KNOWLEDGE OF THE READING PROCESS

COMPETENCY 1
KNOWLEDGE OF THE READING PROCESS

Word analysis (also called phonics or decoding) is the process readers use to figure out unfamiliar words based on written patterns. Word recognition is the process of automatically determining the pronunciation and, to some degree, the meaning of an unknown word. Fluent readers recognize most written words easily and correctly, without consciously decoding or breaking them down. The elements of literacy described below are skills all readers need for word recognition.

Phonological Awareness

PHONOLOGICAL AWARENESS is the ability of the reader to recognize the sound of spoken language. This recognition includes how sounds can be blended together, segmented (divided up), and manipulated (switched around). This awareness then leads to phonics, a method for teaching children to read. It helps them “sound out” words.

Development of phonological skills may begin during the pre-K years. Indeed, by the age of five, a child who has been exposed to rhyme can recognize a rhyme. Such a child can demonstrate phonological awareness by filling in the missing rhyming word in a familiar rhyme or rhymed picture book.

Children learn phonological awareness when they learn the sounds made by particular letters and various combinations of letters, and how to recognize individual sounds in words.

Phonological awareness skills include:

- Rhyming and syllabification
- Blending sounds into words (such as pic-tur-bo-k)
- Identifying the beginning or starting sounds of words and the ending or closing sounds of words
- Breaking words down into sounds, also called “segmenting” words
• Recognizing other smaller words in a larger word by removing starting sounds, such as hear to ear

Instructional methods to teach phonological awareness may include auditory games and drills, during which students recognize and manipulate the sounds of words, separate or segment the sounds of words, take out sounds, blend sounds, add in new sounds, or take apart sounds to recombine them in new ways.

**Phonemic Awareness**

**Phonemic Awareness** is the idea that words are composed of sounds. To be phonemically aware means that the reader and listener can recognize and manipulate specific sounds in spoken words. Phonemic awareness is concerned with sounds in spoken words. The majority of phonemic awareness tasks, activities, and exercises are oral.

Theorist Marilyn Jager Adams, who researches early reading, has outlined five basic types of phonemic awareness tasks:

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<thead>
<tr>
<th>PHONEMIC AWARENESS TASKS</th>
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<tr>
<td>The ability to hear rhymes and alliteration</td>
<td>The children listen to a poem, rhyming picture book, or song and identify the rhyming words they hear, which the teacher might then record or list on an experiential chart</td>
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<td>The ability to do oddity tasks (recognize the member of a set that is different, or odd, among the group)</td>
<td>The children look at pictures of a blade of grass, a garden, and a rose and identify which starts with a different sound</td>
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<tr>
<td>The ability to orally blend words and split syllables</td>
<td>The children say the first sound of a word and then the rest of the word and put it together as a single word</td>
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<tr>
<td>The ability to orally segment words</td>
<td>This is the ability to count sounds; the children are asked as a group to count the sounds in the word hamburger</td>
</tr>
<tr>
<td>The ability to do phonics manipulation tasks</td>
<td>Children replace the r sound in the word rose with a p sound</td>
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Since the ability to distinguish between individual sounds, or phonemes, within words is a prerequisite to the association of sounds with letters and manipulating sounds to blend words—a fancy way of saying “reading”—the teaching of phonemic awareness is crucial to emergent literacy (early childhood K-2 reading instruction). Children need a strong background in phonemic awareness in order for phonics instruction (sound–spelling relationship in printed materials) to be effective.
Instructional methods that may be effective for teaching phonemic awareness include:

- Clapping syllables in words
- Distinguishing between a word and a sound
- Using visual cues and movements to help children understand when the speaker goes from one sound to another
- Incorporating oral segmentation activities that focus on easily distinguished syllables rather than sounds
- Singing familiar songs (e.g., “Happy Birthday,” “Knick-Knack, Paddy-Whack”) and replacing key words in them with words that have a different ending or middle sound (oral segmentation)
- Dealing children a deck of picture cards and having them sound out the words for the pictures on their cards, or calling for a picture by asking for its first and second sound

**Alphabetic Principle**

The alphabetic principle is sometimes called graphophonemic awareness. This multisyllabic technical reading foundation term describes the understanding that written words are composed of patterns of letters that represent the sounds of spoken words.

