THE READING RESEARCH BASE OF THE HELP ME 2 LEARN SUPER STAR SERIES OF PHONICS PROGRAMS

September 19, 2002



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INTRODUCTION

The educational content of the Help Me 2 Learn *Super Star Series* of interactive electronic *Phonics* programs is based on the recommendations of the following:

National Reading Panel (under the auspices of the National Institute for Literacy and the National Institute of Child Health and Development)

Put Reading First: The Research Building Blocks for Teaching Children to Read

National Research Council

Preventing Reading Difficulties in Young Children

California Department of Education

• Teaching Reading: A Balanced, Comprehensive Approach to Teaching Reading in Pre-kindergarten Through Grade Three

Center for the Improvement of Early Reading Achievement

• Teaching Every Child to Read: Frequently Asked Questions

National Institute of Child Health and Development

• A Synthesis of Research on Reading

INTRODUCTION (cont'd)

All these recommendations are in turn based on comprehensive surveys of over 30 years of large-scale scientific reading research. This research has amassed overwhelming evidence showing that, as stated by the National Reading Panel:

Teaching children to manipulate the sounds in language (phonemes) helps them learn to read. This remains true under a variety of teaching conditions and with a variety of learners across a range of grade and age levels. The National Reading Panel concluded that teaching phonemic awareness to children significantly improves their reading when compared to instruction without any attention to phonemic awareness. Specifically, the results of experimental studies led the Panel to conclude that phonemic awareness training led to improvement in students' phonemic awareness, reading, and spelling.

The National Reading Panel goes on to explain that:

Phonemic awareness is the ability to notice, think about, and work with the individual sounds in spoken words. Before children learn to read print, they need to become aware of how the sounds in words work. They must understand that words are made up of speech sounds, or phonemes."

This is why the Help Me 2 Learn series of phonics programs is driven throughout by the principles of **phonemic** awareness.

There follows a table of the activities in the four programs of the "Phonics Super Star Reading System" correlated with the reading research upon which they are based.

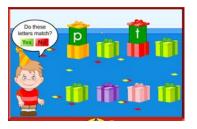
LETTERS & NUMBERS Beginning Level Reading and Math

1. Letter recognition



Spoken instructions direct the child to click on the name of each letter to animate the letter and hear it spoken by three different voices: adult, older child, younger child. This activity is repeated with upper-case letters.

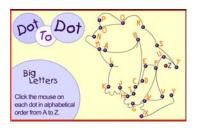
2. Matching Letters





Sing-along with the "ABC Song". Then play "Buddy's Birthday" game: match the letters hidden in the presents to see what's inside.

3. Alphabet Order A-Z.





Sing-along with the "Alphabet Rock" song. Then play "Dot-to-Dot": click on a series of letters in alphabetical order to connect the dots into a picture.

READING RESEARCH BASE

California Department of Education:

"Familiarity with the letters of the alphabet is a powerful predictor of early reading success. Until children can quickly recognize letters, they cannot begin to appreciate that all words are made of sequences and patterns of letters. Until children can comfortably discriminate the shape of one letter from another, there is no point in teaching letter-sound pairings. Encouraging young children to produce temporary spellings is a powerful means of developing phonemic awareness; yet children will not write willingly until they can form the letters with adequate ease and to their own satisfaction. Knowledge of the letter names is important, too, for it is shown to be a major means by which children recall or generate the sounds of letters in their independent reading and writing.

Because the names and shapes of the letters in English are very similar to one another, their learning is best fostered through numerous guided and playful exposures to the alphabet. Across the pre-kindergarten and kindergarten years, teachers should create many opportunities to engage their students with the names, shapes, and formation of the letters of the alphabet."

National Research Council:

"English is an alphabetic language in which printed letters systematically, but not entirely consistently, represent phonemes... In order to grasp this fundamental principle of alphabetic literacy, it is therefore imperative that children first acquire some degree of... letter knowledge, including the ability to distinguish and identify the letters of the alphabet..."

