

DoDEA Assistive Technology Consideration Support Tool:

Potential Assistive Technology To Access DoDEA College and Career Readiness Standards

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Assistive Technology Consideration Resource Guide

Information in this guide is provided to assist CSC teams in considering assistive technology (AT) in the development, review, and/or revision of a student's individual educational program (IEP). This document provides a starting point for CSC teams to identify potential assistive technology solutions within specific areas of the curriculum. This guide is not prescriptive; the IEP team must identify all necessary assistive technology devices and services for each student individually, using a framework that considers the student, the environment and the tasks.

The assistive technology devices listed in this document are included to provide examples of different types of assistive devices that may be required in order for students with disabilities to access a free and appropriate public education. ***This document does not include all assistive technology devices within each category and inclusion of a particular device does not constitute endorsement by DoDEA.*** Additional devices may be added to the document by emailing suggestions to aaron.marsters@dodea.edu

Many of the items referenced in this guide area are available for checkout from the DoDEA AT Lending Libraries or are already within the schools. Contact your local AT-ISS and/or your SPED ISS for more information.

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Instructional or Access Area: READING	Standard Tools	Accommodations	Assistive Technology Solutions
<p style="text-align: center;">Sample Tasks:</p> <ul style="list-style-type: none"> • Identify letters in isolation and in sequence • Recognize/read name • Read basic/primer sight words • Read functional words (e.g., community, emergency, grocery) • Read target/selected words within a sentence • Comprehend age-/grade-appropriate reading materials • Read print materials from textbooks and supplemental materials with comprehension • Read material from worksheet with comprehension • Read material from board/overhead with comprehension • Read material from computer display with comprehension • Read longer reading samples with comprehension and without fatigue • Answer literal questions regarding materials read • Answer questions regarding main idea of materials read • Answer inferential questions regarding materials read 	<ul style="list-style-type: none"> • Traditional textbooks • Multimedia materials provided by textbook publishers • Worksheets • Printed information on board/overhead/interactive whiteboard • Websites • Online databases • Document cameras • Presentation software (e.g., PowerPoint, Keynote) • Printed test materials • Instructional software to remediate basic reading and/or reading comprehension skills 	<ul style="list-style-type: none"> • Increase time for completing reading materials • Color code to emphasize key points (highlight) • Change background color/use colored filters • Adjust font characteristics such as size, color, typeface, spacing between letters, words, and/or lines) 	<ul style="list-style-type: none"> • Page fluffers, page turners • Slant board and book holders • Color overlays • Tracking strategies (e.g., reading window, bar magnifier, computer operating system magnifier) • Speaking spellchecker or dictionary as a word recognition aid (e.g., Speaking Merriam-Webster Dictionary and Thesaurus) • Devices that allow for recording directly on books/printed materials (e.g., Bookworm, AnyBook Reader, PenFriend) • Digital pen readers (e.g. CPen) • Audio books (e.g., Reading Ally, Tumblebooks) • E-text (Bookshare, MackinVIA) • Commercial talking word-processing programs (e.g., Clicker 7 , Speak Q, Read and Write for Google/Gold) • Computer with graphic word processor (e.g., Writing with Symbols, BM Plus) • Computer with text enlargement software (in operating system or commercial software such as ZoomText) • Text-to-speech software (commercial such as Read and Write, Kurzweil, WYNN, Read Outloud, or open source such as Natural Reader, Read Please) • Screen reader (e.g., JAWS) • Computer-based advanced reading and writing aids (e.g., Kurzweil, Read & Write Google/Gold) • Devices for converting text into alternative format (e.g., scanner or camera with OCR software, Braille translation software, Braille printer/embosser, refreshable Braille displays, and tactile graphic production systems) • Mobile devices with text-to-speech capabilities (e.g., Kindle, Nook, iPad)
		Modifications	
		<ul style="list-style-type: none"> • Provide peer/adult reading assistance • Use high-interest, low-reading-level materials • Increase time for completing reading materials • Decrease length of assignment • Simplify complexity of text • Color code to emphasize key points (highlight) • Customize the vocabulary list • Use symbol-supported text • Decrease length of assignment 	

