the chapter summary. They help students understand and retain information.

Highlighting or color coding is used to draw attention to vocabulary and key ideas in text. Some text comes with key words and phrases already highlighted for emphasis. Students can learn to identify key words and mark paper-based materials with an erasable highlighter or sticky notes. Students can also highlight digital materials electronically.

Annotating text helps students think about what is important as they read. Students write notes about main ideas, details and summary statements. Sticky notes can be placed on the pages. Many e-books or digital files have a note or comment feature where annotations can be recorded (Office of Academic Support, 2016).

Study guides help students focus attention on important content and encourage active processing of meaning. Examples include structured note-taking forms, outlines, story maps and graphic organizers.

Hands-on activities, pictures and diagrams help students understand abstract concepts and complex information.

Supports for Listening

Students with disabilities may need supports for listening because they have difficulty maintaining attention, understanding how ideas are related and remembering information.

Advance organizers can increase understanding and retention of information when provided before presentations or lectures. They may include an overview of the content, description of activities and expectations, new vocabulary, or explanation of connections with previous lessons or background knowledge.

Explicit cues can help students identify the topic, main ideas and supporting details, or the steps or key components in a process. Verbal or visual cues emphasize what is important for students to remember and understand.

Active student involvement is facilitated through the use of questions, response cards, small-group interaction and discussion. Cooperative learning techniques, such as think/pair/share or jigsaw, are also effective for active student involvement.

Repetition of information by paraphrasing and summarizing facilitates student recall and understanding.

Note-taking assistance may include a copy of the presentation slides, an outline of the lecture or a predesigned graphic organizer. Students can also learn to take notes using a two-column, note-taking format or concept mapping. If a student is unable to take notes independently, a copy of the notes from the teacher or peer may be provided. A student may also record class lectures using an audio recorder (Levy, 2006, August).

Amplification systems, such as frequency modulation systems, enhance the teacher's voice output when working with students in the classroom. The teacher's voice is transmitted from a lavaliere or handheld microphone through classroom speakers. This is sometimes known as a class soundfield system or small public address system (Teach Logic, n.d.).

Supports for Following Directions

Teachers give directions many ways, such as orally, in writing, or by demonstrating and modeling. Students with disabilities who have difficulty understanding or remembering may need supports to follow instructions.

Signals or prompts help to obtain the student's attention when the teacher gives directions. The student may need an auditory cue, such as a change in tone of voice, or a visual or tactile cue.

Self-instruction and self-questions help students focus on positive attributions for success and task progress (e.g., "Read the directions first," "Take my time," and "Did I check my answer?").

A **copy of directions** from the textbook, assessment or other instructional material can be given to the student.

Directions can be repeated or clarified for students, or students may paraphrase instructions.

Sample problems and tasks can be used to show students what to do. Explicit explanations of the model or expected behavior may be helpful.

Simplified or graphic directions with pictures or diagrams are used with students who cannot follow verbal or written instructions. Picture or icons illustrate each step.

The teacher uses **monitoring** to determine when the student needs help to follow instructions and get started.

Verbal encouragement helps the student stay on task (e.g., “Keep working” and “Answer every question”).

Uncluttered and clearly organized materials make it easy for students to know where to start and how to proceed.

Visual cues, such as color coding, icons or numbering each step of directions, help students understand tasks and expectations.

Response Accommodations

Students typically respond to classroom tasks by speaking, writing, drawing or other means of expression. Response accommodations may enable students to use different ways to complete assignments, tests and activities.

Alternate Response Modes

Students with disabilities unable to respond in standard ways may need to use an alternate response mode. This may include students who have sensory or language impairments, as well as students who have motor impairments that result in difficulty with handwriting or speaking.

A **scribe** writes down or records what a student dictates, whether through speech, sign language, a communication system or device, or by pointing. The scribe may not edit or change the student’s words or ideas; however, the student can review and edit what the scribe has written (Shyyan et al., 2016, August).