National Reading Panel:

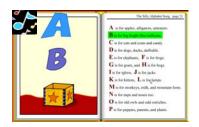
"Teach every letter-sound correspondence explicitly. Research supporting this idea is simply overwhelming. ...If children do not know letter names and shapes, they need to be taught them along with phonemic awareness."

LETTERS & NUMBERS

Beginning Level Reading and Math (cont'd)

4. Beginning Letters of Words





Sing-along with the "Silly Alphabet" song. Then match the beginning letter of the animal with one of the letters below. The name of the animal appears in level one, and is removed in level two. Bonus Activity: hear a special message about reading.

5. Beginning & Ending Sounds of Words





Sing-along with the "If You Know the Sound Of" song. Then play the "Phonics Finder" game. Drag the item into the chest whose <u>beginning</u> letter and sound corresponds to the letter on the chest. In the level 2 version, the child must look for the <u>ending</u> letter and sound.

Bonus Activity: Learn the Letter Sounds





Hear the sound of each letter in the alphabet, and discover that a c e g l o u x and y can have more than one sound. The child hears and sees pictures of words that begin with all the possible letter sounds, to learn the difference between a letter name and a letter sound.

READING RESEARCH BASE

Center for the Improvement of Early Reading Achievement:

"Effective phonemic awareness instruction teaches children to notice, think about, and work with (manipulate) sounds in spoken language. Teachers use many activities to build phonemic awareness, including: *Phoneme isolation*

Children recognize individual sounds in a word.

Teacher: What is the first sound in van? Children: The first sound in van is /v/.

Children can show us that they have phonemic awareness in several ways, including:

- recognizing which words in a set of words begin with the same sound ("Bell, bike, and boy all have /b/ at the beginning.");
- isolating and saying the first or last sound in a word ("The beginning sound of *dog* is /d/." "The ending sound of *sit* is /t/.")

National Research Council:

"Enhancing children's letter knowledge and phonological awareness skills should be a priority goal in the kindergarten classroom. Not only will these abilities be key to the children's success in learning to read in the first grade, but they are also critical to the effectiveness of the pre-reading activities so important in kindergarten...

The entry to phonemic awareness typically begins with an appreciation of alliteration, for instance, that *boy* and *butterfly* begin with /b/."

National Reading Panel:

- "Support for phonemic awareness development should occur in prekindergarten, kindergarten, and first grade (Yopp, 1992), including the abilities to:
- attend to the separate words of sentences (e.g., rhyming songs, print tracking);
- break up words into syllables (e.g., clapping syllables);
- detect and generate rhymes;
- engage in alliterative language play (e.g., listening for or generating words that begin with a specific initial phoneme..."

LETTERS & NUMBERS Beginning Level Reading and Math (cont'd)

6. Using the Alphabet (Poem)





Sing-along with the "Betty Bunny" song. Listen to and follow along a series of short poems for each letter of the alphabet. Either in sequence or accessed in random order. Color Betty's picture – just for fun or to learn to use the mouse.

7. Spelling



Given a letter, a word clue and a picture of the word, click on the letters in the proper order to spell the word. As the activity progresses, the letter clue is withdrawn, then both the letter clue and the picture clue are withdrawn.

READING RESEARCH BASE

National Research Council:

"Reading aloud with kindergartners has been broadly advocated. By actively engaging children with different aspects of shared books, read-aloud sessions offer an ideal forum for exploring many dimensions of language and literacy. This is especially important for children who have had little storybook experience outside school (Feitelson et al., 1993; Purcell-Gates et al., 1995).

Among the goals of *interactive storybook reading* are developing children's concepts about print, including terms such as "word" and "letter" (Holdaway, 1979; Snow and Tabors, 1993); building familiarity with the vocabulary of book language (Robbins and Ehri, 1994), as well as its syntax and style (Bus et al., 1995; Feitelson, et al., 1993); and developing children's appreciation of text and their motivation to learn to read themselves. "

National Reading Panel:

"In the largest, most comprehensive evidenced-based review ever conducted of research on how children learn reading, a Congressionally mandated independent panel has concluded that the most effective way to teach children to read is through instruction that includes a combination of methods. The panel determined that effective reading instruction includes teaching children to break apart and manipulate the sounds in words (phonemic awareness), teaching them that these sounds are represented by letters of the alphabet which can then be blended together to form words (phonics), having them practice what they've learned by reading aloud with guidance and feedback (guided oral reading), and applying reading comprehension strategies to guide and improve reading comprehension."

