

# Florida Center for Reading Research

## Lightspan Early Reading Program

### What is Lightspan Early Reading Program?

The *Lightspan Early Reading Program* is designed to complement core reading programs for grades K-3. It is comprised of two branches that work synchronously to teach students foundational reading skills and provide opportunities for extensive practice. One branch, *The Lightspan Reading Center*, is a comprehensive internet program that provides progress assessments, lesson plans and printable materials, an index of resources, standards correlations, reading behavior checklists, and more. The second branch, *Lightspan Achieve Now!*, consists of a collection of resources surrounding 26 Adventure CD-ROMS that can be run on either a PC or a Sony PlayStation game console. Each Adventure CD is story-based, and within that story, characters complete certain reading tasks to resolve the story problem. The task complexity varies from naming the letters of the alphabet in order, to completing analogies and determining main ideas. The two branches and the skills they encompass are indexed in detail for the teacher's ease in finding appropriate activities to meet children's current needs and to accompany lessons being covered through the core curriculum. In addition, there is a *Lightspan Literacy Library* available through Scholastic publishers that offers children's books in classroom sets to provide textual reading to support the skills that the children are learning through the software. Instruction can occur in whole-class format, small-groups, or individually. Teacher materials accompanying the Adventure CDs also include "in-a-flash" cards. These cards provide teachers with at-a-glance correlated assessment materials, tips for teaching the content, both a reading and a writing focus, instructional strategies, any accompanying *Literacy Library* books that may be relevant, and an area for the teacher to write accompanying notes for the next time that he or she uses it.

A unique feature of the *Lightspan* curriculum is its emphasis on connecting school and home learning, and on encouraging parents' and families' involvement in children's learning. The major avenue for accomplishing this goal is the CD-ROM library and the Sony PlayStation. The children are allowed to take the PlayStations home with the CDs, and directed to play the games for "homework." Lightspan reports that children find great enjoyment in this, and consequently play the learning games with frequency at home. Brief guides accompanying each CD provide background and other helpful information for parents. By choosing the CD-ROM given to each child, the teacher can individualize the learning content for each student.



Assessments are incorporated in the *Lightspan* program through progress checks and progress tests available in the teacher's materials and through the website. These assessments serve to aid teachers in placing children appropriately in the program, as well as to evaluate their mastery of skills being taught in each lesson. There are options for three implementation models of the program: as a tutorial, with family involvement, or with the internet alone.

## How is *Lightspan* aligned with Reading First?

The *Lightspan* program addresses each one of the five critical aspects identified by Reading First: phonemic awareness, phonics, fluency, vocabulary, and comprehension. In addition, it has an extensive professional development program that is integrated into the use of *Lightspan* at virtually every level.

Activities to deliver the five basic aspects of effective reading instruction are addressed both through the web and through the use of the Adventure CDs. For example, one level of the Adventure CDs, The Three Decoders, provides practice for children on phonemic awareness skills, but the Reading Center website has over 100 additional phonemic awareness activities. The majority of these activities involve sounds and sound discriminations alone, without accompaniment by written letters. Students learn to recognize and use the sounds of letters in spoken words through rhyming, sound matching, blending, and phoneme substitution.

Phonics activities are extensive as well. Once sounds are understood, the program effectively gives children practice in associating those sounds with their representative letters. Students match letters with beginning, final, and medial sounds represented in pictures. Word families are studied as well. The actual process of blending phonemes into words is not explicitly taught. Again, it should be emphasized that the variety of activities available for students to practice and learn these skills is extraordinarily extensive.

Fluency is addressed indirectly in two ways. Through the *Literacy Library* students are given the opportunity to engage in common fluency-building activities such as repeated readings, choral reading, and partner reading. In addition, reading passages provide optional auditory accompaniment, so that the student could practice reading along with the PlayStation or computer. Vocabulary words that may prove challenging to students are highlighted in textual passages, such that the student clicking on a highlighted word provides him with a definition or optional other clues regarding the word's origin, its use in a sentence, etc. In this way, the student is presented with knowledge of several strategies that can be used to learn the meanings of unknown words.

Examples of comprehension strategies that are modeled are making predictions about text, distinguishing fact from opinion, using prior knowledge to interpret content, identifying an implied main idea, identifying cause and effect relationships, and identifying details (additional strategies are practiced as well).

Extensive professional development is provided to schools and teachers implementing the *Lightspan* program in an ongoing, interactive, consultative manner. It indeed is not a separate aspect of the program, but is an interwoven dimension of the program that teachers continually access. Aid to each school is specifically tailored to the needs of that school. There is on-site assistance, a Partner Line that provides technical phone support, a Consultant Line, and six professional development CDs which can be used for initial training in the use of the program, for reinforced learning as need arises, and for integrating new teachers to the school into the *Lightspan* program. An online alignment tool matches *Lightspan* reading resources with state standards and recommends resources for teachers based on an assessment. One professional CD identifies and reinforces knowledge of the four levels of instruction that are foundational in the *Lightspan* program: (1) early—the knowledge that text and illustration have meaning; (2) emergent—concepts of print, developing more sophisticated reading skills; (3) transitional—achieving independence in reading, understanding the syntax of English, comprehension strategies, and integrating

phonological skills; and (4) fluent—independent reading of grade level text, using reading strategies, competent at both literal and inferential comprehension skills.