A **word processor or computer** may be used by a student who has difficulty with handwriting. A student may use an AT device, such as touch screen, trackball, mouth stick or head wand, pointing devices, or alternative keyboards for typing. Speech-to-text conversion or voice recognition software can be used to dictate text or give commands to the computer. In some testing situations, the spelling and grammar check feature must be turned off (Shyyan et al., 2016, August).

Word prediction software provides a list of choices based on words previously typed. The predictions are based on spelling, syntax, and frequent and recent use. This enables students to use proper spelling, grammar and vocabulary with fewer keystrokes (DO-IT Center, 2015, August 24).

A **braillewriter (brailler)** has a six-key braille keyboard for producing hard-copy braille.

Portable note-taking devices are small, lightweight devices equipped with a braille or standard keyboard for input. Some devices have additional features, such as a calculator and calendar, and can be connected to the Internet or personal computer to exchange files or print. Applications can record audio notes and allow the user to enter written notes with a keyboard on smartphones and tablets (Kendrick, 2011, July; American Foundation for the Blind, 2017b).

Voice recorders copy speech electronically. Voice recorders are often included in apps used in smartphones, tablets or computers.

Voice recognition software converts speech to text, so the student can use voice to dictate text and give commands to the computer.

Sign language is used for communication, primarily by students who are deaf or hard of hearing. American Sign Language, manually coded English and finger spelling are different types of sign language. Some students combine sign language with voice (total communication). Students may need an interpreter when they communicate with persons who do not know sign language.

Cued speech is a visual mode of communication in which mouth movements of speech combine with “cues” made by placement and movement of the speaker’s hands to make the sounds (phonemes) of traditional spoken languages look different. Cued speech (language) transliterators are professionals that facilitate communication between individuals who use spoken language and those who use cued speech. They may convey everything that is said as well as sounds in the environment (Laurent Clerc National Deaf Education Center and Boston Children’s Hospital, 2015; National Cued Speech Association™, 2017).

Augmentative and alternative communication (AAC) includes all forms of communication, except oral speech, that are used to express thoughts and ideas. The forms include facial expressions, gestures, symbols, pictures and writing. Aided communication methods range from paper and pencil to communication boards. Electronic devices produce voice output, written output or both. Individuals may rely on AAC to supplement or replace their own speech (American Speech-Language-Hearing Association, 2017a).

Response Supports

Students use response supports to facilitate their use of standard methods for expression. Written expression involves language conveyed by text. Oral expression involves language conveyed by speaking.

Supports for Handwriting

Students with disabilities who write illegibly may have problems with letter formation, letter size, letter and word spacing, and writing on or between the lines. Difficulties may

result from poor postural control, fine motor impairments, visual impairments, visual perception or attention difficulties. Teachers are encouraged to consult with the local AT specialist when selecting tools or equipment. The occupational therapist can also determine the need for specialized furniture or adapted tools.

Pencils, markers or crayons of different diameters, pencils with softer lead and softer crayons may be used by students who have difficulty grasping or controlling writing implements. Mechanical pencils and nonabrasive erasers help students who use excessive pressure when writing (Rein, 1997/2001). High-contrast writing tools, such as markers, felt-tipped pens and soft-lead pencils, help students with visual impairments read their own writing.

Pencil or pen grips enlarge or adapt the shape of standard writing tools to correctly position the fingers and hand when writing. They include triangular or pear-shaped grips and grips with indentations for fingers (Rein, 1997/2001).

Finger spacers help students use proper spacing between letters and words. Spacers can be purchased or made out of cardboard or plastic. Some spacers feature an arrow for directionality and a window for tracking when reading (Rein, 1997/2001).

Handwriting guides or templates help students stay within a defined writing space. The student lays the guide on top of a regular sheet of paper with a cutout area for writing that exposes the space between the lines (Rein, 1997/2001).

Alphabet strips provide a model for students to guide letter formation in manuscript or cursive style.

