Welcome Families!

Overview of the Science of Learning to Read
How to Support Young Readers at Home
Question and Answer Session

Amy Fleisher, K-2 Reading Specialist – aefleisher@seattleschools.org
Julie Bedell, 2nd Grade Teacher - jlbedell@seattleschools.org
Why do we read?

- relaxation
- empathize
- escape
- connect
- learn
- participate
- communicate
- work
Our brains are wired to walk.
Our brains are wired to talk.

Our brains are not wired to read.

“We human beings were never born to read; we invented reading and then had to teach it to every new generation. Each new reader comes to reading with a 'fresh' brain - one that is programmed to speak, see, and think, but not to read.” ~ Maryanne Wolf
The Science of Reading

We now have a deep scientific understanding of exactly how the brain learns to read.
“Reading is a highly complex task that involves many interconnected and codependent linguistic processes that draw upon a variety of separate skills.”

Jan Hasbrouck and Deb Glaser
Assessing Reading Fluency
Scarborough's Reading Rope

Language Comprehension

Word Recognition

Skilled Reader
Scarborough’s Reading Rope

- Background Knowledge
  - Vocabulary
  - Language Structures
  - Verbal Reasoning
  - Literacy Knowledge

- Skilled Reader

- Word Recognition
Language Comprehension At Home

**Read from a wide variety of text** Biographies, nonfiction, classics, poetry, science fiction, historical fiction, and more!

**Talk about what you read** Ask questions about characters, setting, plot, characters' traits and behavior. For nonfiction, ask what they’ve learned.

**Introduce precise vocabulary** Talk with your children about a range of subjects using precise vocabulary. “Really big” might become enormous, vast, massive, or substantial.

**Play with language** Play around with riddles, jokes, and puns. Introduce them to idioms like “It’s raining cats and dogs!”
Scarborough’s Reading Rope

Language Comprehension

Phonological Awareness
Decoding
Sight Recognition

Skilled Reader
Phonological awareness is the ability to identify and manipulate sounds in spoken language.

Example: Say “bookcase.” Now, say “bookcase” but don’t say “case.” What’s left? “Book.”

Examples: rhyming, hearing word parts (syllables), identifying beginning sounds, blending sounds.

Example: How many syllables in “fantastic?” 3.

Phonemes are the smallest sounds in spoken language.

Example: The word “cat” has 3 phonemes: /k/ /æ/ /t/. The word “right” also has 3 phonemes: /r/ /i/ /t/.

Advanced Phonemic Awareness is the ability to effortlessly identify and transform the smallest sounds in the spoken language.

Example: Say “tree.” Now say “tree” but don’t say /r/. What do you have? “Tee.”

Is done without looking at words on a page! Does not involve print. Can do it with your eyes closed.
The phonemes (individual sounds) in a word does not always correlate with the number of letters in the word.

<table>
<thead>
<tr>
<th>Word</th>
<th>Letters</th>
<th>Phonemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>time</td>
<td>3</td>
<td>t / ī / m</td>
</tr>
<tr>
<td>loose</td>
<td>3</td>
<td>l / ü / s</td>
</tr>
<tr>
<td>new</td>
<td>2</td>
<td>n / ü</td>
</tr>
<tr>
<td>guess</td>
<td>3</td>
<td>g / ĕ / s</td>
</tr>
<tr>
<td>best</td>
<td>4</td>
<td>b / ĕ / s / t</td>
</tr>
<tr>
<td>though</td>
<td>2</td>
<td>th / ŏ</td>
</tr>
<tr>
<td>box</td>
<td>4</td>
<td>b / ā / k / s</td>
</tr>
</tbody>
</table>
Phonological Awareness

Phonological Awareness is like the bottom piece of Velcro. It must be strong, or the top piece of Velcro will have nothing to stick to. Solid phonological awareness is essential to developing other reading skills.

word reading, fluency, and ultimately comprehension

phonological awareness
Phonological Awareness At Home

**Talk Talk Talk** The more language your child hears, the better! Hearing spoken words is essential to developing phonological awareness.