### Research Support for *Lightspan*

*Lightspan*, which was developed in 1993, was the subject of a doctoral research study regarding its effectiveness in response to the Delaware Challenge Grant in 2002 (Birch, 2002). The study was a two-year study encompassing a 2<sup>nd</sup>/3<sup>rd</sup> grade cohort of students. The study used matched control groups, although the students were not randomly assigned. In other words, a classroom using *Lightspan* was matched with a very similar classroom in another school in the district on a number of variables, yet the students within these conditions were not randomly assigned. The students were pre- and post-tested in the areas of vocabulary and reading comprehension (and mathematics) using the Stanford Achievement Test, 9<sup>th</sup> Edition (SAT-9). Results indicated that the *Lightspan* group of students outperformed the control group of students in vocabulary in both the second and third grades, and in reading comprehension in the third grade. These results were found to be statistically significant.

Another evaluation of the results of the Delaware Challenge Grant Project produced slightly divergent results from those described above (Giancola, Ratkiewicz, Siach-Bar, & Grogan, 2000). The authors undertook a five-year evaluation to assess the effectiveness of the *Lightspan* program in meeting its stated goals. The following results were noted. Regarding student achievement, second grade student scaled scores on reading achievement tests (SAT-9) increased significantly from pre- to post-test. However, fourth grade student scaled scores did not increase significantly over the course of the year. Fourth graders participating in *Lightspan* did not significantly increase their standing in relation to the national reference group in reading, and actually showed a decline in comparison to this group of 7 percentile points. Students who tested in the lower two quartiles in the fall demonstrated much higher reading gains than students whose initial achievement test score were above the 50<sup>th</sup> percentile. Other grade levels were not noted in the evaluation. The evaluators further found that students generally used the *Lightspan* curriculum on the Sony PlayStation at home for approximately 30 minutes daily. Students and parents reported that using the PlayStation was a very positive experience for them in their home life, with students spending less time watching TV, more time doing schoolwork, and increased participation of children in family activities.

A three-year longitudinal study was undertaken in Wichita, Kansas from 1997-2000 (Gwaltney, 2000). Three Title I schools using *Lightspan* were matched with three Title I schools in the same district that did not use the *Lightspan* curriculum. It is not stated in the report which additional reading curricula were used during the three years of the project implementation. Although there was attrition from both the experimental and the control groups over the three-year period, the original sample size was sufficient to maintain statistical integrity in the study's final analysis. The Metropolitan Achievement Test (MAT-7) was used to measure student performance in both reading and math. With regard to the reading, the researcher found that the *Lightspan* group outperformed the control group. Students who were in first grade when the project was initiated and in fourth grade at the end of the study were found to have made statistically significant gains over the control group in reading. No results were reported for the second (5<sup>th</sup>) grade students. In addition to statistical significance, educationally significant effect sizes were found for fourth grade students

as well. It is reported that “the fourth grade *Lightspan* cohort made an average 3.2 Grade Equivalents (G.E.) gain in reading between the September of 1997 and April of 2000, compared to an average gain of 2.8 G.E. made by the comparison cohort” (Gwaltney, 2000). Information gathered through interviews and questionnaires with students, teachers, and parents concurred with the statistical evidence favoring *Lightspan* in that these participants supported qualitatively the belief that *Lightspan* was an effective means of improving academic achievement.

The *Lightspan* curriculum was conceived and written based on well-founded instructional research in the area of reading, and incorporates sound practices based on scientifically based reading research. Several studies have reported positive effects on reading growth that are linked to the use of *Lightspan* materials, but the results are more consistent for younger (1<sup>st</sup>, 2<sup>nd</sup> graders vs. 4<sup>th</sup>, 5<sup>th</sup> grade students).

## Strengths & Weaknesses

### Strengths of *Lightspan*:

- *Lightspan* provides opportunities through the software and Sony PlayStation for students to continue classroom learning at home with their families.
- *Lightspan* has a strong network of ancillary support materials and lessons to assist teachers in meeting student needs. This material is well indexed in printed format for teachers and is well-organized and easily accessible through the *Lightspan* website.
- Student and classroom reports are generated based on student performance and are readily accessed by the teacher.
- The teacher guides accompanying each *Lightspan Achieve Now!* adventure CD are of unusually high quality, providing background information about the characters in the adventure, an overview of the story line, specific instructions regarding manipulating the cursor on the screen and what each activity on the screen is for, a detailed explanation of each activity, and written checks to monitor student progress. Aids to teacher planning are included, as are blackline masters to be used both in school and at home.

### Weaknesses of *Lightspan*:

- Fluency instruction and practice are minimal.
- Practice in the actual process of blending sounds to read words is not provided.

### Which Florida districts have schools that implement Lightspan?

Alachua	352-955-7527	Leon	850-487-7147
Baker	904-259-0401	Levy	352-486-5231
Bradford	904-966-6800	Liberty	850-643-2275
Brevard	321-631-1911	Manatee	941-708-8770
Charlotte	941-255-0808	Nassau	904-321-5880
Collier	239-254-4100	Okaloosa	850-833-3100
Dixie	352-498-6131	Orange	407-317-3202
Duval	904-390-2115	Osceola	407-870-4008
Escambia	850-469-6130	Palm Beach	561-434-8200
Gadsden	850-627-9651	Pinellas	727-588-6011
Gulf	850-229-8256	Polk	863-534-0500
Hamilton	386-792-1228	Santa Rosa	850-983-5000
Hendry	863-674-4642	St. Lucie	772-468-5021
Highlands	863-471-5564	Sumter	352-793-2315
Holmes	850-547-9341	Volusia	386-734-7190
Indian River	772-564-3140	Wakulla	850-926-7131
Jackson	850-482-1200	Walton	850-892-8331
Lee	239-337-8301	Washington	850-638-6222

### For More Information

[www.lightspan.com](http://www.lightspan.com)

### References

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