Specialized writing paper provides prompts or visual cues to guide handwriting. The paper may have wider lines, colored or shaded areas between the lines, colored lines or raised lines as tactile cues. Students may also write on every other line on a sheet of lined paper. Gridded paper can be used to help students organize numbers for mathematics computation, allowing one digit per cell (Rein, 1997/2001).

Visual cues can be added to standard writing paper, such as highlighting the left margin or drawing lines for margins. A paper can be divided into sections by drawing lines, folding or covering parts of the text.

Paper stabilizers position paper at an appropriate place on the desk and keep it from moving. Removable tape also can be used to hold paper in place. Nonslip mats or rubberized netting will stabilize a binder or clipboard (Rein, 1997/2001).

Slant boards hold a paper at an optimum angle for writing. A slant board can be made with an empty three-ring binder.

Physical support or positioning may be needed to stabilize students who have a physical impairment. Students with limited mobility may also need assistance manipulating instructional materials, objects and equipment.

Periodic checks by the teacher may be used to be sure the student is responding to the task as instructed.

The student may **respond directly on a consumable worksheet.** As an alternative, the student can use erasable markers on clear sheets of acetate overlaying the text. The student may need two copies of a worksheet—one for a draft and one for the final copy.

Supports for Written Expression

Students with disabilities may have difficulty planning and drafting writing because they have insufficient understanding of text structure, topics or audience. Some students have difficulty with linguistic knowledge, including spelling, vocabulary, sentence structure and mechanics (i.e., grammar, punctuation and capitalization).

Dictionaries and thesauruses can assist the student with word choice when writing. Some devices include electronic or talking dictionaries that check spelling and grammar usage as well as word meaning. An ELL student may require native language translation dictionaries.

Strategies, templates, checklists and grammar rules can be printed on personal cue cards or posted in the classroom as quick reference guides.

An **individualized spelling list** or a personal dictionary of frequently used vocabulary may help the student with word choice when writing.

Spelling and grammar check features are available in word processing programs. Talking spelling and grammar devices allow the student to enter an approximate spelling or usage of the word and then see and hear the correct version.

Graphic organizers and outlining help students identify or create a structure for organizing information in patterns or diagrams. Students can use paper-based graphic organizers or software for planning reports, essays and content maps.

Supports for Oral Expression

Students with disabilities who have difficulty using spoken language may need accommodations to get their message across.

Increased wait time may provide students the opportunity to think about what they want to say and how they will say it. Teachers and peers should not interrupt or speak for students.

Use of visual images can help students convey their spoken message through pictures, drawings or other graphics.

Supports for Mathematics

Some students have difficulty with mathematical tasks. They may struggle with mathematical symbols, how to solve problems or apply abstract concepts. Some students with disabilities require concrete materials or visual representations as an accommodation.

Calculation devices may be needed by students whose disabilities affect calculation, but not mathematics reasoning. Devices include the calculator, abacus, geoboard or special software (Math Windows® and Graphic Aid for Mathematics).

It is important to determine whether the use of a calculation device is a matter of convenience or a necessary accommodation. For example, if students are learning how to subtract, a calculator does not show the steps for regrouping. On the other hand, if students are learning problem-solving skills that involve subtraction (e.g., shopping for items), a calculation device may be appropriate. Adapted calculators are available with large keys or voice output (talking calculators) for students with visual impairments. In testing situations, calculator use may be limited for certain items or grade levels.

Tactile tools and materials may be used by students with visual impairments. They include raised line or braille-embossed number line, tactile graphic forms, geoboard, manipulatives for counting and number systems, tactile and braille rulers and protractors, and clocks with braille numerals (Texas School for the Blind and Visually Impaired, n.d.a). Students may use a light box to assist with the identification of objects. The use of raised lines or rough surfaces on materials can provide tactile feedback to help students identify the image or object.

A chart of math facts may be used by students who are not fluent with basic math facts. In testing situations, students may not allowed to use fact charts.

Concrete materials and manipulatives are used by students to represent mathematical concepts and procedures. Some materials may be created by three-dimensional printers.

