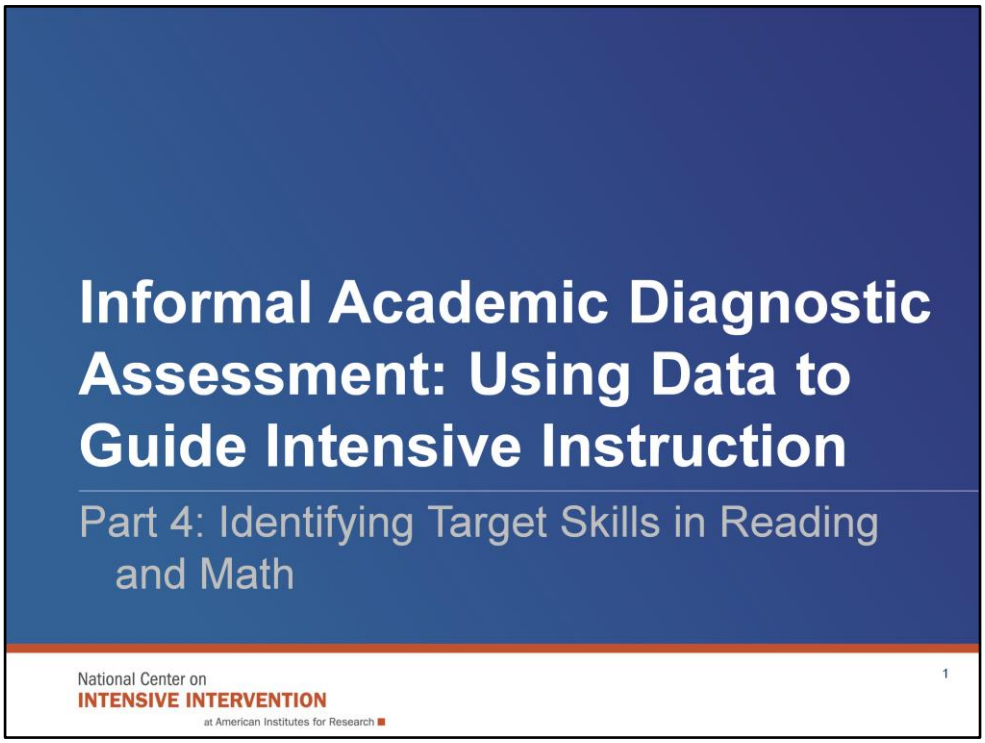


Introduction to Part 4 of the module: *This section is Part 4 of the module, "Informal Academic Diagnostic Assessment: Using Data to Guide Intensive Instruction." The following slides are intended to provide participants with guidance for identifying skills to target in reading and math interventions. The module is part of a series of training modules on Data-Based Individualization developed by the National Center on Intensive Intervention (NCII) and is aimed at district or school teams involved in initial planning for using DBI as a framework for providing intensive intervention in academics and behavior. The audience for this module may include the academic or behavior interventionists, special educators, school psychologists, counselors, and administrators, as appropriate. Before viewing this module, teams should be familiar with the content in the first four modules. For more information about these modules, please visit the DBI Training Series page on NCII's website at:* http://www.intensiveintervention.org/content/dbi-training-series.

Speaker notes for Title Slide:

Welcome participants to the training on Identifying Target Skills in Reading and Math. Introduce yourself (or selves) as the facilitator(s) and briefly cite your professional experience with regard to intensive intervention and DBI. Explain that this section provides guidance on identifying target skills for reading and math intervention. If progress monitoring data shows that a change is needed to a student's intervention, this section will help educators to identify what type of skills the intervention should target to be most effective.