LETTERS & NUMBERS Beginning Level Reading and Math (cont'd)

8. Number Recognition





Spoken instructions direct the child to click on the name of each number to animate the number and hear it spoken by three different voices: adult, older child, younger child.

9. Counting to 5





Sing-along with the "Five Little Skunks" song. Then, in the following activity, count the skunks as they appear in different sized groups, and click on the number above to show how many you've counted. At level 2, the skunks do not appear all together, but in two groups, this requires adding the two groups to find the correct total number in each case.

These activities not only provide instruction in beginning math, they allow the student to apply reading to help them learn something other than reading.

10. Number Order





Sing-along with the "One Lonely Bird" song. Then, in the following activity, click on the blocks in order from 1-10. At level 2, click on the blocks in order from 1-20.

11. More Number Recognition

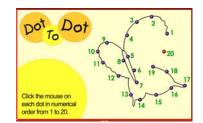




Sing-along with the "When I Was Young" song. Then, in the following activity, the child is asked to match the numbers 1-10 with the corresponding section of the picture, thereby coloring that part of the picture. At level 2, numbers 1-20 are to be colored in this way.

12. Counting to 10



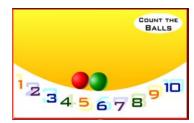


Sing-along with the "Counting to 10" song. Then, in the following activity, form a picture by clicking on the dots in order from 1-20. At level 2, the numbers are more crowded together.

LETTERS & NUMBERS Beginning Level Reading and Math (cont'd)

13. Counting to 10, 20, 30

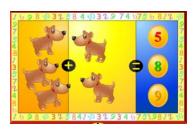




Sing-along with the "Counting from 1-20" song. Then, in the following activity, count the balls that appear on the screen by clicking on the corresponding number from 1-10, At level 2, count balls by clicking on number 11-20-30. Balls will be added to a set already counted or taken away from that set.

14. Addition



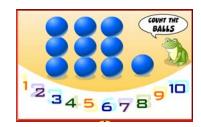




Sing-along with the "I Can Add" song. Then, in the following activity, add the animals or objects by clicking on the right number. At level 2, add numbers plus animals or objects.

15. Review - Counting, Adding, Subtracting





Click on the spinner to advance the frog around the board. When he lands, the child will be asked a counting or adding question, using objects and numbers. At level 2, subtraction questions will be included.

PHONICS 1a Vowel Sounds

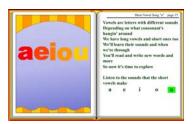
1. Short Vowels





Listen to the sounds of short and long vowels. Then hear words and see pictures of things words with short or long vowels stand for.

2. Short "a"









Sing-along with the "Short 'a' song", then listen to explanations of short vowels in general, and the short "a" in particular. Next, learn the vocabulary that is used in the "Cat on a Mat short a game", and then play this game which involves distinguishing between words with short and long "a" sounds.

Similar songs and vocabulary lists and activities are then presented in lessons 3-14 for the remaining four short vowels and the five long vowels, plus using "y" as a vowel.

READING RESEARCH BASE

National Reading Panel:

"The panel determined that effective reading instruction includes teaching children to break apart and manipulate the sounds in words (phonemic awareness), teaching them that these sounds are represented by letters of the alphabet which can then be blended together to form words (phonics), having them practice what they've learned by reading aloud with guidance and feedback (guided oral reading), and applying reading comprehension strategies to guide and improve reading comprehension...

Teach phonemic awareness explicitly. Although there are some children who have an implicit understanding of phonemic awareness, almost all children benefit greatly from explicit instruction. Phonemic awareness is a prerequisite for successful subsequent phonics instruction...

Vocabulary plays an important part in learning to read. As beginning readers, children use the words they have heard to make sense of the words they see in print. Consider, for example, what happens when a beginning reader comes to the word *dig* in a book. As she begins to figure out the sounds represented by the letters *d, i, g,* the reader recognizes that the sounds make up a very familiar word that she has heard and said many times.

