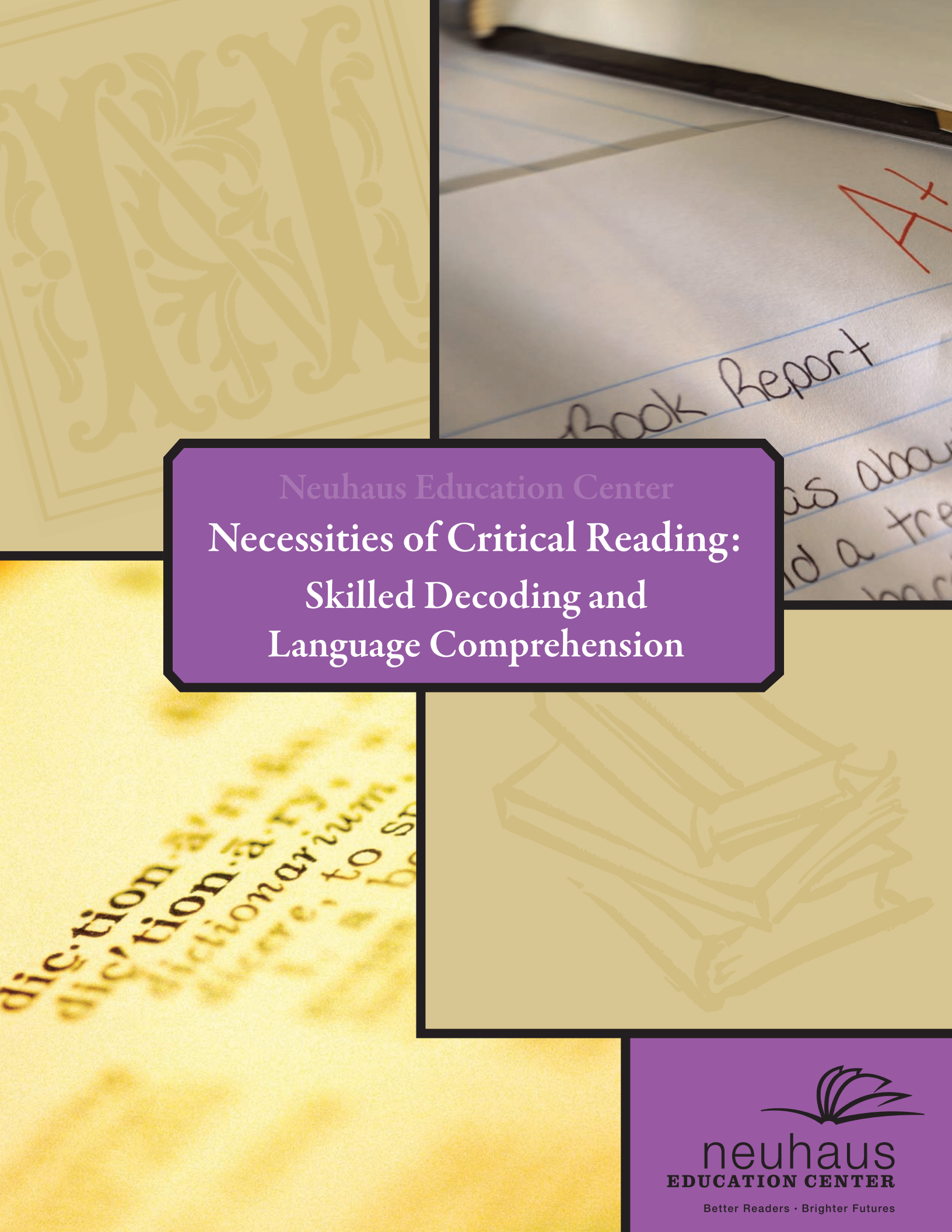

Neuhaus Education Center

Necessities of Critical Reading:

Skilled Decoding and Language Comprehension

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NECESSITIES FOR CRITICAL READING:

SKILLED DECODING AND LANGUAGE COMPREHENSION

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Critical reading is the ultimate goal of content instruction. The Simple View of Reading (Gough & Tunmer, 1986; Hoover & Gough, 1990) suggests reading comprehension is dependent on adequate decoding and language comprehension. Poor **reading comprehension** may be caused by inadequate **decoding**, inadequate **language comprehension**, or inadequate decoding and language comprehension (Gough & Tunmer, 1986; Hoover & Gough, 1990). Therefore, students' decoding and language comprehension skills should be assessed, and appropriate decoding and/or language comprehension instruction should be provided as needed to ensure the development of critical reading comprehension.