Visual representations display simple and complex mathematical concepts and procedures using visuals, such as diagrams, flowcharts and computer animations.

Specialized mathematical image descriptions may be needed by students to increase accessibility of instructional materials that include graphs, math diagrams, geometric figures, and equations and expressions. Some software programs can translate mathematical formulas into speech (Diagram Center, n.d.).

Planning guides with a list of steps or flowchart can help students recall what to do when solving math problems.

Special paper, including gridded or graph paper, can help students line up digits for computation.

Setting Accommodations

Setting accommodations involve changes in the location or conditions of the educational environment. Accommodations can address accessibility issues, behavior and attention, and organization of space and materials. Students who use accommodations that distract other students, such as a reader or scribe, may also need setting accommodations.

Physical Accessibility

Accessibility refers to the design of products, services and environments to meet the needs of persons with disabilities. Students may need an accessible location, specific room conditions or special equipment as a result of their disability.

Physical access to the educational setting requires a barrier-free environment. Students should be able to access all parts of the building, including classrooms, restrooms, cafeteria, media center and school grounds. Many buildings are made accessible because they are equipped with nonslip surfaces, guide rails, ramps, elevators and automatic doors.

Accessible workstations include adjustable desks and tables for students who use mobility aids, such as a wheelchair. Adaptive furniture and equipment also include seating systems, standers, gait trainers, walkers, positioning devices and other types of supports, special surfaces and matting, and ergonomic equipment (Job Accommodations Network [JAN], n.d.a).

Preferential seating involves locating a student's desk so the student can see or hear the teacher and complete assignments. The specific location will depend on the needs of the student and the typical activities used in the classroom.

Special lighting or light filters may be needed by a student with eye strain or fatigue. A natural light source or alternative lighting may be required (JAN, n.d.b).

Acoustical treatments diminish background noise and distractions in the classroom. Window treatments, rugs or carpets, and soft materials on the walls can reduce noise. Noisy equipment, including light fixtures, should be turned off when not in use (American Speech-Language-Hearing Association, 2017b, 2017c).

Assignments and assessments administered in a familiar place or by a familiar person may be needed for instruction and testing.

Supports for Behavior and Attention

Students with disabilities who have difficulty maintaining attention and effort may need accommodations. Students may require positive behavioral supports or a specialized behavior management system that includes monitoring of behavior in school with regular reports to the parents. Accommodations can be included in the student's behavior plan.

Class rules and expectations must be enforced systematically and consistently. Rules should be clearly defined and articulated to the student and may be integrated with the individual behavior plan.

Regular procedures and predictable routines for beginning and ending classes can be implemented.

Alternative activities can be used during unstructured time. The student needs to know how to access and perform the activities.

Reduced sources of distractions can help students concentrate. The student should be seated away from windows, heating or cooling vents, doors, resource areas, and other disruptions. An enclosed study carrel or sound absorption panel will block out distractions.

Preferential seating can be used to position the student's desk away from busy parts of the classroom or closer to the teacher.

Noise buffers can reduce auditory distractions and help the student concentrate and maintain focus. Examples include headphones, earphones and earplugs, white noise (environmental sound machines), and approved music.

Small-group or other special grouping arrangements may be required for students who need additional personal attention and support. Some students need assistance on tasks, small-group instruction or tutoring. An aide can help the student if the teacher is not available. The size of the group (teacher-to-pupil ratio) must be specified in the description of the accommodation.

Individual settings may be needed if the student cannot work in a group. Some students learn better when they can read and think aloud. Other students have difficulty controlling behaviors that may distract other students.

Increased or decreased opportunity for movement may be provided for students. Some students may need to move in the classroom without disrupting other students. Other students may need to be kept from wandering.

Organization of Space and Materials

Students with disabilities may have trouble managing their own space and materials in the classroom. Some do not complete tasks because they cannot find the resources they need.

Compartmentalized containers can be used to keep personal materials organized in the student's desk or locker. Bookends, plastic containers, and bags or folders may be used.