**Rhyme All the Time** Play games listening for words that rhyme: Do pan and fan rhyme? Yes! Do hat and rock rhyme? No!

**Eye Spy** This works with almost any phonological skill. “I spy something that begins with the /s/ sound...” or “I spy something that rhymes with boat…”

**Sing Songs** There is a reason Old MacDonald and Mary Had a Little Lamb have stayed on the Top 10 charts for so long.

**Read Books!**
These books are available at the Kearns Library!
Scarborough’s Reading Rope

Language Comprehension

Phonological Awareness
Decoding
Sight Recognition

Skilled Reader
Decoding

Written language is a sound-symbol alphabetic CODE

The code: letters represent spoken sounds

Young readers are learning to BREAK the CODE

Phonics instruction is teaching the code

Must do it with your eyes open
The alphabet is the key to the code.

A chair remains a chair regardless of how it is visually represented.

Letters are symbols that must be read from left to right to maintain their meaning.
Decoding

Breaking the code includes learning to blend the sound-symbols together into words.

Children begin by carefully sounding through simple words like “mat” and “hop”.

The code gradually becomes more and more complex in sound-spelling patterns.

Strong phonological awareness is needed to be skilled at decoding.
English is not crazy. It is just complex.

English has a “deep orthography”

• There are many ways to spell the same sound
• Some letters have more than one sound

70+ Spelling patterns (phonograms)

44 distinct sounds (phonemes)

www.theschoolrun.com
How many ways can you spell the long “a” sound?
Decoding At Home

**Have them read aloud regularly** Practice is essential. Even a few minutes a day will make a difference.

**Break the code** Help them by sounding through words using the sounds they know. When they are unsure, help them identify the correct sounds.

**Provide feedback** When they stumble, direct them back to the sounds in the word. Perfect practice is what builds skills.

**Practice patience** For many early readers this stage is heavy lifting and can feel “boring.” They might not be ready to profess their love of books just yet!

**Avoid guessing or using pictures to identify words** Accuracy reigns supreme. Discourage guessing or using picture clues to identify words.
Sight Recognition: when a word is instantly recognizable without any conscious effort. A child instantly recognizes a parent on the playground. They do not have to stop to think, “Brown hair: check. Blue eyes: check. Freckle on left cheek: check. Yep, that’s my mom.” They instantly know their mom without a thought.

Sight Words: words stored in the brain that can be effortlessly retrieved.

Sight Words **LEAP** off the page.

Sight Words are **NOT** visually memorized. We know from scientific research that visually memorizing words does not play a part in skilled reading.
Read these words as quickly as you can.

RED GREEN YELLOW BLUE ORANGE GREEN RED GREEN PURPLE BLUE BLACK ORANGE
Now...
Say the font color as quickly as you can.
Do not read the word.
When you read the words on the first slide, you likely read them quickly and without effort.

When you said the font color on the second slide, it likely took you longer. You were having to suppress your brain’s automatic recognition of the WORDS so you could say the font color.

Your brain recognizes the WORD “red” faster than it recognizes the actual color red. If your brain is shown a picture of chair and the word “chair,” it will recognize the word faster than the image.

So, how do we build Sight Recognition?

**Orthographic Mapping** Storing words in the brain for future automatic recall.
Orthographic Mapping
Mapping words for automatic recall

For automatic word reading, the brains must map the exact sequence of a word’s printed letters to the word’s corresponding pronunciation.

Example: The exact order of the letters in the word "boat" must attach to the exact order of sounds in the word "boat."
Word mapping requires advanced phonemic skills and advanced decoding skills.

As children begin mapping words, they begin to generalize. If they can read and spell boat, they can also read and spell coat, moat, throat, and float.

Mapping words requires exposure to words. Some children require only a few exposures to a word before it is mapped. Others need exponentially more exposures for it to be mapped.

Words with unexpected pronunciations, like “was” or “said” require more attention to their spelling/sound patterns before they are mapped. They are not visually memorized.