Decoding Instruction

The ultimate goal of decoding instruction is **instant word recognition**, which is the ability to recognize words in print without conscious effort. That is, all words are **sight words** that can be recognized instantly (Ehri, 2005). Accurate and instant word recognition frees cognitive resources for meaning (LaBerge & Samuels, 1974). Decoding instruction begins with the reader's sensitivity to the sound structure of spoken language, which is known as **phonological awareness**. Examples of activities that develop phonological awareness include the teacher saying:

1. "Repeat this sentence _____ (e.g., *the dog ran; the cat laps milk*) and tell me how many words are in the sentence."
2. "Repeat these two words after me _____ (e.g., *mat/rat, sip/lip, sat/sad, down/done, pig/big*) and give me a 'thumbs-up' if they rhyme and a 'thumbs-down' if they do not rhyme."
3. "Repeat this word after me _____ (e.g., *strawberry, fantastic, vanilla, electromagnet*) and tell me how many syllables are in the word."

Phonemic awareness is specific to the individual speech sounds or **phonemes** in spoken words. The most salient activity is the segmentation of words into sounds (i.e., **phonemic segmentation**; Ball & Blachman, 1991; Liberman, Shankweiler, & Liberman, 1989). For example, a phonemic segmentation activity may begin as the teacher gives students several blocks or counting tokens. The teacher says a word (e.g., *sit, let, mad, slip, sprint*). Students repeat the word and then say the word again slowly, moving one block or counter for each phoneme in the word. **Blends** such as *bl, dr, st,* and *tr* contain two phonemes, and blends such as *spl, spr,* and *str* each contain three phonemes.

To heighten students' awareness of phonemes, the features or characteristics of the phonemes can be discussed. For example, when a phoneme is produced, students can determine if the phoneme is **voiced**, **blocked**, and **continuous** like /m/ or **unvoiced**, **partially blocked**, and **clipped** like /t/.

Once students have an awareness of the phonemes that constitute spoken words, they learn how the phonemes in spoken words and the letters in printed words go together (i.e., **sound-symbol correspondences**). The teaching of the sound-symbol correspondences is traditionally known as **phonics**. Words that follow frequently

recurring sound-symbol correspondences and other language patterns are called **regular words**. These words can be sounded out.

The Report of the National Reading Panel (National Institute of Child Health and Human Development [NICHD], 2000) established the importance of explicit, systematic phonics instruction as opposed to implicit phonics. **Explicit instruction** means the concepts and skills are directly taught. **Systematic instruction** means that there is a plan of how the concepts and skills are to be introduced. New concepts build on previously introduced concepts. Concepts move from simple to more complex.

Students can be guided to discover a sound-symbol correspondence (i.e., a single letter, **digraph**, or **trigraph**) in a manner such as this:

1. The teacher reads five or six words that contain the same sound-letter pattern (e.g., *chip, chain, each, munch, cheek*).
2. Students repeat each word, listening for the sound that is the same in all the words.
3. The teacher writes the words on the board.
4. Students determine the **grapheme** (i.e., letter or group of letters that represent a specific sound) that is the same in all the words.
5. Students verbalize the pattern (e.g., digraph *ch* is pronounced /ch/).

Explicit spelling instruction and study of **word origins** further promote students' understanding of sound-symbol correspondences and build students' **orthographic memory**. Students' spelling errors provide clues as to what students know and what they need to learn. In addition to the direct instruction of sound-symbol patterns, high-frequency **irregular words** that do not conform to reliable patterns (e.g., *said, enough, pretty*) should be taught.

Structural analysis, the consideration of the syllabic and morphemic segments of written language, facilitates accurate word reading. There are six **orthographic** syllable types that provide students with information about the expected vowel sound in a syllable. The syllable types are as follows:

1. **Closed syllable** – ends in at least one consonant after one vowel; the vowel is short (*pat, end, split, pond, crush*)
2. **Open syllable** – ends in one vowel; the vowel is long (*so, me, hi*)
3. **Vowel-consonant-*e* syllable** – ends in one vowel, one consonant, and a final *e*; the final *e* is silent and the vowel is long (*name, these, shine, smoke, cute*)
4. **Vowel pair syllable** – has two adjacent vowels; each pair needs to be learned individually (*train, play, need, book, shout, how, coin, boy*)
5. **Vowel-*r* syllable** – has an *r* after a vowel; the vowel makes an unexpected sound; that is, the vowel is not short (*far, fern, fort, firm, fur*)
6. **Final stable syllable** – is a consonant-*le* pattern (bub*ble,* sam*ple,* can*dle*) or a nonphonetic but reliable pattern (mo*tion*, pas*ture*, mess*age*) at the end of a word.