The alphabetic principle has two parts:

1. An understanding that words are made up of letters and that each letter has a specific sound.

2. The correspondence between sounds and letters leads to phonological reading. This consists of reading regular and irregular words and doing advanced analysis of words.

Since the English language depends on the alphabet, being able to recognize and sound out letters is the first step for beginning readers. Relying simply on memorization for recognition of words is not a feasible way for children to learn to recognize words. Therefore, decoding is essential. The most important goal for beginning reading teachers is to teach students to decode text so they can read fluently and with understanding.

There are four basic features of the alphabetic principle:

1. Students need to be able to take spoken words apart and blend different sounds together to make new words
2. Students need to apply letter sounds to all of their reading

3. Teachers need to use a systematic, effective program to teach children to read

4. The teaching of the alphabetic principle usually begins in kindergarten

Some children already know the letters and sounds before they come to school. Others may catch on to this quickly, and still others need one-on-one instruction in order to learn to read.

Critical skills that students need to learn are:

• Letter–sound correspondence
• How to sound out words
• How to decode text to make meaning

When a child decodes a word, the child makes a connection between it and a word she knows. This is very difficult for the child learning English at the same time she is learning to read, because that word may not be in her vocabulary. This makes it hard for the child to make a connection between text and speech, which is a vital step in learning to read.

**Morphology**

MORPHOLOGY is the study of word structure. When readers develop morphemic skills, they are developing an understanding of patterns they see in words. For example, English speakers realize that cat, cats, and caterpillar share some similarities in structure. This understanding helps readers recognize words more quickly and easily since each word doesn’t need individual decoding.

**Syntax**

SYNTAX refers to the rules or patterned relationships that correctly create phrases and sentences from words. When readers develop an understanding of syntax, they begin to understand the structure of how sentences are built, and eventually the beginning of grammar.

“I am going to the movies.”

This statement is syntactically and grammatically correct.

“They’re going to the movies.”

This statement is syntactically correct since all the words are in their correct place, but the use of the word *They* rather than *I* makes it grammatically incorrect.
Semantics

**Semantics** refers to the meaning expressed when words are arranged in a specific way. This is where connotation and denotation of words play a role in reading.

All of these skill sets are important for developing effective word recognition skills, which help emerging readers develop fluency.

Prompts that teachers can use to alert children to semantic cues include:

- **You said __________ (the child’s statement and incorrect attempt).** Does that make sense to you?
- **If someone said __________ (repeat the child’s attempt), would you know what he or she meant?**
- **You said __________ (child’s incorrect attempt).** Would you write that?

Children need to use meaning to predict what the text says so the relevant information can prompt the correct words to surface as they identify the words.

If children come to a word they can’t immediately recognize, they need to try to figure it out using their past reading experiences, background knowledge, and what they can deduce from the text itself.

Pragmatics

**Pragmatics** concerns the difference between the writer’s meaning and the literal meaning of the sentence based on social context. When someone is competent in pragmatics, he or she is able to understand what the writer is trying to convey.

For example, a child sitting beside her mother at a fancy restaurant after her great-grandmother’s funeral looks over to the table next to them. She sees a very elderly woman eating her dessert. “Mom?” she asks, patiently waiting for a response. When her mother addresses her, she states loudly, “That woman is old like Grandma. Is she going to die soon too?” Embarrassed, the mother hushes her child. However, this is a simple example of immature pragmatics. The child has the vocabulary, the patience to wait her turn, and some knowledge of conversational rules; however, she is not aware that certain topics are socially inappropriate and therefore does not adapt her language to the situation.
In the late 1960s and the 1970s, many reading specialists, most prominently Fries (1962), believed that successful decoding resulted in reading comprehension. This meant that if children could sound out the words, they would then automatically be able to comprehend the words. Many teachers of reading and many reading texts still subscribe to this theory after more than thirty years.