Some brains are very efficient at mapping words. Other brains need time and practice for words to become automatic. But all brains learn to read the same way.
“Mapping Words” At Home

Recognize spelling patterns (phonograms) Support mapping by pointing out spelling patterns in words. “In this word, “oa” is making the long o sound.”

The girl stood in the boat and said, “Ahoy!”

Acknowledge unexpected sounds Help them with pronunciation when a word makes an unexpected sound. For example, if sounded out, one might expect the word “said” to sound like “sade.” But we pronounce it “sed.” If your child reads it as “sade,” you can ask, “Does ‘sade’ sound like a word you know?” Then draw their attention to the unexpected sound, connecting it to the “ai” within the word.

Use a tracker To keep their attention on the words, it is helpful to use a bookmark or their finger as they read. They need to pay attention to all letters in the word and not guess.
Supporting Young Readers at Home

- Language Comprehension
- Phonological Awareness
- Decoding “Breaking the Code”
- Sight Recognition “Mapping Words”
Most importantly, have fun! Read and listen to lots of books. They are never too old for a good read aloud!

Encourage conversation Discuss current events, ask questions, introduce new words and concepts. Use precise words and introduce new vocabulary.

Draw attention to spoken language Point out words that rhyme, words that sound the same but mean different things, and words that have unexpected pronunciations.

Build in time for practice Carve out even just a few minutes a day to have your child practice their skills with you. It doesn’t have to be much! This is an essential component to becoming a skilled reader.

Provide feedback Nurture developing skills by providing guidance as your child reads. Help them use the sounds they know to sound through words and provide help with sounds they have yet to learn. Help them break the code!

Partner with your child’s teacher Your child’s classroom teacher is your first stop when it comes to your child’s reading development.
General Resources – Links in Orange

Printable Alphabet Cards
Refrigerator Magnets
Spelling Patterns for Long Vowels
Tips for Reading Together

Games Zingo Word Building and Bananagrams

Go Hairy CVC Word Videos These short videos on YouTube, created by a reading curriculum in the UK, are great!

Phonics with Phonograms This app, from Logic of English, is a review letter-sound correspondence.

Writing Wizard This app, available in multiple formats, helps kids practice letter sounds and letter writing.

Letter School An app with more letter recognition and handwriting practice.

Starfall They have a selection of free Apps. For early readers, stick with the phonics series.

BobBooks These are the classic (and somewhat plain) early books that are great for early blending practice.

Bright Owl Books You will need to read these together, but they do offer more easily decodable words than many of the mass-market “early readers.”

Fly Leaf Publishing You can purchase physical books, but they have a wonderful selection of online books that are great for beginning readers.
Resources for Language Comprehension

Audiobooks are a wonderful way to immerse them in language and adventure. At our house, we call it "ear reading." And yes, if you've listened to a book, you can say, "Oh, I read that and loved it!" Audible is offering many free titles, without requiring an app or a login. Free Audible Stories

There are also amazing Podcasts for kids! They offer a chance to build background knowledge and vocabulary needed for future reading comprehension, all while being entertained:

**Wow in the World!** This series, hosted by NPR veterans Guy Raz and Mindy Thomas, covers a range of science and technology topics. It is an entertaining and educating listen for the whole family!

**Brains On!** When they were younger, my kids listened to every episode of this Minnesota Public Radio science podcast. Every episode features real kids asking questions and experts offering answers. Great fun!

**But Why?** Satisfy childhood curiosities with this Vermont Public Radio podcast answering big questions posed by little kids.

**Forever Ago** Again from the folks at American Public Media, this podcast is a family-friendly dive into history, exploring the origin of just one thing, from video games to sandwiches. There is only one season, but it is still worth a listen.

**Smash Boom Best** Brought to you by the folks at Brains On!, this debate podcast is for kids and grown-ups alike! Ever asked yourself which is better, cats or dogs? Tacos or burritos? Tunnels or bridges? Then this podcast is for you and your kids!