California Department of Education:

"Initial phonics instruction is best conducted with a relatively small set of consonants and short vowels. These spelling-sound relationships should be developed progressively. By using this limited set of letters to build as many familiar words as possible, students can be convinced of the utility of phonics and shown that every letter matters. Most commonly, initial lessons should focus on short words that adhere to the basic left-to-right principle of sounding and blending, such as *fat* and *fit*.

Once children have learned to sound out such basic short-vowel patterns, lessons should be extended to include the most common other vowel spellings. Importantly, research demonstrates that for children who understand how the alphabetic principle works, it is relatively easy for them to add new letter-sound pairs to the working set."

PHONICS 1b Consonant Sounds

1. What Are Consonants?







Listen to an explanation of and see and hear the 21 consonants, plus an introduction to the four "tricky" consonants: C, G, X and Y.

2. Talking One Sound Consonants



The child will understand that the 21 consonants have only one sound and will be able to see how these sounds are used to sound out words.

3. Talking Multi-sound Letters



The child will understand there are 4 letters that make more than one sound, and that one fo these letters, "y", can make 3 sounds.

READING RESEARCH BASE

National Research Council:

"An alphabetic system poses a challenge to the beginning reader, because the units represented graphically by letters of the alphabet are referentially meaningless and phonologically abstract. For example, there are three sounds represented by three letters in the word "but," but each sound alone does not refer to anything, and only the middle sound can really be pronounced in isolation; when we try to say the first or last consonant of the word all by itself, we have to add a vowel to make it a pronounceable entity."

Marilyn J. Adams, "Beginning to Read: Thinking and Learning About Print", 1990:

"...deep and thorough knowledge of letters, spelling patterns, and words, and of the phonological translations of all three, are of inescapable importance to both skillful reading and its acquisition. By extension, instruction designed to develop children's sensitivity to spellings and their relations to pronunciations should be of paramount importance in the development of reading skills. This is, of course, precisely what is intended of good phonic instruction."

National Institute of Child Health and Human Development:

"Children recognize the same sounds in different words. Teacher: What sound is the same in *fix, fall,* and *fun?*

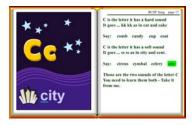
Children: The first sound. /f/. is the same."

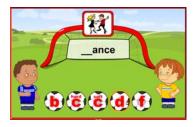
PHONICS 1b Consonant Sounds

4. Consonants B C D F





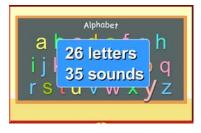




Sing-along with the "BCDF" song and hear and see examples of words beginning with these four consonants, including words beginning with both the hard "C" and the soft "C". Then play the bcdf Soccer Game: score goals by kicking the correct consonant to complete the word.

Similar activities, songs and games are used to teach words using the remaining 17 consonants in lessons 6, 8, 10 and 11.

5. Letter Sounds





A review of letters and sounds, including an explanation of how some sounds together make special sounds such as "oy".

READING RESEARCH BASE

California Department of Education:

"At the pre-kindergarten level, language arts skills and understandings are developed primarily through a variety of interactive activities, such as painting, drawing, building with blocks, singing, dancing, and dramatic play. Children are read picture books and simple storybooks every day at school, and parents are encouraged to read to their children at home. Activities provide playful yet explicit exposure to letter names and the alphabet. Examples of learning activities for this age group include:

- singing nursery rhymes and songs, including playful songs which substitute sounds in words and play with word parts;
- using language in play, such as playing house or pretending to write a grocery list;
- playing rhyming games (singing songs and reciting poems or other text);
- playing with magnetic letters or letter blocks; and having guided discussion of read-alouds and other shared experiences."