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Instructional or Access Area: Writing	Standard Tools	Accommodations	Assistive Technology Solutions	
<p style="text-align: center;">Sample Tasks:</p> <ul style="list-style-type: none"> • Write name • Copy letters/words/numbers for skills practice • Write words from memory • Copy print from book or worksheet • Copy notes from board or overhead • Complete written worksheets with single word responses (fill-in-the-blank) • Complete written worksheets with phrase or sentence response • Complete written test with multiple choice response (circle/mark answer) • Complete written test and forms with fill-in-the-blank response • Complete written test with matching response • Complete written test with phrase/sentence (short answer) • Complete written test with essay response (multi-paragraph) • Record notes from teacher dictation/lecture with teacher recording notes on board/overhead • Record notes from teacher dictation/lecture without teacher notes • Generate creative/spontaneous writing samples • Enter number in correct location in calculation problems • Copy math calculation problems with correct alignment • Record dictated math calculation problems with correct alignment • Copy diagrams and graphs create and plot linear and quadratic equations on graph 	<ul style="list-style-type: none"> • Crayon/marker • Pencil • Pen • Letter and number strip • Clipboard • Word processing software with grammar and spell checker • Instructional software to remediate and enhance specific writing skills • Commercial websites to remediate and enhance specific writing skills • Graphic organizers 	<ul style="list-style-type: none"> • Increase time for completing assignments • Arrange for oral dictation as an alternative to writing (may be accommodation or modification depending on task) • Provide peer notetaker • Use NCR notebooks • Change format of assignment to meet needs of student—multiple choice, matching word banks, fill-in-the-blank, short answer • Provide typed outline or typed copy of lecture notes to student prior to delivery for student to follow lecture • Have student highlight key points on printed copy of notes rather than copying/recording lecture notes • Use webbing-concept mapping strategy 	<ul style="list-style-type: none"> • Pencil grip or other adapted writing aids • Adapted paper (bold line, raised line) • Slant board • Personal dry erase board • Nonslip Material under writing surface (e.g., Dycem) • Tape recorder, digital recorder, Smartpen for dictated responses and note taking • Portable word processor (e.g., AlphaSmart Neo, The Writer Fusion) • Note-taking device (e.g., Braille, adapted tape/digital recorder, interactive whiteboards) • Computer with word-processing software with spell and grammar checks (e.g., Microsoft Word, Ginger) • On-screen keyboard • Speech-to-text software (e.g., Dragon, Microsoft, Google) • Digital recording (e.g., Read and Write Kurzweil, Clicker 7, Inspiration/Inspiration) • Outlining/webbing software (e.g., Inspiration or Kidspiration) • Computer with graphic-based word processor (e.g., Writing with Symbols, BM Plus) • Computer with talking word-processing software (e.g., Read and Write, Classroom Suite, Clicker 7 Kurzweil) • Open-source software/apps (e.g., My Study Bar) • Computer with word-prediction software (e.g., Co:Writer, WordQ, Clicker 7, Read and Write) • Computer with digital word banks (e.g., Clicker 6) • Scanner and computer with form-filling software to create electronic worksheets (Adobe, Read and Write) • Computer-based advanced reading and writing aids (e.g., Kurzweil, Read & Write Gold, Clicker 7) • Adaptive input hardware and/or software (e.g., keyguard ,keyboard utilities, enlarged keyboard, touchscreen, on-screen keyboard, trackball, switch access, voice dictation software, Braille input) and adaptive output solutions (screen enlargement, text or screen reading software) to be used as needed for all computer-based writingsolutions 	
		Modifications		
		<ul style="list-style-type: none"> • Decrease length/complexity of responses • Supply word banks, sentence starters, and cloze format writing activities for supports • Decrease number of responses required 		

