

# Individualizing Instructional Practices for Students with Attention Deficit Hyperactivity Disorder

Effective teachers of students with attention deficit hyperactivity disorder (ADHD) individualize their instructional practices according to the needs of their pupils and the subject matter they are teaching. Because children with ADHD, like many other students, learn in many different ways, teachers often find it necessary to modify their instructional tactics. Listed below are suggestions for modifying the delivery of instruction across several academic areas.

## Language Arts and Reading Comprehension

To help children with ADHD who are poor readers improve their reading comprehension skills, try the following instructional practices:

- **Silent reading time.** Establish a fixed time each day for silent reading [e.g., D.E.A.R.: Drop Everything and Read and Sustained Silent Reading (Holt & O'Tuel, 1989; Manzo & Zehr, 1998)].
- **Follow-along reading.** Ask the child to read a story silently while listening to other students or the teacher read the story aloud to the entire class.
- **Partner reading activities.** Pair the child with ADHD with another student partner who is a strong reader. The partners take turns reading orally and listening to each other.
- **Storyboards.** Ask the child to make storyboards that illustrate the sequence of main events in a story.
- **Storytelling.** Schedule storytelling sessions where the child can retell a story that he or she has read recently.
- **Playacting.** Schedule playacting sessions where the child can role-play different characters in a favorite story.
- **Word bank.** Keep a word bank or dictionary of new or “hard-to-read” sight vocabulary words.
- **Board games for reading comprehension.** Play board games that provide practice with target reading comprehension skills or sight vocabulary words.
- **Computer games for reading comprehension.** Schedule computer time for the child to have drill-and-practice with sight vocabulary words.
- **Recorded books.** These materials, available from many libraries, can stimulate interest in traditional reading and can be used to reinforce and complement reading lessons.
- **“Backup” materials for home use.** Make available to students a second set of books and materials that they can use at home.
- **Summary materials.** Allow and encourage students to use published book summaries, synopses, and digests of major reading assignments to review (not replace) reading assignments.

## Phonics

To help children with ADHD master rules of phonics, the following are effective:

- **Mnemonics for phonics.** Teach the child mnemonics that provide reminders about hard-to-learn phonics rules (e.g., “when two vowels go walking, the first does the talking”) (Scruggs & Mastropieri, 2000).
- **Word families.** Teach the child to recognize and read word families that illustrate particular phonetic concepts (e.g., “ph” sounds, “at-bat-cat”).

- **Board games for phonics.** Have students play board games, such as bingo, that allow them to practice phonetically irregular words.
- **Computer games for phonics.** Use a computer to provide opportunities for students to drill and practice with phonics or grammar lessons.
- **Picture–letter charts.** Use these for children who know sounds but do not know the letters that go with them.

## Writing

In composing stories or other writing assignments, children with ADHD benefit from the following practices:

- **Standards for writing assignments.** Identify and teach the child classroom standards for acceptable written work, such as format and style.
- **Recognizing parts of a story.** Teach the student how to describe the major parts of a story (e.g., plot, main characters, setting, conflict, and resolution). Use a storyboard with parts listed for this purpose.
- **Post office.** Establish a post office in the classroom, and provide students with opportunities to write, mail, and receive letters to and from their classmates and teacher.
- **Visualize compositions.** Ask the child to close his or her eyes and visualize a paragraph that the teacher reads aloud. Another variation of this technique is to ask a student to describe a recent event while the other students close their eyes and visualize what is being said as a written paragraph.
- **Proofread compositions.** Require that the child proofread his or her work before turning in written assignments. Provide the child with a list of items to check when proofreading his or her own work.
- **Tape recorders.** Ask the student to dictate writing assignments into a tape recorder, as an alternative to writing them.
- **Dictate writing assignments.** Have the teacher or another student write down a story told by a child with ADHD.

## Spelling

To help children with ADHD who are poor spellers, the following techniques have been found to be helpful:

- **Everyday examples of hard-to-spell words.** Take advantage of everyday events to teach difficult spelling words in context. For example, ask a child eating a cheese sandwich to spell “sandwich.”
- **Frequently used words.** Assign spelling words that the child routinely uses in his or her speech each day.
- **Dictionary of misspelled words.** Ask the child to keep a personal dictionary of frequently misspelled words.
- **Partner spelling activities.** Pair the child with another student. Ask the partners to quiz each other on the spelling of new words. Encourage both students to guess the correct spelling.
- **Manipulatives.** Use cutout letters or other manipulatives to spell out hard-to-learn words.
- **Color-coded letters.** Color code different letters in hard-to-spell words (e.g., “receipt”).