Morphemes are meaning-carrying units of language that help students understand the meanings of words and read longer words (Henry, 2010). Morphemes are **prefixes, suffixes**, and **roots**. For example, the **derivative** *instructor* has three

morphemes: prefix *in-,* root *struct,* and suffix *-or* and means *the one who* (*-or*) *builds* (*struct*) *in* (*in-*). An *instructor* is *one who builds in* knowledge or information. **Inflectional endings** (e.g., *-s*, *-ed*, *-ing, 's*) denote the number, tense, or ownership of a **base word** or derivative. Adding inflectional ending *-s* to the derivative *instructor* (*instructors*) means that there is more than one instructor. When students understand morphemes, they can quickly "chunk" a long unfamiliar word into smaller parts without having to sound out every letter in the word, and they can determine the meaning of the word.

Knowing **syllable division patterns** also eases the reading of long unfamiliar words. The most common pattern is vowel-consonant-consonant-vowel or VCCV. When there are two consonants between two vowels, a word usually divides between the consonants. This pattern is seen in words such as: *nap'|kin, bas'|ket, mar'|ket, cam'|pus,* and *can|teen'*. The second most common pattern is the vowel-consonant-vowel or VCV pattern. Words with this pattern usually divide before the consonant. With both patterns, the **accent** (*'*) usually falls on the first syllable. If accenting the first syllable does not result in a recognizable word, the second syllable is accented. The VCCV and VCV patterns can also be used to divide words of more than two syllables as in *cu'|cum|ber, re|pub'|lic,* and *com|pre|hend'*. In the case of words with three or more syllables, the accent will usually fall on the first or second syllable, but students need to be flexible and continue to adjust the accent until there is a match to a word in their speaking and listening **lexicon**.

An understanding of the skills necessary for accurate and automatic decoding provides a guideline for instruction. Additionally, this understanding provides students with a **metacognitive** framework for reading unfamiliar words. When students encounter an unfamiliar word, they can employ an inner-dialogue such as:

1. *"Do I know this word?"* (instant word recognition) If not, …
2. *"Can I sound out the word?"* (sound-symbol correspondences) or
3. *"Can I break the word into smaller parts?"* (structural analysis) If not, …
4. *"Can I use the meaning surrounding the word to predict it?"* (context).

By engaging in such an inner-dialogue, students move from helplessness (*I don't know this word; I'll just guess or give up*) to **self-efficacy** (*I'm not sure about this word, but I can use what I know to figure it out*) and **competency** (*I know this word!*). Both self-efficacy and competency foster **motivation** for reading (McTigue, Washburn, & Liew, 2009).

It is important to give students adequate and **sustained practice** in reading words, phrases, sentences, and connected text (NICHD, 2000). Initially, the text should be decodable and contain only the patterns and irregular words that have been introduced. Over time, the text becomes increasingly less controlled. Practice and **wide reading** help to ensure the development of instant word recognition, which enables students to hold words in memory and read them without having to sound them out or break them into smaller parts (Ehri, 2005). Additionally, explicit spelling instruction and opportunities to write reinforce the patterns of the language and aid instant word recognition.

The reciprocity of decoding and comprehension can be observed with **fluency**, which is the ability to quickly recognize words in connected text in a manner that achieves adequate speed for maintaining attention and processing meaning. In addition to instant

and accurate word recognition, reading that has a smooth, rhythmic flow (i.e., **prosody**) and mimics speaking frees cognitive resources to process meaning and to further comprehension (Samuels, 1979). Snow referred to fluency "…as both an antecedent to and a consequence of comprehension" (2002, p. 13). As an antecedent to comprehension, the reader must fluently recognize words without conscious effort. As a consequence of comprehension, understanding what is being read aids the prosodic flow of oral reading. Poor **phonological processing** (Lyon, Shaywitz, & Shaywitz, 2003; Scarborough & Brady, 2002) and/or poor **rapid naming** speed (Wolf & Bowers, 1999) may interfere with instant word recognition and result in slow, labored oral reading. It should be noted that for struggling readers, fluency is difficult to remediate (Torgesen & Hudson, 2006).

Language Comprehension Instruction

Hoover and Gough (1990) contended the limit on reading comprehension is the limit on language comprehension, which is synonymous with listening comprehension. Any increase in language comprehension is an automatic increase in reading comprehension, assuming the reader can decode the words. Increases in decoding skills alone, the authors further argued, would not increase reading comprehension without a simultaneous increase in language comprehension. Students may experience difficulties with language comprehension because of inadequate **oral language** and **vocabulary**, insufficient **world knowledge**, inability to integrate information, poor **working memory**, lack of sensitivity to causal structures, or inability to identify semantic relationships (Cain & Oakhill, 1999; Oakhill & Cain, 2007; Yuill & Oakhill, 1991).