Diagrams that show how to organize books and materials can be posted inside the locker for reference.

Checklists of materials needed for each class can be stored in the student's locker or binder.

Binders with color-coded dividers or folders can keep materials for each subject separate. They can help students organize their assignments and handouts.

A **limited amount of materials** can be given to the student at a time.

Access to learning resources and instructional materials outside of class can be provided. A student may keep a copy at home and another copy at school.

Scheduling Accommodations

Scheduling accommodations involve changes in how time is allocated, scheduled and managed. Students may need scheduling accommodations to address issues related to effort, rate of performance, attention, and their own ability to monitor and manage time.

Time Allocation

Changes in the amount of time or the way the time is organized for activities can be provided as an accommodation. Some students do better when not under the pressure of a strict schedule. Others need more time because they read and process information slowly. Students may also need extended time to use certain accommodations, such as AT, braille and dictation.

Extended time can be provided for assignments and assessments. The amount of additional time should be determined on a case-by-case basis. Unlimited time is not feasible.

Breaks may be given during tasks. A timer can signal the end of the break.

Schedule adjustments allow activities to be scheduled at a particular time or day of the week or for a number of days. The performance of students with health-related impairments can vary because of medications or diminishing energy levels.

Time Management

Complex tasks can be difficult for students who struggle to work on more than one thing at a time. Students may forget instructions and get tasks confused because they are easily distracted. They may give up easily and not go back and check their work.

Established timelines and predictable routines provide structure to the school day and help the student know what to expect.

Separating tasks into parts gives the student a manageable way to complete lengthy assignments.

Timelines can be used to help the student keep track of progress.

Checklists of individual responsibilities can help the student know what is expected.

Assignment planners or visual schedules identify subjects, assignments and timelines. The student may record important information and dates in a journal, assignment planner, homework log or calendar.

Electronic devices with alarms or signals can be used to remind the student of important dates and meetings. A timer is used to define work periods.

Accommodations Not Allowed for Statewide Testing

Some accommodations are not allowed on statewide assessments. When a student uses an accommodation that is not allowed, the test results may be declared invalid (FDOE, 2017a; 2017b). Examples include the following:

- Oral presentation by a test administrator or text-to-speech for passages in statewide standardized assessments reading and writing items,
- Signed presentation for passages in statewide standardized assessments reading and writing items,
- Use of devices to check spelling or grammar,
- Use of a calculator for computation in grades 3-6 statewide standardized assessments in mathematics,
- Use of multiplication charts or tables,
- Use of manipulative materials except when approved for use with braille materials,
- Use of assistive devices that violate the purpose of the test, and
- Unlimited time to complete a test session.

Students with disabilities may have any accommodations they need for instruction, even if the accommodation is not available on statewide assessments. If a nonallowed accommodation is recommended for instruction, parents must be notified and give signed consent for its use in the classroom. Parents must acknowledge in writing that they understand the possible impact and consequences of using a nonallowed accommodation.

Unique Accommodations

Students with disabilities may require unique accommodations for statewide assessments that require changes to existing test materials, presentation or administration guidelines. The unique accommodation must be regularly used by the student for classroom instruction and must not threaten the security of the assessment or negate the validity of the assessment. District-level staff must review accommodation requests before they are sent to FDOE. The Commissioner of Education or designee must approve each request for a unique accommodation in advance and prior to its use. Written requests for unique accommodations must be submitted using the *Unique Accommodations Request Form* provided by FDOE. The request must include a copy of the student's IEP or Section 504 plan along with signatures of the district exceptional education director and the district assessment coordinator or district alternate assessment coordinator. Such requests must be submitted each year that the student needs the unique accommodation (BEESS, 2015; FDOE, 2017b).

Summary

There are many ways to support students with disabilities in the classroom. The IEP or Section 504 plan team decides which accommodations the student needs.

A quick reference guide with a list of the accommodations matched to the effect of the disability or learning difficulty is included in Appendix B.