National Reading Panel:

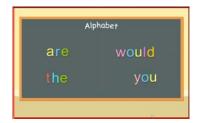
"Phonics instruction is a way of teaching reading that stresses learning how letters correspond to sounds and how to use this knowledge in reading and spelling. Phonics instruction can be provided systematically. Systematic phonics instruction occurs when children receive explicit, systematic instruction in a set of pre-specified associations between letters and sounds. Children are taught how to use these associations to read, typically in texts containing controlled vocabulary...

The Panel determined that systematic phonics instruction leads to significant positive benefits for students in kindergarten through sixth grade and for children with difficulty learning to read. Kindergartners who receive systematic beginning phonics instruction read better and spell better than other children, and first graders are better able to decode and spell words. The students also show significant improvement in their ability to understand what they read. Similarly, phonics instruction helps older children spell and decode text better, although their understanding does not necessarily improve.

PHONICS 1b Consonant Sounds

7. Phonics Rules and Making Sounds





How to put letters together to create words, how the great majority of words such as "hand" can be sounded out, and an introduction to the concept of sight words such as "are", "the", "would" and "you" which cannot be sounded out.

9. Phonics Blending and Spelling





More on sounding out words: sounding out the word faster and faster until the sounds blend into the complete word as you hear it spoken. Moving the cursor over a series of words.

A range of different activities, songs and games are used in lessons 10-20 to practice phonics blending and spelling.





READING RESEARCH BASE

A Synthesis of Research on Reading from the National Institute of Child Health and Human Development.

Show children exactly how to sound out words.

After children have learned two or three sound-spelling correspondences, begin teaching them how to blend the sounds into words. Show them how to move sequentially from left to right through spellings as they "sound out," or say the sound for each spelling. Practice blending words composed of only the sound-spelling relationships the children have learned every day.

Use connected, decodable text for children to practice the sound-spelling relationships they learn.

The findings of the NICHD research emphasize that children need extensive practice applying their knowledge of sound-spelling relationships to the task of reading as they are learning them. This integration of phonics and reading can only occur with the use of decodable text. Decodable text is composed of words that use the sound-spelling correspondences the children have learned to that point and a limited number of sight words that have been systematically taught. As the children learn more sound-spelling correspondences, the texts become more sophisticated in meaning, but initially they are very limited. Only decodable text provides children the opportunity to practice their new knowledge of sound-letter relationships in the context of connected reading.

California Department of Education:

Not all words are amenable to decoding. Whether irregular or not, those short words of extremely high frequency, such as *the*, *of*, *are*, and *you*, should be familiarized at the outset. Text cannot be written without these very high frequency words. Further, because so many of them are irregularly spelled, they should be recognized at a glance so that the student's attention is not diverted from decoding. A workable number of these words should be firmly established in kindergarten and early first grade by directing attention to them in big book and writing activities. As other irregular words are added along the way, it is worth noting their peculiarities as well as their phonetic regularities. This practice serves at once to make them more memorable and to protect the rest of the system from their waywardness.

Lessons 1-4 review phonics, long and short vowels, onesound and multi-sound consonants.

5. Consonant Blends: SN, SK, GL, FR



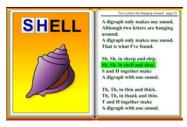
Practice in hearing how two consonants blend together at the beginning of a word and then in sounding out that word.

6. Consonant Blends: CL, PL, ST, DR



More consonant blends.

7. Digraphs





Sing-along with the "Two Letters Are Hanging Around" song to understand how two consonants can make one sound. Then drag the words that begin with two-consonant combinations that are digraphs into the jukebox and those whose two-consonants combinations are not digraphs into the trash can.

READING RESEARCH BASE

Center for the Improvement of Early Reading Achievement:

Phonics is the understanding that there is a predictable relationship between phonemes (the sounds of spoken language) and graphemes (the letters and spellings that represent those sounds in written language).

A phoneme is the smallest part of spoken language that makes a difference in the meaning of words. English has about 41 phonemes. A few words, such as a or oh, have only one phoneme. Most words, however, have more than one phoneme: The word if has two phonemes (/i/ /f/); check has three phonemes (/ch/ /e/ /k/), and stop has four phonemes (/s/ /t/ /o/ /p/). Sometimes one phoneme is represented by more than one letter.