To **DECODE** means to change communication signals into messages. Reading comprehension requires that the reader learn the code in which a message is written and be able to decode it to get the message.

To **ENCODE** means to change a message into symbols. Some examples of encoding include changing oral language into writing (spelling), putting an idea into words, or representing a mathematical idea using appropriate mathematical symbols.

Although effective reading comprehension requires identifying words automatically (Adams, 1990; Perfetti, 1985), children do not have to be able to identify every single word or know the exact meaning of every word in a text to understand the text. Indeed, Nagy (1988) says that children can read a work with a high level of comprehension even if they do not fully know as many as 15 percent of the words in a given text.

Children develop the ability to decode and recognize words automatically. They can then extend their ability to decode to multisyllabic words.

**Procedure for letter–sound investigations**
The following procedure for letter-sound investigations helps to support beginning decoding.

1. Focus on a particular letter or letters that you want the child to investigate. It is good to choose one from a shared text with which the children are familiar. Make certain that the teacher’s directions to the children are clear and either ask them to look for a specific letter or listen for sounds.

2. Begin a list of words that meet the task given to the children. Use chart paper to list the words the children identify. This list can be continued into the next week as long as the children’s focus stays on the list. This can be easily done by challenging the children to identify a specific number of letters or sounds and “daring” them as a class team to go beyond those words or sounds.

3. Continue to add to the list. At the beginning of the day, have the children focus on the goal of adding their own words to the list. Give each child an
adhesive note (sticky-pad sheet) on which they can write down the words they find. They can then they can attach their newly found words with their names on them to the chart. This provides the children with a sense of ownership and pride in their letter-sounding abilities. During shared reading, discuss the children’s proposed additions and have the group decide if they meet the criteria. If all the children agree that they do meet the criteria, include the words on the chart.

4. Do a word sort from all the words generated and have the children put the words into categories that demonstrate similarities and differences. They can be prompted to see if the letter appeared at the beginning of the word or in the middle of the word. They might also be prompted to see that one sound could have two different letter representations. The children can then “box” the word differences and similarities by using colors established in a chart key.

5. Finally, before the children go off to read, ask them to look for new words in the texts, which they can now recognize because of the letter-sound relationships on their chart. During shared reading, make certain that they have time to share the words they were able to decode.

When students practice fluency, they practice reading connected pieces of text. In other words, instead of looking at a word as just a word, they might read a sentence straight through. Students who are not fluent in reading would sound each letter or word out slowly and pay more attention to the phonics of each word. A fluent reader, on the other hand, might read a sentence out loud using appropriate intonation. The best way to test for fluency, in fact, is to have a student read something out loud, preferably a few sentences in a row. Fluency is considered to be a good predictor of comprehension. A child who is focusing too much on sounding out each word will not be paying attention to the meaning.

Accuracy
One way to evaluate reading fluency is to look at student accuracy, and one way to do this is to keep running records of students during oral reading. Calculating the reading level lets you know if a book is at a level the child can read independently or comfortably with guidance or if the book is at too high a level, which will frustrate the child.
As part of the informal assessment of primary grade reading, it is important to record the child’s word insertions, omissions, requests for help, and attempts to get the word. In informal assessment, the rate of accuracy can be estimated from the ratio of errors to total words read.

Results of running record informal assessment can be used for teaching based on accuracy. If a child reads from 95-100 percent correctly, the child is ready for independent reading. If a child reads from 92-97 percent correctly, the child is ready for guided reading. If a child reads below 92 percent correctly, the child needs a read-aloud or shared reading activity.

