

Working with Special Needs Learners

Headsprout Early Reading is a research-based, online supplemental early reading program that teaches reading fundamentals. Headsprout provides instruction in Phonemic Awareness, Phonics, Fluency, Vocabulary, and Reading Comprehension, and teaches segmenting, blending, and decoding in context. Headsprout's rigorous development and user testing process ensures reading success across a wide variety of learners.

Key Program Outcomes:

- ✓ Reading/decoding up to the mid-2nd-Grade level
- ✓ Fluent knowledge of over 90 phonetic elements and over 100 sight words
- ✓ Potential reading vocabulary of over 5,000 words
- ✓ Progression from single word comprehension to building meaning and inferential comprehension
- ✓ Mastery of the skills and strategies necessary to succeed on standardized tests

Students with Disabilities

The Individuals with Disabilities Education Act (2004) generally defines a 'child with a disability' as a child with mental retardation, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), emotional disturbance, orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities; or a child aged 3 through 9, who is experiencing developmental delays in one or more of the following areas: physical development; cognitive development; communication development; social or emotional development; or adaptive development. These learners are in need of special education and related services.ⁱ

Students with disabilities vary in numerous ways, including the type, degree, and number of disabilities they have, and the effect disabilities have on the learner's educational progress. While students with disabilities are a very diverse group, research indicates potential benefits of computer-based instruction. Technology has been shown to enhance a student's acquisition of skills and content knowledge when the computer is used to deliver well-designed and well-managed instruction. In addition, it has been found that students with mild learning disabilities often demonstrate higher-level performance and attention to detail working on multimedia projects than they normally exhibit.ⁱⁱ

While Headsprout has been used successfully with a variety of learners who have been identified as having a disability, we recognize that each student is different. Some students may require additional instructional assistance, at varying levels, to use Headsprout, while others may not require any extra support.

"Headsprout Early Reading has been an excellent literacy solution for our students, while also addressing the needs of our ELL, intervention, and special needs students. Our test scores have increased dramatically, and our teachers and students love it."

Roberto Flores
Principal, PS 106, Brooklyn, NY

Headsprout Early Reading provides a program of practice of beginning-strategies instruction with delineated explanation and teacher modeling, followed by scaffolding that culminates in independent student use of reading strategies in generalized settings. Prior to reading instruction, students first practice pre-requisite skills by completing a brief tutorial. Lessons build upon each other through clear instruction, modeling, guided practice, repetition, frequent opportunities to respond, and cumulative review. The instructional sequence begins with the alphabetic principle (that letters represent sounds), early decoding strategies and fluent reading of sounds (that sounds go together to make words), and moves on to words and short sentences making up print (words and sentences make up stories that have meaning), and finally the reading of much longer stories and chapter books (for enjoyment, meaning and new information).

➤ **Headsprout provides concentrated, effective, individualized instruction, which allows students to learn at their own level and pace.**

Headsprout's carefully designed instructional sequence allows learners to start with things they know or can easily do and builds instruction from there. As a result, students are able to succeed in challenging work while the program helps them to master complex skills and build confidence. Headsprout presents "respectful" tasks that are interesting and engaging for a variety of learners while providing support at each level to ensure that each student is successful. High amounts of one-on-one learning are needed to address the difficulties of most special needs learners. Headsprout Early Reading provides over 180 individualized interactions within each 20-minute episode. Headsprout's individualized adaptive instruction is like having an instructional aide for each student. With Headsprout, teachers can provide individualized instruction in critical learning areas (phonics, segmenting, blending, fluency and reading comprehension) to all their students, every school day.

➤ **Headsprout teaches until program objectives are met, individualizing instruction and making sure each student acquire critical objectives.**

Headsprout's instruction is tailored to meet the needs of each learner—and ensures that those needs are met before the lesson comes to an end. In Headsprout, students practice and learn, building on prior knowledge, until they've mastered the skill. The program ensures that a learner does not exit an instructional segment without achieving that specific learning goal. Headsprout manages this by its moment-to-moment adaptation: Although the core instruction is the same for all learners, some learners require more instruction, practice, or even a specialized set of instructions based on their needs, and these subroutines are available to provide extra skill building and reinforcement whenever needed. Headsprout is effective for them because it provides special needs students with the additional practice and review needed to achieve the same educational goals as their peers.