Instructions for using the speaker notes

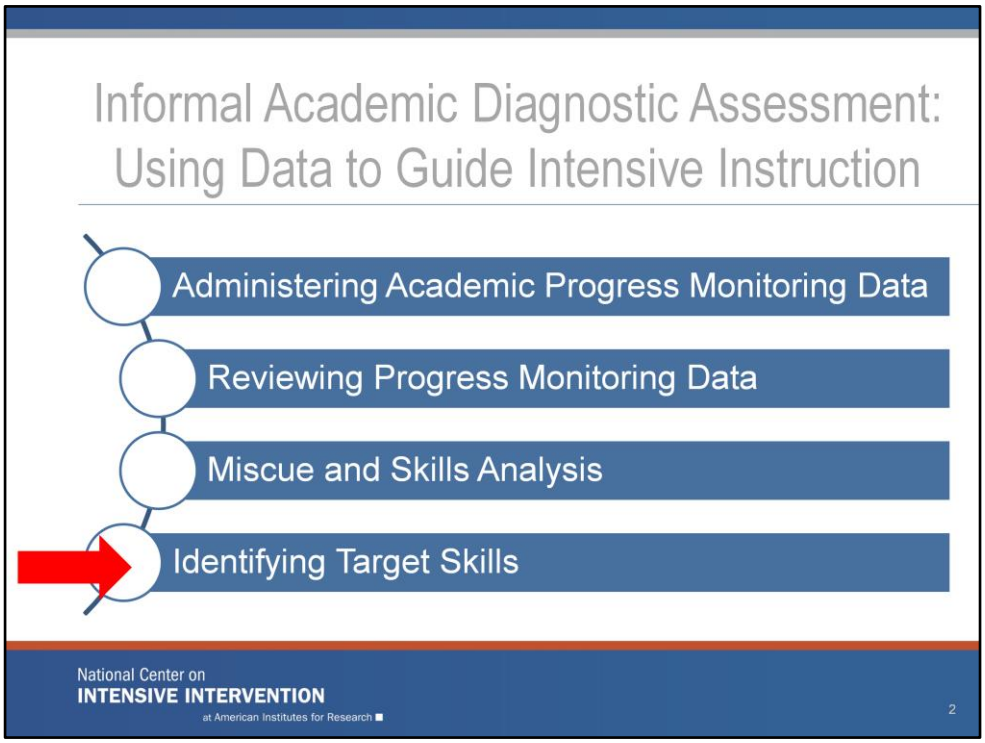
- Text formatted in standard font is intended to be read aloud or paraphrased by the facilitator.
- Text formatted in **bold** is excerpted directly from the presentation slides.
- Text formatted in *italics* is intended as directions or notes for the facilitator; italicized text is not meant to be read aloud.
- Text formatted in underline indicates an appropriate time to click to bring up the next stage of animation in an animated slide.

Handouts:

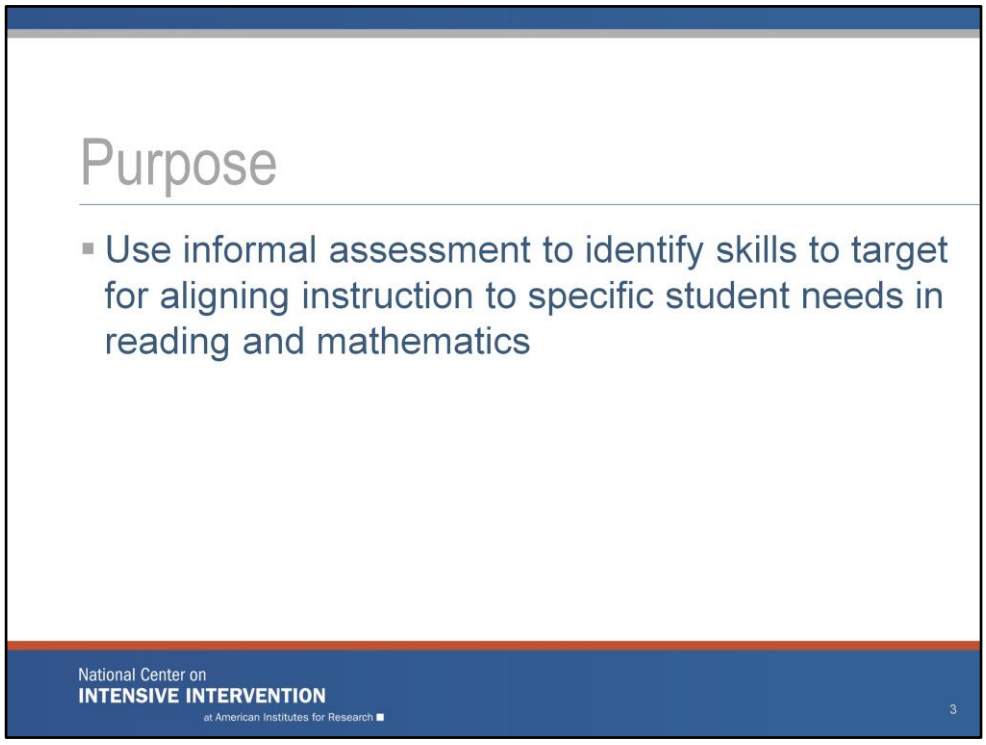
Several handouts accompany this module. They will be referenced throughout this presentation. The handouts are:

- *Phonics Inventory*
- *Progress Monitoring Handouts*
- *Mathematics Assessment Supplement*

This module also contains links to resources from NCII, the Florida Center for Reading Research, and the Meadows Center for Preventing Educational Risk.



Remind participants that this section is part of a larger module titled "Informal Academic Diagnostic Assessment: Using Data to Guide Intensive Instruction." This section will focus on identifying target skills for reading and math intervention.



The purpose of this module is to help educators use informal assessment to identify skills to target in order to better align instruction to specific student needs in reading and mathematics.