A grapheme is the smallest part of written language that represents a phoneme in the spelling of a word. A grapheme may be just one letter, such as b, d, f, p, s; or several letters, such as ch, sh, th, -ck, ea, -igh.

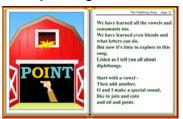
Phonemic awareness is the ability to hear, identify, and manipulate the individual sounds--phonemes--in spoken words.

National Reading Panel:

"Teach high frequency letter-sound relationships early. Successful curricula tend to involve students in activities in which they can experience immediate and ongoing success. A successful phonics program gets children reading as soon as possible by teaching the highest frequency relationships early and presenting students with stories that consist of words containing only the relationships that have already been taught.

Teach sound-blending explicitly. Students do not necessarily understand how to connect the phonemes in unfamiliar words. Students with explicit training outperform those who have had little or no training."

8. Diphthongs





Sing-along with the "Diphthong" song to understand how consonants can be put together in the middle of words as in the case of oi, oy, ew and au. make one sound. Then drag the correct diphthong into place to form the word.

9. Compound Words







Sing-along with the "Butterfly and the Bullfrog" song to see how you can take two different words and put them together to make one word that means something completely different. Then practice sounding out compound words. Finally, play the compound word game: drag the appropriate pair of words into the compound word machine to make a new compound word.

READING RESEARCH BASE

Center for the Improvement of Early Reading Achievement:

"Phonemic awareness instruction is most effective when children are taught to manipulate phonemes by using the letters of the alphabet.

Phonemic awareness instruction makes a stronger contribution to the improvement of reading and spelling when children are taught to use letters as they manipulate phonemes than when instruction is limited to phonemes alone. Teaching sounds along with the letters of the alphabet is important because it helps children to see how phonemic awareness relates to their reading and writing. Learning to blend phonemes with letters helps children read words. Learning to segment sounds with letters helps them spell words.

If children do not know letter names and shapes, they need to be taught them along with phonemic awareness.

Relating sounds to letters is, of course, the heart of phonics instruction, which is the subject of the next section of this booklet.

Phonemic awareness instruction is most effective when it focuses on only one or two types of phoneme manipulation, rather than several types.

Children who receive instruction that focuses on one or two types of phoneme manipulation make greater gains in reading and spelling than do children who are taught three or more types of manipulation.

One possible explanation for this is that children who are taught many different ways to manipulate phonemes may become confused about which type to apply. Another explanation is that teaching many types of manipulations does not leave enough time to teach any one type thoroughly. A third explanation is that instruction that includes several types of manipulations may result in teaching children more difficult manipulations before they acquire skill in the easier ones...

Using word parts: A second-grade teacher wants to teach her students how to use the base word play as a way to help them think about the meanings of new words they will encounter in reading. To begin, she has students brainstorm all the words or phrases they can think of that are related to play. The teacher records their suggestions: player, playful, playpen, ballplayer, and playing field. Then she has the class discuss the meaning of each of their proposed words and how it relates to play."

10. Rhyming Words





Sing-along with the "Rhyming Word Rule" song to see how you can take two different words and put them together to make one word that means something completely different. Then click on the words in the picture that rhyme to color in the clown.

11. Antonyms





Sing-along with the "Antonym Rhyming Game" song to see that most words have an opposite, which is a completely different word with a completely different meaning. Then click on a gopher hole to try to find the antonym to the match the word the gopher gives you.

READING RESEARCH BASE

National Research Council:

"Research with preschoolers has demonstrated that (a) adult-child shared book reading that stimulates verbal interaction can enhance language (especially vocabulary) development and knowledge about concepts of print, and (b) activities that direct young children's attention to the sound structure within spoken words (e.g., play with songs and poems that emphasize rhyming, jokes, and games that depend on switching sounds within words), and to the relations between print and speech can facilitate learning to read. These findings are buttressed by others showing that knowledge of word meanings, an understanding that print conveys meaning, phonological awareness, and some understanding of how printed letters code the sounds of language contribute directly to successful reading...