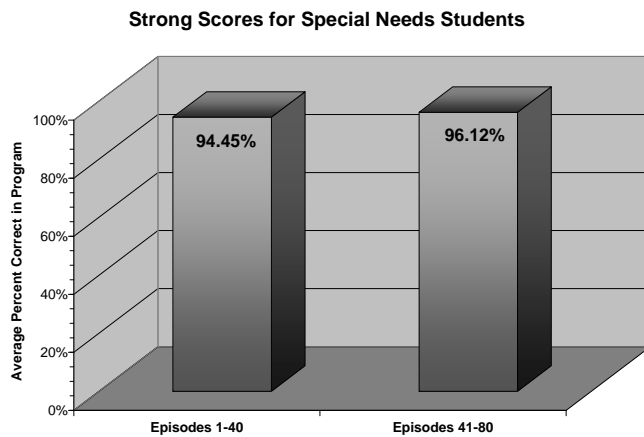
➤ **Headsprout helps teachers remain in constant contact with student data.**

Headsprout provides ongoing individual and group performance data that teachers can use to inform their instructional decisions, including making appropriate interventions, which may include repeating lessons, restarting at earlier points in the curriculum, reviewing specific skills, or providing additional practice. While the program is continually assessing during teaching, the performance reports and benchmark assessments allow teachers to monitor student progress and better understand each student's unique strengths and needs.

➤ **Headsprout facilitates the involvement of parents, encouraging them to be active participants in their child's education.**

Headsprout can provide students with their own library of books to take home, read, and share. As students progress through the program, printable black and white and even full color stories are available, which they can keep for their very own. To encourage success, Headsprout provides guidance on how to use shared reading materials effectively. In addition, even Headsprout's online lessons can be used at both school and home, and progress reports can be automatically emailed to parents for all lessons done at school.

Robust Scores for Learners with Special Needs



Students identified as Special Needs have completed Headsprout Early Reading with over 90% correct in the program, while progressing to the outcomes described above. The chart below indicates the average percent correct for Special Needs students who have completed episodes 1-40, which focus on the early building blocks of reading, and episodes 41-80, which extend a learner's reading skills and strategies.

Investigations of Effectiveness

Clarfield, J. & Stoner, G. (2004). The Effects of Computerized Reading Instruction on the Academic Performance of Students Identified With ADHD. *School Psychology Review*, 34(2) p. 246-254

This study investigated the effects of computerized reading instruction on the task engagement and reading performance of children with Attention-Deficit Hyperactivity Disorder (ADHD). *Headsprout Early Reading™* was used to provide beginning reading instruction for three Kindergarten and 1st Grade students identified with ADHD. Results suggest that Headsprout Early Reading was effective in improving student task engagement and oral reading fluency, as compared with teacher-directed instruction. Findings also suggest the potential cost benefit of computerized academic interventions for children with ADHD.

A summary of the research may be found at: <http://www.umass.edu/education/schoolpsychology/Presentations/2004NASP/Computerized%20Reading.pps#263,7,Slide 7>

Judge Rotenberg Center, Rhode Island

Staff at the Judge Rotenberg Educational Center, a special needs school in Canton, MA serving both higher-functioning students with conduct, behavior, emotional, and/or psychiatric problems and lower-functioning students with autistic-like behaviors, evaluated the effects of Headsprout Reading Basics on the ancillary disturbing behavior of five autistic adolescent males. They found that Headsprout significantly decreased instances of disruptive behavior, while improving reading skills for all 5 students.

From a First Grade Teacher:

"Headsprout is able to not only teach phonics but it captures the attention of the most difficult child. After a year in my classroom, a child with learning disabilities and attention deficit disorder is motivated and captivated by Headsprout. He completes his work now so he can work on Headsprout. He works on Headsprout for long periods of time. Nothing else on the computer could keep him focused for longer than five minutes. Now he's fully engaged and making progress! He is very proud when he finishes another *episode*."

ⁱ Individuals with Disabilities Education Improvement Act of 2004 (IDEA) (<http://thomas.loc.gov/cgi-bin/query/C?c108:./temp/~c108dUNDBe>)

ⁱⁱ From: *Use of Computer Technology to Help Students with Special Needs*, by Ted S. Hasselbring and Candyce H. Williams Glaser (http://www.futureofchildren.org/usr_doc/vol10no2Art5.pdf)