**Automaticity**

Fluency in reading depends on automatic word identification, which assists the student in achieving comprehension of the material. Even slight difficulties in word identification can significantly increase the time it takes a student to read material, may require rereading parts or passages of the material, and reduces the level of comprehension. A student who experiences reading as a constant struggle will avoid reading whenever possible and consider it a negative experience. The ability to read for comprehension, and learning in general, will suffer if all aspects of reading fluency are not presented to the student as skills that can be acquired with the appropriate effort.

Automatic reading involves developing strong orthographic representations, which allows fast and accurate identification of whole words made up of specific letter patterns. Most young students move easily from using alphabetic strategies to using orthographic representations, which can be accessed automatically. Initially, word identification is based on the application of phonic word-accessibility strategies (letter-sound associations). These strategies are in turn based on the development of phonemic awareness, which is necessary to learn how to relate speech to print.

**Six syllable types**

One of the most useful devices for developing automaticity in young students is through the visual pattern provided in the six syllable types.

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<tr>
<th>EXAMPLES OF THE SIX SYLLABLE TYPES</th>
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<tr>
<td>Not (Closed)</td>
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<td>No (Open)</td>
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Continued on next page
Note (Silent “E”) | Ends in vowel consonant “e”—vowel makes its _long_ sound
---|---
Nail (Vowel Combination) | Two vowels together make the sound
Bird (“R” Controlled) | Contains a vowel plus 4—vowel sound is changed
Table (Consonant “L”-“E”) | Applied at the end of a word

These orthographic (letter) patterns signal vowel pronunciation to the reader. Students must become able to apply their knowledge of these patterns to recognize the syllable types and to see these patterns automatically and ultimately in order to read words as wholes. The move from decoding letter symbols to identify recognizable terms to automatic word recognition is a substantial move toward fluency.

A significant tool for helping students move through this phase was developed by Anna Gillingham, who incorporated an activity using phonetic word cards into the Orton-Gillingham lesson plan (Gillingham and Stillman, 1997). This activity involves having students practice reading words (and some nonwords) on cards as wholes, beginning with simple syllables and moving systematically through the syllable types to complex syllables and two-syllable words. The words are divided into groups that correspond to the specific sequence of skills being taught.

The student’s development of the elements necessary for automaticity continually moves through stages. Another important stage involves the automatic recognition of single graphemes as a critical first step to the development of the letter patterns that make up words or word parts.

English orthography is made up of four basic word types:

1. Regular, for reading and spelling (e.g., cat, print)
2. Regular, for reading but not for spelling (e.g., float, brain—could be spelled *flote* or *brane*, respectively)
3. Rule based (e.g., canning—doubling rule, faking—drop e rule)
4. Irregular (e.g., beauty)

Students must be taught to recognize all four types of words automatically in order to be effective readers. Repeated practice in pattern recognition is often necessary. Practice techniques can include speed drills in which students read lists of isolated words with contrasting vowel sounds that are signaled by the syllable type. One way to do this is to randomly arrange several closed syllable and vowel-consonant e words containing the vowel _a_ on pages containing about twelve lines and
have the child read for one minute. Individual goals are established and charts are kept of the number of words read correctly in successive sessions. The same word lists are repeated in sessions until the goal has been achieved for several succeeding sessions. When selecting words for these lists, the use of high-frequency words in a syllable category increases the likelihood of generalization to text reading.

**Rate**

A student whose reading rate is slow, or halting and inconsistent, exhibits a lack of reading fluency. According to an article by Mastropieri, Leinart, and Scruggs (1999), some students have developed accurate word pronunciation skills but read at a slow rate. They have not moved to the phase where decoding is automatic, and their limited fluency may affect performance in the following ways:

- They read less text than their peers and have less time to remember, review, or comprehend the text
- They expend more cognitive energy than their peers trying to identify individual words
- They may be less able to retain text in their memories and less likely to integrate those segments with other parts of the text

The simplest means of determining a student’s reading rate is to have the student read aloud from a prescribed passage that is at the appropriate reading level for age and grade and contains a specified number of words. The passage should not be too familiar for the student (some will try to memorize or “work out” difficult bits ahead of time), and should not contain more words than can be read comfortably and accurately by a normal reader in one or two minutes.