For most children, an awareness of the phonological structure of speech generally develops gradually over the preschool years. Among the first signs of awareness that spoken words contain smaller components are monitoring and correcting speech errors and "playing" with sounds (e.g., "pancakes, cancakes, canpakes"), both of which even 2- to 3-year-olds have been observed to do occasionally in naturalistic conversational settings. Appreciating rhymes (for instance, that *light* rhymes with *kite*) has also been noted in young preschoolers.

The entry to phonemic awareness typically begins with an appreciation of alliteration, for instance, that *boy* and *butterfly* begin with /b/. Even so, many children initially find it difficult to separate the component phonemes of a complex onset, reporting for example that the first sound of *play* is /pl/ rather than /p/ or failing to represent both sounds of such initial blends in their independent spelling...

True phonemic awareness extends beyond an appreciation of rhyme or alliteration, as it corresponds to the insight that every word can be conceived of as a sequence of phonemes. Children with phonemic awareness are able to discern that *camp* and *soap* end with the same sound, that *blood* and *brown* begin with the same sound, or, more advanced still, that removing the /m/ from *smell* leaves *sell*."

12. Synonyms





Sing-along with the "Similar Synonyms" song to understand that some words are spelled differently, sound differently, but have the same meaning. Then click on the two words on the sea creatures that are the same.

13. Homonyms





Sing-along with the "Blue and Blew" song to understand that some words sound alike, but are spelled differently and have different meanings. Then on the two words in the sentence that are homonyms.

14. Spelling



Spell the words as quickly as you can. The faster you spell, the faster your skateboard goes.

READING RESEARCH BASE

California Department of Education:

"Research has shown repeatedly that phonemic awareness is a powerful predictor of success in learning to read. Research findings include the following:

- Phonemic awareness is more highly related to learning to read than tests of general intelligence, reading readiness, and listening comprehension (Stanovich, 1986, 1993).
- The lack of phonemic awareness is the most powerful determinant of the likelihood of failure to learn to read because of its importance in learning the English alphabetic system or in learning how print represents spoken words. If children cannot hear and manipulate the sounds in spoken words, they have an extremely difficult time learning how to map those sounds to letters and letter patterns&151;the essence of decoding (Adams, 1990).
- Phonemic awareness is the most important core and causal factor separating normal and disabled readers (Share and Stanovich, 1995).
- Phonemic awareness is equally important in learning to spell. (Ehri, 1992; Treiman, 1993).

As children become proficient in spoken language, they learn to attend to its meaning rather than its sounds. For that reason, acquiring phonemic awareness is difficult for many. However, research demonstrates that phonemic awareness can be fostered through language activities that encourage active exploration and manipulation of sounds and that doing so significantly accelerates both reading and writing growth for all children. Research also indicates that all young readers benefit from explicit assistance with phonemic awareness; at least one-fifth of them depend critically on it."

National Research Council:

"Because of the physical and psychological nature of phonemes as well as the nature of human attention, few children acquire phonemic awareness spontaneously (Adams et al., 1998). Rather, attaining phonemic awareness is difficult for most children and far more difficult for some than others. Still, because phonemes are the units of sound that are represented by the letters of an alphabet, an awareness of phonemes is key to understanding the logic of the alphabetic principle."

Use in the Classroom

The CD-ROMs in the Help Me 2 Learn *Phonics Super Star Reading System*, along with their accompanying user guides and lesson plans, are designed to be used as a supplement to the existing classroom reading program.

The CD-ROMs can be used as follows:

- 1) By the teacher as a presentation to the entire class displayed on a single computer. Guided by the lesson plans, the teacher can control the CD in leading the class through discussion of the lesson concepts, relating this to any existing class materials.
- When leading the class through an activity, the teacher can either let the class as a whole vote on the correct answer or have an individual student respond to the question.
- The teacher can also copy the black-line masters or print out pages either as extra work or as a test of the students' comprehension of the lesson.
- 2) By the students working at their own computers, either in a computer lab or in the classroom. The CD-ROMs are designed for self-paced study, notably in the "Learn the Words" segments. The Super Star Tracking System (see below) allows the teacher to see which activities each student has completed and mastered, thereby enabling the teacher to help individual students with any specific activities that may be causing them a problem.