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Instructional or Access Area: SPELLING	Standard Tools	Accommodations	Assistive Technology Solutions
<p>Sample Tasks:</p> <ul style="list-style-type: none"> Identify correctly spelled word from printed list Write spelling words from dictation Spell words orally Take a written spelling test Use spelling words appropriately in sentences Locate correctly spelled words in a dictionary Complete writing tasks with correct spelling Identify/correct incorrectly spelled words in writing sample 	<ul style="list-style-type: none"> Flashcards Alphabet strips Printed/electronic/online dictionary Word-processing software with spell checker Online spell checker Dictionary app Instructional software to remediate and enhance basic phonics and spelling skills 	<ul style="list-style-type: none"> Increase time for completing assignments Allow oral spelling 	<ul style="list-style-type: none"> Personal dry erase board for practice Digital recorder with difficult to spell words recorded Hand-held spellchecker with auditory output (e.g., Speaking Merriam-Webster Dictionary and Thesaurus) Portable word processor with spell checker or word prediction Word-processing software with spell check feature (e.g., Microsoft Word, Ginger) Pocket Mod for frequently misspelled words Talking word-processing software with talking spell check (e.g., Classroom Suite, Write Out:Loud, Clicker 7, Co Writer, Read and Write) Word prediction software that allows for phonetic spelling (e.g., Co:Writer, Read and Write, WordQ)
		Modifications	
		<ul style="list-style-type: none"> Provide peer/adult assistance for difficult to spell words Equip student with personal or custom dictionary Supply problem word list Provide individual spelling lists Determine, based on lesson objective, whether or not to penalize for misspelling Reduce number of spelling words 	

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Instructional or Access Area: MATH	Standard Tools	Accommodations	Assistive Technology Solutions
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<p style="text-align: center;">Sample Tasks:</p> <ul style="list-style-type: none"> • Identify numbers in isolation and sequence • Comprehend basic math concepts • Complete basic calculations (addition, subtraction, multiplication, and division) • Complete complex math calculations • Complete math word problems • Tell time to the hour, half-hour, etc., using an analog and/or digital clock • Calculate passage of time • Identify coins and bills • Demonstrate understanding of coins and bill value • Use money to purchase items • Use coins and bills to make appropriate change • Maintain and balance a checkbook 	<ul style="list-style-type: none"> • Manipulatives (e.g., beads) • Abacus • Number line • Math facts sheet (e.g., multiplication facts) • Calculator • Instructional software to remediate and enhance specific math skills 	<ul style="list-style-type: none"> • Change format of assignment (e.g., write answers only) • Have peer/adult read problem and record answer • Arrange additional spacing between problems • Provide additional time to complete tasks 	<ul style="list-style-type: none"> • Increased printsize • Modified paper (e.g., bold line, enlarged, raised line, graph paper) • Talking calculator • Smart pen to talk through solutions • Calculator with large print display • Calculator with large keypad • Calculator with embossed output (e.g., Braille N Speak) • On-screen calculator • Equation Editor feature (Microsoft Word) • Electronic math worksheet software with adaptive input and output as needed (e.g., MathPad, MathPad Plus, Scientific Notebook, and Geometers Sketchpad) • Adapted measuring devices (e.g., devices with speech output, large print display, tactile or Braille labels)
<p>Instructional or Access Area: Studying & Organization</p>	<p>Standard Tools</p>	<p>Accommodations</p>	<p>Assistive Technology Solutions</p>
<p style="text-align: center;">Sample Tasks:</p> <ul style="list-style-type: none"> • Copy assignments from board • Record assignments from teacher dictation • Record and complete assigned task within designated timelines • Gather appropriate materials/supplies for class activities 	<ul style="list-style-type: none"> • Instructional materials, including software, to remediate deficit areas, to teach compensation strategies and to focus on strengths 	<ul style="list-style-type: none"> <input type="checkbox"/> Have peer and/or adult provide assignment sheet <input type="checkbox"/> Outline key points <input type="checkbox"/> Provide student schedule or checklist <input type="checkbox"/> Position student strategically within classroom environment <input type="checkbox"/> Use timers <input type="checkbox"/> Give student self-monitoring sheets <input type="checkbox"/> Request teacher/peer assistance when needed to gather appropriate materials/supplies for class activities 	<ul style="list-style-type: none"> • Visual supports such as text or picture schedule • Organizational aids (e.g., color coding, appointment book) • Audio/video recorder • Personal information managers (electronic, web-based, app, or dedicated) with speech, text, auditory, or tactile cues • Transparent or color-coded folders • Digital images of assignments written on board or peer's planner with use of cell phone or mobile device