Count only the words correctly pronounced on first reading, and divide this word count into elapsed time to determine the student’s reading rate. To determine the student’s standing and progress, compare this rate with the norm for the class and the average for all students who read fluently at that specific age/grade level.

The following general guidelines can be applied for reading lists of words with a speed drill and a one-minute timing:

- 30 wpm for first- and second-grade children
- 40 wpm for third-grade children;
- 60 wpm for mid-third-grade
- 80 wpm for students in fourth grade and higher
Various techniques are useful with students who have acquired some proficiency in decoding skill but whose skill levels are lower than their oral language abilities. Such techniques have certain common features:

- Students listen to text as they follow along with the book
- Students follow the print using their fingers as guides
- Use of reading materials that students would be unable to read independently

Experts recommend that a beginning reading program incorporate partner reading, practice reading difficult words prior to reading the text, timings for accuracy and rate, opportunities to hear books read, and opportunities to read to others.

Prosody

PROSODY is versification of text and involves such matters as which syllable of a word is accented. With regard to fluency, it is that aspect which translates reading into the same experience as listening in the reader's mind. It involves intonation and rhythm through such devices as syllable accent and punctuation.

In their article for Perspectives (Winter 2002), Pamela Hook and Sandra Jones proposed that teachers can begin to develop awareness of the prosodic features of language by introducing a short three-word sentence with each of the three different words underlined for stress (e.g., He is sick. He is sick. He is sick.). The teacher can then model the three sentences while discussing the possible meaning for each variation. The students can practice reading them with different stress until they are fluent. These simple three-word sentences can be modified and expanded to include various verbs, pronouns, and tenses (e.g., You are sick. I am sick. They are sick.). This strategy can also be used while increasing the length of phrases and emphasizing the different meanings (e.g., Get out of bed. Get out of bed. Get out of bed now.) Teachers can also practice fluency with common phrases that frequently occur in text.

Using prepositional phrases

Prepositional phrases are good syntactic structures for this type of work (e.g., on the ________, in the ________, over the ________). Teachers can pair these printed phrases with oral intonation patterns that include variations of rate, intensity, and pitch. Students can infer the intended meaning as the teacher presents different prosodic variations of a sentence. For example, when speakers want to stress a concept they often slow their rate of speech and may speak in a louder voice (e.g., Joshua, get-out-of-bed-NOW!). Often, the only text marker for this sentence will be the exclamation point (!), but the speaker's intent will affect the manner in which it is delivered.
Using the alphabet
Practicing oral variations and then mapping the prosodic features onto the text will assist students in making the connection when reading. This strategy can also be used to alert students to the prosodic features present in punctuation marks. In the early stages, using the alphabet helps to focus a student on the punctuation marks without having to deal with meaning. The teacher models for the students and then has them practice the combinations using the correct intonation patterns to fit the punctuation mark (e.g., ABC. DE? FGH! IJKL? or ABCD! EFGH? KL.).

Using two- or three-word sentences
Teachers can then move to simple two-word or three-word sentences. The sentences are punctuated with a period, question mark and exclamation point and the differences in meaning that occur with each different punctuation mark (e.g., Chris hops. Chris hops? Chris hops!) are discussed. It may help students to point out that the printed words convey the fact that someone named Chris is engaged in the physical activity of hopping, but the intonation patterns get their cue from the punctuation mark. The meaning extracted from an encounter with a punctuation mark is dependent upon a reader’s prior experiences or background knowledge in order to project an appropriate intonation pattern onto the printed text. Keeping the text static while changing the punctuation marks helps students to attend to prosodic patterns.

Using chunking
Students who read word-for-word may benefit initially from practicing phrasing with the alphabet rather than words because letters do not tax the meaning system. The letters are grouped, an arc is drawn underneath, and students recite the alphabet in chunks (e.g., ABC DE FGH IJK LM NOP QRS TU VW XYZ). Once students understand the concept of phrasing, it is recommended that teachers help students chunk text into syntactic (noun phrases, verb phrases, prepositional phrases) or meaning units until they are proficient. There are no hard and fast rules for chunking, but syntactic units are most commonly used.