Robust oral language and sufficient world knowledge are critical to deep comprehension. A brief beginning-of-the-year measure of oral language, as presented in Appendix A, can be individually administered. Students name items in each of the following categories for 30 seconds (Carreker & Boulware-Gooden, unpublished manuscript):

1. Things in a classroom
2. Fruits and vegetables
3. Animals
4. States in the United States.

The total number of items named in the four categories for a total of 2 minutes (30 seconds for each category) is divided by two to determine a words-named-per-minute rate. The following benchmarks identify students who may need additional work in developing oral language and world knowledge:

Second grade	–	fewer than 14 named in one minute
Third grade	–	fewer than 15 named in one minute
Fourth grade	–	fewer than 18 named in one minute
Fifth grade	–	fewer than 22 named in one minute
Sixth grade	–	fewer than 25 named in one minute

Reading to students and engaging them in discussions, conversations, and wide reading increases oral language and world knowledge. Daily naming, describing, or retelling activities are also valuable in building oral language and world knowledge.

For text comprehension, it is important for students to be attuned to macro levels of text structure. For example, students need to understand that **narrative or literary text**, which tells a story, is structured around characters, a setting, a problem or goal, and a solution or achievement. Also, there is a plot that has a beginning, middle, and end; and there is an overarching theme (i.e., a big idea or meaning). On the other hand, **expository or informational text**, which gives information, is structured around a subject (i.e., what the passage is mostly about), a main idea (i.e., the subject + what the passage says about the subject), supporting ideas, and details.

At the word, sentence, and **discourse** (e.g., paragraphs, essays, text) levels of comprehension, **inference making** is vital. Yuill and Oakhill (1991) reported that students with poor comprehension had difficulties making inferences, and the ability to make inferences best differentiated students with good or poor comprehension at all ages. An i**nference** is an understanding or conclusion that is implied by a text and requires students to integrate information within, among, or beyond the lines in the text. Short passages can be presented to students. Students determine inferences that can be made from the passage. For example, what inferences can be made from the following passage?

> *The rooster crowed as the sun began to glisten on the freshly fallen snow. Maggie raced down the stairs and grabbed a piece of toast, as once again she had to run to catch the school bus.*

Inferences that can be made: It is morning (rooster crows, sun begins to glisten), it is winter (there is snow), Maggie overslept (she has to race and run), Maggie often oversleeps (once again), and Maggie is on her way to school (she is catching the school bus).

To make inferences, students must be adept at dealing with the micro levels of text structure. That is, students must use the context to 1) determine the meaning or the correct usage of a word (i.e., **semantics**), 2) understand **anaphoric pronouns** (i.e., a pronoun that refers back to a specific word used earlier) and interclausal connectives (e.g., *so, because*), and 3) integrate information, using vocabulary and background knowledge (Cain & Oakhill, 2007). The following activities are helpful in developing these important requirements:

a. **Multiple meanings** – The word *run* can mean *to gallop, to race, to flow,* or *to campaign*. What does *run* mean in this sentence: *The water will not freeze if you let the faucet run*? (A faucet is a valve that controls the stream of water; *run* must mean *to flow*.)
b. Anaphoric pronouns – *To thank the boy, the man gave his hat to the boy*. Does the word *his* refer to the man or the boy?
c. Interclausal connectives – What is the difference in meaning of these two sentences: *Mary had to wash the dishes, so she didn't finish her homework* and *Mary had to wash the dishes because she didn't finish her homework*? (in the first sentence, washing the dishes caused Mary to not finish her homework; in

the second sentence, washing the dishes was the result of Mary not finishing her homework)

d. Integrating information (Yuill & Oakhill, 1988) – Who is Teddy in this sentence? *Teddy barks loudly at the door*. (because Teddy barks, he must be a dog)
e. Word profiles (Carreker & Birsh, 2011) – What do you know about the word *bark*?

Number of phonemes	(3)
Number of letters	(4)
Number of graphemes	(3)
Number of morphemes	(1)
Rime pattern	(ark)
Words with the **rime**	(park, dark, spark, shark)
Derivatives	(barks, barked, barking)
Definition	(dog's sound)
Multiple meanings	(shout; outer layer of a tree)
Synonyms	(woof, yap, snarl; skin, cover)
Figurative expressions	(bark worse than bite, barking up the wrong tree)

The more students know about words, the easier it is for them to quickly read and attach the most appropriate meaning or usage to words. As is true with decoding, opportunities to write reinforce the meanings and usages of words and **syntax** (e.g., sentence structures) that promote greater understanding of written text. If a student with adequate language skills is not successful in making inferences, this student may have poor working memory, which is the ability to hold information in memory while doing another task, such as monitoring or integrating information.