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Instructional or Access Area: LISTENING	Standard Tools	Accommodations	Assistive Technology Solutions			
<p style="text-align: center;">Sample Tasks:</p> <ul style="list-style-type: none"> • Follow verbal directions • Listen to stories, books, etc., and answer comprehension questions • Listen to classroom discussion and apply information (e.g., answer questions, record notes) • Listen to teacher lecture and apply information (e.g., answer questions, record notes) • Listen to verbally presented information and retell with correct sequencing and facts • Listen to videos to gather information about current instructional topics • Respond to environmental stimuli appropriately (e.g., someone knocking on classroom door, bell ringing, fire alarm) 	<ul style="list-style-type: none"> • Digitally recorded material • Headphones for clarity of sound and blocking of extraneous noises for television/computer • Overhead projector/document camera to provide visual outline during notetaking • Closed-captioning access to caption-ready television and video presentations • Podcasts 	<ul style="list-style-type: none"> • Arrange preferential seating • Use teacher proximity • Improve classroom acoustics • Eliminate extraneous noise • Break directions into smaller steps/segments • Use verbal prompts • Use gestures • Pre-teach vocabulary and/or components of the lesson • Use visual aids (e.g., picture symbols, diagrams, maps) to illustrate key points • Provide a written outline of lecture • Use a peer note taker to record notes in class • Provide print copy of script for video clips • Provide sign language/oral interpreter 	<ul style="list-style-type: none"> • Personal amplification system • Classroom sound field system • Auditory trainer • Personal hearing aids • Audio recorder with indexing capability • Smart board for transferring teacher written notes to student computer for viewing and printing and viewing • Environmental alert system • Closed captioning on non-caption-ready instructional materials • Real-time captioning of class lecture and discussion (CART) • CCTV focused on teacher's face 			
Instructional or Access Area: Oral Communication	Standard Tools	Accommodations	Assistive Technology Solutions			
<p style="text-align: center;">Sample Tasks:</p> <ul style="list-style-type: none"> • Gain attention of peers/adults within environment • Express basic wants/needs • Request assistance as needed • Provide appropriate greetings • Participate in conversations with peers/teachers • Respond appropriately to teacher/peer questions and/or comments • Provide oral report in class on assigned topic • Learn and use vocabulary specific to the curriculum • Inform others of events, topics, etc. • Terminate conversation 	<ul style="list-style-type: none"> • Organizing diagram for presentations • Word banks • Personal/visual dictionary • Sign language • Written language for receptive and expressive communication 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td> <ul style="list-style-type: none"> • Use interpreter • Provide verbal prompts • Model appropriate skills • Repeat spoken answers • Allow additional response time • Provide questions ahead of time </td> </tr> <tr> <td style="text-align: center;"> Modifications </td> </tr> <tr> <td> <ul style="list-style-type: none"> • Accept shortened responses </td> </tr> </table>	<ul style="list-style-type: none"> • Use interpreter • Provide verbal prompts • Model appropriate skills • Repeat spoken answers • Allow additional response time • Provide questions ahead of time 	Modifications	<ul style="list-style-type: none"> • Accept shortened responses 	<ul style="list-style-type: none"> • Speech-enhancing devices (e.g., amplifiers, clarifiers) • AAC Apps for iPad, iPod, tablets • Augmentative/alternative communication systems (e.g., object-based communication displays, picture communication boards, books, wallets, talking switches, dedicated augmentative communication devices, and integrated computer-based augmentative communication solutions—all with adaptive input as needed)
<ul style="list-style-type: none"> • Use interpreter • Provide verbal prompts • Model appropriate skills • Repeat spoken answers • Allow additional response time • Provide questions ahead of time 						
Modifications						
<ul style="list-style-type: none"> • Accept shortened responses 						