Using slashes
For better readers, teachers can mark the phrasal boundaries with slashes for short passages. Eventually, the slashes are used only at the beginning of long passages and then students are asked to continue “phrase reading” even after the marks end. Marking phrases can be done together with students, or those on an independent level may divide passages into phrases themselves. Comparisons can be made to clarify reasons for differences in phrasing. Another way to encourage students to focus on phrase meaning and prosody, in addition to word identification, is to provide tasks that require them to identify or supply a paraphrase of an original statement.
At some point it is crucial that the early reader integrate graphophonic cues with semantic and structural cues and move toward fluency. Before this happens, early readers sound stilted when they read aloud, which, does not promote the enjoyment of reading.

**Expressive Reading**

The teacher needs to be theatrical to model for children so they can hear the beauty and nuances that are contained in the texts whose print they are tracking so anxiously. Children love to mimic their teachers and will do so if the teacher takes time each day to recite a poem with them. The poem might be posted on chart paper and stay up on the board for a week.

First, the teacher can model the fluent and expressive reading of the poem. Then, with the use of a pointer, the class can recite it with the teacher. As the week progresses, students can recite it on their own.

**Illustrations**

Illustrations can be key supports for emergent and early readers. Teachers should not only use wordless stories (books that tell their stories through pictures alone), but can also make targeted use of Big Books for read-alouds, so that young children become habituated to illustrations as an important tool for constructing meaning. The teacher should teach children how to reference an illustration for help in identifying a word the child does not recognize in the text.

Of course, children can also go on a picture walk with the teacher as part of a mini-lesson or guided reading and anticipate the story (narrative) using the pictures alone to construct meaning.

**Decodability**

Use literature that contains examples of letter-sound correspondences you wish to teach. First, read the literature with the children or read it aloud to them. Take a specific example from the text and have the children reread it as you point out the letter-sound correspondence. Then ask the children to go through the now-familiar literature to find other letter-sound correspondences. Once the children have correctly made the text-sound correspondence, have them share other similar correspondences they find in other works of literature.
Cooper (2004) suggests that children can be taught to become word detectives so they can independently and fluently decode on their own. The child should learn the following word detective routines in order to function as an independent fluent reader who can decode words on his own:

• First, the child should read to the end of the sentence
• Next, the child should search for known word parts and also try to decode the word from the letter sounds
• As a last resort, the child should ask someone for help or look up the word in the dictionary

Independent, Instructional, and Frustration Reading Levels

Instructional reading is generally judged to be at the 95 percent accuracy level, although Taberski places it between 92 and 97 percent. Taberski tries to enhance the independent reading levels by making sure that readers on the instructional reading levels read a variety of genres and have a range of available and interesting books of a particular genre to read.

Taberski's availability for reading conferences helps her to both assess first-hand her children's frustration levels and to model ongoing teacher/reader book conversations by scheduling child-initiated reading conferences where she personally replenishes their book bags.

In order to allay children's frustration levels in their reading and to foster their independent reading, it is important to some children that the teacher personally take time out to hear them read aloud and to check for fluency and expression. Children's frustration levels can be immeasurably lessened if they are explicitly told by the teacher after they have read aloud that they need to read without pointing and that they should try chunking words into phrases that mimic their natural speech.

Assessment of the reading development of individual students

Using pictures and illustrations

For young readers who are from ELL backgrounds, even if they were born in the United States, the use of pictures validates their story-authoring and story-telling skills and provides them with access and equity to the literary discussion and book talk of their native English-speaking peers. These children can also demonstrate their story-telling abilities by drawing sequels or prequels to the story detailed in the illustrations alone. They might even be given the opportunity to share the story aloud in their native language or to comment on the illustrations in their native language.