With adequate decoding, oral language, world knowledge, and working memory, the reader can easily employ **strategic thinking** as he or she reads. The strategic thinker reasons, connects, monitors, repairs, summarizes, and evaluates (NICHD, 2000). The strategic thinker knows the structure of the text he or she is reading. (*I am reading a narrative text, so I need to think about the characters, the setting, and the plot.*) The strategic thinker understands the author's purpose and **tone**. (*The author's intent is to inform the reader on this topic in a light-hearted manner*.) The strategic thinker connects ideas. (*I know these ideas about what I am reading, but how do all these ideas go together? What predictions can I make?*) The reader is constantly summarizing and monitoring his or her understanding. If the text is not making sense, the strategic thinker has a plan for repairing his or her comprehension (e.g., rereading a paragraph or looking up an unfamiliar word). Lastly, the strategic thinker evaluates. (*This is what I have read. What value do I place on what I have read? How do I judge the validity of what I have read?)* Strategic thinking is developed first through teacher **modeling**. Then, through **gradual release** (e.g., *I do, we do, you do*), students assume more and more ownership (Pearson & Gallagher, 1993) and become independent in their strategic thinking.

Response to Invention

The Individuals with Disabilities Education Improvement Act (IDEIA; 2004) introduced **Response to Intervention (RTI)** as a model for the identification of students who are at risk for reading failure. RTI has two purposes: 1) improvement of student reading achievement, and 2) early identification of students with learning or reading disabilities (Fletcher & Vaughn, 2009).

RTI uses **universal screening** instruments to identify students who are at risk for learning or reading disabilities. Two frequently used screenings are Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kiminski, 2002) and the Texas Primary Reading Inventory (TPRI; University of Texas System and Texas Education Agency, 2006). Each measure has well-established **score reliability** and **validity**. Using either DIBELS or TPRI, teachers can assess students' vocabulary, reading comprehension, and decoding skills, such as phonemic awareness, word recognition, and fluency.

Instructional decisions should be driven by data (i.e., **data-driven decision making**). In addition to a universal screening instrument, **summative data** from standardized achievement tests, such as the Stanford Achievement Test Series, Tenth Edition (SAT-10; Harcourt Assessments, 2003), can help determine a student's learning profile and identify students who may need supplemental instruction. To understand a student's performance on the SAT-10, it is important to look at the standardized scores called Normal Curve Equivalents (NCEs), which are statistical conversions of raw scores (i.e., how many items correct). An NCE has a **mean** (i.e., average) of 50 and a **standard deviation** of 21.60. The standard deviation is the spread of the scores around the mean. For example, a student who has an NCE of 50 on the word study skills subtest is at the mean and is an average decoder. This student does not need supplemental decoding instruction. In contrast, a student who has an NCE of 27 is more than one standard deviation below the mean (i.e., 50-27 = 23; 23 is greater than 21.06). This student will most likely need supplemental decoding instruction.

In an RTI model, **Tier I** instruction involves **evidenced-based** reading instruction (i.e., instruction based on the best available research evidence) that is taught and practiced at the classroom level. Appropriate small-group intervention, known as **Tier II**, begins in the general education classroom as soon as a student's difficulty in acquiring any requisite reading skill is identified or detected (15% of students). The instruction can be delivered by the classroom teacher or a reading or intervention specialist. Initially, there is no need for a diagnosis of a reading disability or an official educational plan before the intervention can begin. If the student fails to respond to the Tier II instruction, then more intensive **Tier III** instruction may be warranted (5% of students). This instruction may be delivered in the classroom or may be delivered in a pull-out program with a reading or intervention specialist.

As new concepts and skills are taught and sufficiently practiced, **progress monitoring** or **formative assessment** is essential to ensure that students are learning. Progress monitoring can be done using published monitors such as the DIBELS or TPRI or informal measures can be used. A spelling test, for example, can provide valuable information about a student's phonemic awareness (e.g., is the student detecting all the

sounds) or a student's knowledge of patterns (e.g., does the student know when to spell /k/ with a *k* versus a *c*). The two-minute naming activity as presented in Appendix A or the use of a retelling rubric as presented in Appendix B, for example, can help to identify students with limited oral language and world knowledge that will adversely impact comprehension.

The important points about progress monitoring are 1) it is done regularly, 2) it incorporates the area(s) in which a student has demonstrated difficulties, and 3) it informs subsequent instruction. If a student has not mastered a skill, instruction must be adjusted (e.g., more time, smaller group, slower pace). If a student has mastered a skill, he or she does not need to continue working on that skill in an intervention setting. This is the idea of **flexible grouping**, which is grouping and regrouping students in small or large groups for a particular purpose.

Conclusion

The Simple View of Reading (Gough & Tunmer, 1986; Hoover & Gough, 1990) provides a framework for understanding the two essential components of reading comprehension. Decoding enables meaning to be lifted from the printed page. Decoding begins with phonemic awareness, which allows the beginning reader to perceive the individual phonemes in spoken words and their counterparts in written words (i.e., graphemes). Connecting phonemes to graphemes requires explicit instruction. Additionally, knowing syllabic and morphemic units of language aids the rapid recognition of words. When words are instantly recognized and reading is fluent, attention and cognitive resources are available for processing meaning. In short, decoding is necessary but not sufficient for skilled reading comprehension.