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Instructional or Access Area: Activities of Daily Living	Standard Tools	Accommodations	Assistive Technology Solutions
<p style="text-align: center;">Sample Tasks:</p> <ul style="list-style-type: none"> • Feed self using appropriate utensils • Drink using appropriate utensils • Prepare simple snack • Prepare basic meal • Dress and/or undress self using appropriate tools • Complete personal hygiene tasks (e.g., toileting, bathing, hand washing) • Complete grooming tasks (e.g., brushing teeth, hair) • Perform simple household chores 	<ul style="list-style-type: none"> • Eating utensils (e.g., spoon, cup) • Personal hygiene tools (e.g., toothbrush, comb, brush) • Bathroom rails and adaptive faucet handles • Cleaning materials and appliances 	<ul style="list-style-type: none"> • Provide verbal prompts • Model appropriate skills • Use picture cues and prompts • Give additional time to complete tasks <hr/> <p style="text-align: center;">Modifications</p> <hr/> <ul style="list-style-type: none"> • Modify task length and complexity • Have student complete only part of task independently • Have task performed by health aide 	<ul style="list-style-type: none"> • Adapted eating aids (e.g., grips for standard eating utensils, adapted cups/glasses), feeding machines • Adapted dressing aids (e.g., buttonholers, pulls for zippers, Velcro fasteners) • Adapted cooking and food preparation aids (e.g., blender attached to power control unit, adapted pouring handles) • Adapted household cleaning tools and appliances
Instructional or Access Area: Recreation and Leisure	Standard Tools	Accommodations	Assistive Technology Solutions
<p style="text-align: center;">Sample Tasks:</p> <ul style="list-style-type: none"> • Participate in play activities • Participate in leisure activities (e.g., look at/read book or magazine, listen to music) • Manipulate and/or operate toys, tools, and/or electronic appliances required for participation in leisure activities 	<ul style="list-style-type: none"> • Puzzles • Games • Toys • Music—mobile devices (e.g., iPod, MP3 player) • Television • DVD player 	<ul style="list-style-type: none"> • Use verbal prompts • Provide adult peer assistance • Model appropriate skills <hr/> <p style="text-align: center;">Modifications</p> <hr/> <ul style="list-style-type: none"> • Modify games • Change/simplify rules 	<ul style="list-style-type: none"> • Knobs for puzzles • Adapted crayon holders • Adapted books • Adapted music with symbols • Raised line coloring sheets • Spinners for games • Switch accessible toys (commercially available or switch accessible through switch interface) • Environmental control devices • Power control units and battery adapter devices • Adaptive sports equipment • Computers with adaptive input devices as needed and appropriate software to address leisure skills

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Instructional or Access Area: Prevocational and Vocational	Standard Tools	Accommodations	Assistive Technology Solutions
<p>Sample Tasks:</p> <ul style="list-style-type: none"> • Complete assigned tasks (e.g., filing, sorting/assembling) within designated timelines • Use tools, Manipulatives, and/or equipment to complete tasks • Complete single and multiple step tasks 	<ul style="list-style-type: none"> • Sorting and assembling materials • Office equipment • Computer with standard office applications • Timers and watches 	<ul style="list-style-type: none"> • Use verbal prompts • Use picture and word cues • Model appropriate skills • Arrange for cooperative participation with peers and adults • Furnish student with self-monitoring sheets 	<ul style="list-style-type: none"> • Individualized task and material modifications to meet student needs • Computer with adaptive input devices as needed and appropriate software to address prevocational or vocational needs • Vibrating and talking watches and timers • Auditory prompting with and without visual display • Photograph/video modeling of task completion • Adapted work station • Magnifiers
		Modifications	
		<ul style="list-style-type: none"> • Modify task length and 	
Instructional or Access Area: SEATING, POSITIONING & MOBILITY	Standard Tools	Accommodations	Assistive Technology Solutions
<p>Sample Tasks:</p> <ul style="list-style-type: none"> • Move about/ambulate around the classroom, school, and/or community • Manipulate educational materials as required in assigned activities • Maintain appropriate seating/position for participation in relevant activities • Access computer/Internet 	<ul style="list-style-type: none"> • Classroom chairs, desks, and tables • Computer, keyboard, mouse 	<ul style="list-style-type: none"> • Limit mobility requirements through careful scheduling of daily activities (e.g., order, location) • Provide peer and adult assistance 	<ul style="list-style-type: none"> • Adaptive classroom equipment (e.g., prone and supine stander, side lyer, adapted chair with seating modifications and support) • Footrest to maintain proper seating • Slant board • Adapted table and desk • Walker • Crutches/cane • Manual wheelchair • Power wheelchair • Lap tray and equipment mount • Adapted vehicle
		Modifications	
		<ul style="list-style-type: none"> • Modify requirements based upon student's daily energy level and the task to be completed 	