For most effective use of the material, we recommend that the teacher follow the lesson plans in presenting individual lessons to the class, and then let the students work on the CD-ROMs on their own, with the teacher assisting them as and when necessary.

When it is not feasible to let the students work through the CD-ROMs in the lab or classroom, we suggest that the teacher recommend the CD-ROMs to the parents or for use in after-school programs.

Effectiveness

The Phonics Super Star Reading System can certainly be used very effectively as supplemental material in the classroom. However, its use by individual students can be equally effective, since the students' progress and detailed results are readily tracked within the program.

We call this built-in student tracking our "Super Star System". It has two components:

1) Super Star Buttons. These are located in the center at the bottom of the program interface. They consist of a correct answer box, a wrong answer box and the Super Star. The Super Star button displays a purple "no star" state, a Silver Star or a Gold Star. Clicking on the Super Star button takes you to the Super Star Page.

Effectiveness (cont'd)

2) Super Star Page. This displays all 25 Super Stars and indicates which stars the student has earned in each of the songs or activities.

The "Super Star System is at once deceptively simple and highly effective. As the student plays an instructional song, he or she will earn a Silver Star at about 75% of the way through the song. By listening to the song all the way through, the student earns a Gold Star.

These songs contain much of the instructional material of the program. As the California Department of Education report on reading states, for very young children "language arts skills and understandings are developed primarily through a variety of interactive activities, such as painting, drawing, building with blocks, singing, dancing, and dramatic play."

The CD-ROMs contain many other instructional components besides the songs. Students can also earn Gold Stars by watching these presentations or by clicking on all of the letters.

Children may earn further Silver and Gold Stars on the CD-ROMs through a comprehensive array of interactions and games, which are designed to reinforce and test their comprehension and mastery of the letters, sounds, words and concepts that were taught in the songs. As stated earlier, the effectiveness of this "multi-mode" approach to teaching early readers has been extensively documented by the National Research Council: "play with songs and poems that emphasize rhyming, jokes, and games that depend on switching sounds within words... can facilitate learning to read"

All of the various activities and games in the CD-ROMs are based on the rigorously field-tested principles of instructional design, which are underpinned by over 40 years' research in behavioral and cognitive psychology, human factors engineering and programmed learning.

The instructional design core of the CD-ROMs consists of continual motivational feedback and positive reinforcement – both intrinsic and extrinsic – every step of the student's journey through the material.

The Super Star System

The "Super Star System" illustrates this reinforcer-based "performance management" approach with particular clarity. When a student completes an activity or game error-free, he or she immediately earns a Gold Star. However, even if the students does make a mistake, the act of completing the activity or game automatically earns him or her a Silver Star.

Furthermore, the activities and games are designed in such a way that a student cannot keep making the same mistakes.

Once a student completes an activity, he or she can repeat the activity as many times as desired. If the student earned a Gold Star on his or her first run through the activity, the student cannot lose this Gold Star by repeating the activity, even if he or she makes a mistake in these subsequent iterations of the activity. That is to say, there is no penalty – or "punishment" to use operant conditioning terminology – for repeating an activity. Instead, the child experiences nothing but positive reinforcement throughout the learning exercise.

This schedule of positive reinforcers is highly motivating, with a gratifyingly cumulative effect. Once students have garnered their first few Silver or Gold Stars, they will want to earn more and more stars, and will not be satisfied until they have earned a Gold Star for every single one of the songs, presentations, activities or games on the CD-ROMs. In other words, they will not rest until they have worked through all the material without making a single error.

Accountability and Student Tracking

Once a student has completed the entire CD with a Gold Star on every "Super Star" page, he or she can print out a personalized Certificate of Completion, providing proof of that student's mastery of all the letters, sounds, words and concepts taught in the CD.

Since these "Super Star" pages automatically pinpoint those areas of the content where a child is only

performing to the "Silver Star" level, they constitute a systematic feedback and tracking system for the teacher or parent who can see immediately where the child is having difficulty.

In this way, both accountability and student tracking are built into the CD-ROMs themselves.