Language comprehension is also a necessary but not a sufficient component of skilled reading comprehension. As Snow stated, "…the child with limited vocabulary knowledge, limited world knowledge or both will have difficulty comprehending texts that presuppose such knowledge, despite an adequate development of word-recognition and phonological-decoding skills" (2002, p. 23). Oral language and world knowledge are important to language comprehension, as are the abilities to integrate information and make inferences within a sentence and across sentences in discourse.

The two components of reading help define student learning profiles. Namely, students with poor reading comprehension may have:

1) poor decoding but adequate language comprehension,
2) adequate decoding but poor language comprehension, or
3) poor decoding and language comprehension.

By identifying students' learning profiles, the most appropriate evidence-based instruction can be planned and delivered to meet the learning needs of each student. In sum, when the two essential components – decoding and language comprehension – are securely in place, students will read accurately, fluently, and with deep and critical comprehension.

GLOSSARY OF TERMS

1. ***Accent*** – stress placed on a word or part of a word; the mouth opens wider, the voice is louder and higher; all one-syllable words are accented

2. ***Anaphoric pronoun*** – a pronoun (e.g., *he, she, it, we, they*, *his, hers*) that refers back to a person or object and is used to avoid repetition of the name of the person or object

3. ***Base word*** – a plain word with nothing added

4. ***Blend*** – a group of two or more letters whose sounds blend together, yet the sound of each letter can be segmented as a separate sound (e.g., *bl, gl, st, dr, sp, spr, str*)

5. ***Blocked and partially blocked*** – with blocked sounds, the tongue, teeth, or lips block the sound during the entire production as with /l/, /s/, and /m/; with partially blocked sounds, there is a release of the tongue, teeth, or lips during the production of the sound as with /g/, /t/, and /p/

6. ***Closed syllable*** – a syllable that ends in at least one consonant after one vowel; the vowel is short (e.g., *bag, beg, big, bog, bug, band, bend*)

7. ***Competency*** - the ability to do something well

8. ***Continuant (continuous) and clipped*** – a continuant sound is produced continuously as with /l/, /s/, and /m/; a clipped sound has a brief production as with /g/, /t/, and /p/; it is important to not add /ŭh/ to the end of clipped sounds

9. ***Data-driven decision making*** – instructional decisions (e.g., grouping, materials, intensity) based on student data

10. ***Decoding*** – the translation of symbols on a page into words

11. ***Discourse*** – spoken or written communication beyond the sentence level

12. ***Digraph*** – two adjacent letters that represent one sound (e.g., *sh, oa*)

13. ***Evidence-based*** – synonymous with scientifically based; involves the gathering of evidence to answer questions and make decisions

14. ***Explicit instruction*** – direct and purposeful teaching of skills and concepts; the learning of skills is not implicit or intuited

15. ***Expository or informational text*** – text that informs or gives information; text that is structured around a subject, main idea, supporting ideas, and details

16. ***Formative assessment*** – on-going formal and informal assessment that provide information about how well students are learning particular skills or meeting short-term instructional goals

17. ***Figurative expressions*** – expressions in which words are used in unexpected ways; words are not used in their literal sense, such as in "raining cats and dogs"

18. ***Final stable syllable*** – a consonant-*le* pattern (bub*ble,* sam*ple,* can*dle*) or a nonphonetic but reliable pattern (mo*tion*, pas*ture*, mess*age*) at the end of a word

19. ***Flexible grouping*** – grouping and regrouping students in small or large groups for a particular purpose

20. ***Fluency*** – the prosodic flow with which a skilled reader reads; reading with adequate speed to maintain attention and access meaning

21. ***Gradual release*** – teacher modeling that leads to guided instruction and then to independent use of a skill or strategy

22. ***Grapheme*** – a letter or group of letters that represent a specific sound; the word *cheek* has five letters and three graphemes - *ch, ee, k*

23. ***Inference*** – connecting with information beyond the text or filling in gaps in the text

24. ***Inference making*** – the ability to make connections and fill in gaps – text to text, text to self, or text to world

25. ***Inflectional ending*** – a suffix that shows tense (e.g., *-ed, -ing*), number (e.g., *-s, -es*), person of a verb (e.g., *-s*), comparison (e.g., -er, -est), or possession (i.e., 's or just an apostrophe)

26. ***Instant word recognition*** – the ability to recognize words without conscious thought or use of cognitive resources; the ultimate goal of decoding instruction

27. ***Irregular words*** – words that do not conform to the reliable patterns of language and cannot be sounded out, such as *said, two, were, enough, thorough, busy*

28. ***Language comprehension*** - synonymous with listening comprehension; attachment of meaning to words or comprehension of language in the absence of print

29. ***Lexicon*** – knowledge about the meanings and usages of words

30. ***Mean*** – the average

31. ***Metacognitive*** - having to do with thinking about thinking or knowing about one's own thinking