- **Movement activities.** Combine movement activities with spelling lessons (e.g., jump rope while spelling words out loud).
- **Word banks.** Use 3" × 5" index cards of frequently misspelled words sorted alphabetically.

## Handwriting

Students with ADHD who have difficulty with manuscript or cursive writing may well benefit from their teacher's use of the following instructional practices:

- **Individual chalkboards.** Ask the child to practice copying and erasing the target words on a small, individual chalkboard. Two children can be paired to practice their target words together.
- **Quiet places for handwriting.** Provide the child with a special "quiet place" (e.g., a table outside the classroom) to complete his or her handwriting assignments.
- **Spacing words on a page.** Teach the child to use his or her finger to measure how much space to leave between words in a written assignment.
- **Special writing paper.** Ask the child to use special paper with vertical lines to learn to space letters and words on a page.
- **Structured programs for handwriting.** Teach handwriting skills through a structured program such as Jan Olsen's Handwriting Without Tears program (Olsen, 2003).

## Math Computation

Numerous individualized instructional practices can help children with ADHD improve their basic computation skills. The following are just a few:

- **Patterns in math.** Teach the student to recognize patterns when adding, subtracting, multiplying, or dividing whole numbers (e.g., the digits of numbers that are multiples of 9 [18, 27, 36 . . .] add up to 9).
- **Partnering for math activities.** Pair a child with ADHD with another student and provide opportunities for the partners to quiz each other about basic computation skills.
- **Mastery of math symbols.** If children do not understand the symbols used in math, they will not be able to do the work. For instance, do they understand that the "plus" in  $1 + 3$  means to add and that the "minus" in  $5 - 3$  means to take away?
- **Mnemonics for basic computation.** Teach the child mnemonics that describe basic steps in computing whole numbers. For example, "Don't Miss Susie's Boat" can be used to help the student recall the basic steps in long division (i.e., divide, multiply, subtract, and bring down).
- **Real-life examples of money skills.** Provide the child with real-life opportunities to practice target money skills. For example, ask the child to calculate his or her change when paying for lunch in the school cafeteria, or set up a class store where children can practice calculating change.
- **Color coding arithmetic symbols.** Color code basic arithmetic symbols, such as +, -, and =, to provide visual cues for children when they are computing whole numbers.
- **Calculators to check basic computation.** Ask the child to use a calculator to check addition, subtraction, multiplication, or division.
- **Board games for basic computation.** Ask the child to play board games to practice adding, subtracting, multiplying, and dividing whole numbers.
- **Computer games for basic computation.** Schedule computer time for the child to drill and practice basic computations, using appropriate games.

- “**Magic minute**” drills. Have students perform a quick (60-second) drill every day to practice basic computation of math facts, and have children track their own performance.

## Solving Math Word Problems

To help children with ADHD improve their skill in solving word problems in mathematics, try the following:

- **Reread the problem.** Teach the child to read a word problem two times before beginning to compute the answer.
- **Clue words.** Teach the child clue words that identify which operation to use when solving word problems. For example, words such as “sum,” “total,” or “all together” may indicate an addition operation.
- **Guiding questions for word problems.** Teach students to ask guiding questions in solving word problems. For example: What is the question asked in the problem? What information do you need to figure out the answer? What operation should you use to compute the answer?
- **Real-life examples of word problems.** Ask the student to create and solve word problems that provide practice with specific target operations, such as addition, subtraction, multiplication, or division. These problems can be based on recent, real-life events in the child’s life.
- **Calculators to check word problems.** Ask the student to use a calculator to check computations made in answering assigned word problems.

## Use of Special Materials in Math

Some children with ADHD benefit from using special materials to help them complete their math assignments, including:

- **Number lines.** Provide number lines for the child to use when computing whole numbers.
- **Manipulatives.** Use manipulatives to help students gain basic computation skills, such as counting poker chips when adding single-digit numbers.
- **Graph Paper.** Ask the child to use graph paper to help organize columns when adding, subtracting, multiplying, or dividing whole numbers.

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## References

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