32. ***Modeling*** – demonstrating how to use a skill or strategy

33. ***Morphemes*** – meaning-carrying units of language, such as prefixes, suffixes, and roots

34. Motivation – a sense of enthusiasm, interest, or commitment that makes one want to do something

35. Multiple meanings – more than one meaning (e.g., *tip* can mean to tilt, to turn over, money for a waiter, a suggestion)

36. Narrative or literary text – text that tells a story; text that has elements such as characters, setting, problem/goal, action, resolution of the problem or achievement of the goals

37. Open syllable – a syllable that ends in one vowel; the vowel is long (e.g., *so, me, hi, go, she*)

38. Oral language – includes knowledge of word meanings, understanding of the forms and usages of words, and oral communication of ideas; includes phonology and syntax

39. Orthographic memory – memory that is specific to letter patterns and words; a more specific memory than visual memory

40. Orthographic – having to do with how words are written; having to do with the letter patterns of words

41. Phoneme – an individual speech sound that changes the pronunciation or meaning of a word; changing /m/ in /măt/ to /s/ changes the word to /săt/ and changes the pronunciation and meaning

42. Phonemic awareness – the ability to detect, identify, and manipulate individual speech sounds in spoken words

43. Phonemic segmentation – awareness or detection of the separate speech sounds in a spoken word (e.g., the word *mat* has three phonemes - /m/, /ă/, /t/)

44. ***Phonics*** – instruction that connects sounds and letters and teaches reliable patterns for reading

45. ***Phonological awareness*** – the awareness of the sound structure of spoken language

46. ***Phonological processing*** – an auditory processing skill that allows the detection and discrimination of individual speech sounds in spoken words

47. ***Prefix*** – a letter or group of letters added to the beginning of a root or base word that changes the meaning of the base word or root; a prefix is a morpheme

48. ***Progress monitoring*** – periodic assessment to evaluate the effectiveness of instruction and student growth and to determine necessary adjustments in instruction

49. ***Prosody*** – the smooth and rhythmic flow of oral reading; the application of features of spoken language, such as intonation and phrasing, so that oral reading mimics spoken language

50. ***Rapid naming*** – the ability to quickly name objects, colors, or printed numbers and letters; also call *rapid automatized naming*

51. ***Reading comprehension*** – the ability to attach meaning to words that have been translated from symbols

52. ***Regular words*** – words that follow reliable, frequently recurring patterns; regular words can be sounded out

53. ***Response to Invention (RTI)*** – a model for the early identification of students who are at risk for reading failure and the improvement of student reading achievement through focused instruction that targets student needs

54. ***Rime*** – in a syllable, the vowel and all the sounds that come after the vowel; in the word /bark/, /ark/ is the rime and /b/ is the onset; the onset is the sound or sounds before the vowel

55. ***Root*** – a meaning-carrying unit of language; roots may stand alone as base words or may require the addition of a prefix and/or suffix; in the word *instructor*, the root *struct* means *build* and a prefix and a suffix have been added

56. ***Score reliability*** – the consistency with which scores on a test measure an underlying ability

57. ***Self-efficacy*** – one's belief that he or she can perform a task in a certain manner

58. ***Semantics*** – meaning

59. ***Sight words*** – any word that is held in memory and can be recognized instantly

60. ***Sound-symbol correspondences*** – the pairing of phonemes and graphemes; knowledge of these associations enables students to sound out unfamiliar words

61. ***Standard deviation*** – the clustering of scores around the mean; a small standard deviation means the scores are close to the mean; a large standard deviation means the scores are further from the mean

62. ***Strategic thinking*** – the ability to reason, connect ideas, monitor, summarize, repair, and evaluate

63. ***Suffix*** – a letter or group of letters added to the end of a base word or root that denotes the form, tense, or ownership or changes the meaning of the base word or root; a suffix is a morpheme

64. ***Summative data*** – student data from formal and informal tests that is gathered to assess how well students have met long-term, comprehensive goals

65. ***Sustained practice*** – continued practice of a concept or skill so that the concept or skill is learned to automaticity and is remembered over time

66. ***Syllable*** – a word or part of a word made with one opening of the mouth; a syllable has one vowel sound

67. ***Syllable division patterns*** – patterns that determine the division of words with two or more syllables; the most common patterns are VCCV and VCV; VCCV words usually divide between the consonants; VCV words usually divide before the consonant; the accent usually falls on the first syllable; the VCCV and VCV patterns occur in Spanish words

68. ***Syntax*** – grammar and sentence structure

69. ***Systematic instruction*** – instruction that is ordered with more complex skills building on top of simpler skills

70. ***Tier I*** – core classroom instruction for all students delivered to the whole or small groups by the teacher; the instruction uses evidence-based materials and is planned for a minimum of 90 minutes; universal screenings are used to identify students who are at risk for reading failure

71. ***Tier II*** – supplemental instruction for at-risk or struggling students (15% of students); this instruction is in addition to Tier I instruction; usually delivered in small groups of 3 to 5 students with similar abilities and learning needs for 30 minutes every day; progress is monitored every two weeks; the classroom teacher or a reading or intervention specialist may deliver the instruction in the general education classroom

72. ***Tier III*** – intensive instruction for students with persistent difficulties (5% of students); usually delivered individually or in small groups of no more than 3 students; this instruction is delivered every day in two 30-minute sessions and is delivered by a reading specialist or special education teacher; progress is monitored every two weeks

73. ***Tone*** – the author's treatment of a subject conveyed through words and syntax

74. ***Trigraph*** – three adjacent letters that represent one sound (e.g., *tch, igh*)

75. ***Universal screening*** – a brief measure that is given to identify any students who may be at-risk for reading failure

76. ***Validity*** – the notion that a test measures what it is suppose to measure

77. ***Vocabulary*** – words that are understood and used in listening, speaking, reading and writing

78. ***Voiced and unvoiced*** – voiced sounds activate the vocal cords during production as in /l/ and /m/; unvoiced sounds do not activate the vocal cords during production as in /s/ and /t/

79. ***Vowel-consonant-e syllable*** – a syllable that ends in one vowel, one consonant, and a final *e*; the *e* is silent; the vowel is long; examples include: *name, five, these, rope, tune*

80. ***Vowel pair syllable*** – a vowel pair syllable has two adjacent vowels (e.g., *pain, book*); the pronunciation of each pair must be carefully taught; the adage "When two vowels go walking, the first one does the talking" is true only 45% of the time

81. ***Vowel-r syllable*** – a vowel-*r* syllable has an *r* after the vowel (e.g., *her, star, for*); the vowel makes an unexpected sound (i.e., the vowel is not short as expected).

82. ***Wide Reading*** – a strategy that involves students reading varied reading materials that are comfortably at students' independent reading level and cover a variety of topics; wide reading builds students' oral language, vocabulary, and world knowledge

83. ***Working memory*** – ability to hold information in memory while engaging in another task, such as monitoring, reasoning, or integrating information

84. ***Word origins*** – most English words originated from the Anglo-Saxon/Old English, Latin, and Greek languages; knowledge of word origins can aid students in the correct pronunciations and spellings

85. ***World knowledge*** – the accumulation of knowledge, experiences, and attitudes that skilled readers link to the text they are reading; also known as *prior knowledge* or *background knowledge*

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APPENDIX A

NEUHAUS EDUCATION CENTER
Oral Language and World Knowledge Screening

Teacher:_____ **Grade:**_____ **Date:**_____

School:_____

Categories for Naming	
1. Things in a Classroom	(30 sec.)
2. Fruits and Vegetables	(30 sec.)
3. Animals	(30 sec.)
4. States in the US	(30 sec.)
Total the items named and divide by two to determine items/min.	

Benchmarks	
K or First Grade	– record tally marks; mark N/A
Second Grade	– 14 items/min.
Third Grade	– 15 items/min.
Fourth Grade	– 18 items/min.
Fifth Grade	– 22 items/min.
Sixth Grade	– 25 items/min.

First Name and Last Initial	Tally Marks for Items Named	Items /min.	Met Benchmark		
			Yes	No	N/A
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					

APPENDIX B
RETELLING RUBRIC

Name_____ **Date**_____

Objective	Beginning 1	Developing 2	Mastery 3	Exemplary 4	Score
Uses complete sentences in retelling the passage	Uses incomplete sentences	Uses complete and incomplete sentences – not all sentences are cogent	Uses complete sentences with simple structure	Uses complete sentences with varied structures	_____
Captures the salient idea of each event	Does not recall all salient ideas or inaccurately expresses two or more ideas	Expresses one salient idea incompletely or inaccurately	Accurately captures the salient idea of each event but is overly verbose or not specific enough	Accurately and succinctly captures the salient idea of each event	_____
Sequences events cohesively	Does not include all events or does not state all events in correct order	States events in order but without any transitions	Sequences events using traditional transition words (e.g., *first, then, next, finally*)	Sequences events using adverbs (e.g., *then, next, therefore, that's why*) and conjunctions (e.g., *so, if, because*)	_____
Incorporates vocabulary from the passage	Does not incorporate any vocabulary words from the passage	Incorporates vocabulary words exactly as used in the passage	Uses appropriate synonyms for vocabulary words from the passage	Uses vocabulary words from the passage in novel ways	_____
Retells the passage with prosody	Does not complete the retelling of the passage and may say "I can't remember" or "I forget"	Restates, pauses, or self-corrects while retelling the passage and may overuse "um"	Retells the passage haltingly but persistently	Retells the passage with ease, confidence, and expression	_____

Total _____