Identifying Skills to Target in Reading

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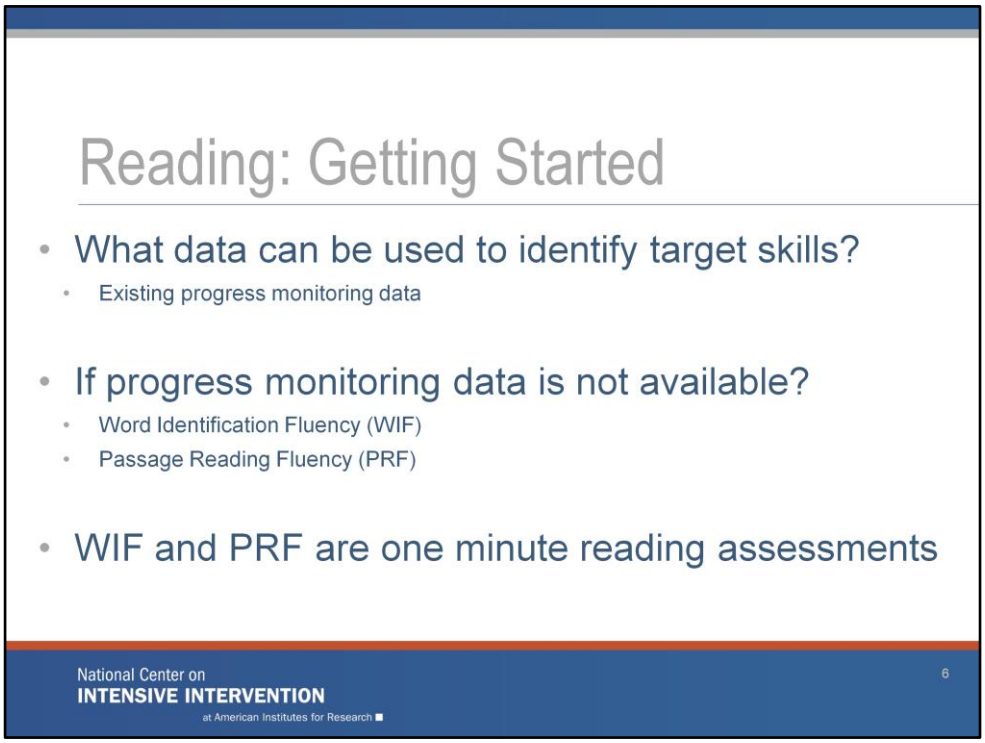
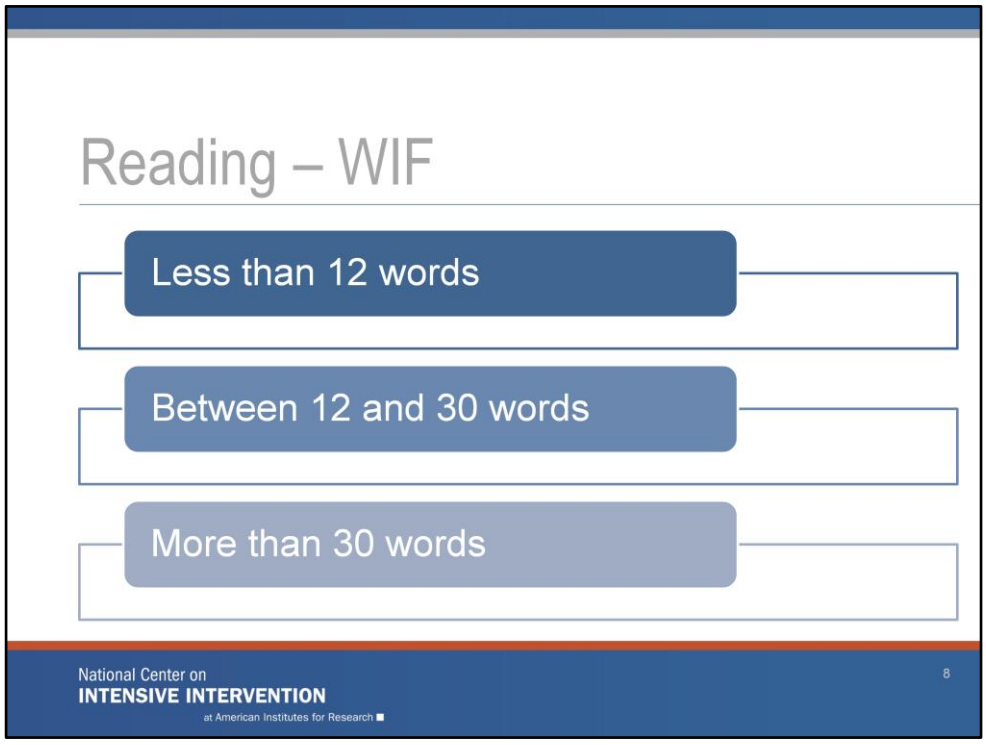
Identifying appropriate skills to target in reading begins with assessing the student's reading ability. At the earliest stages of reading development, your student will most likely benefit from systematic instruction, phonological awareness, and basic phonics. As the student's reading ability improves, interventions that address more advanced phonics, fluency, comprehension, and vocabulary or word study are indicated.



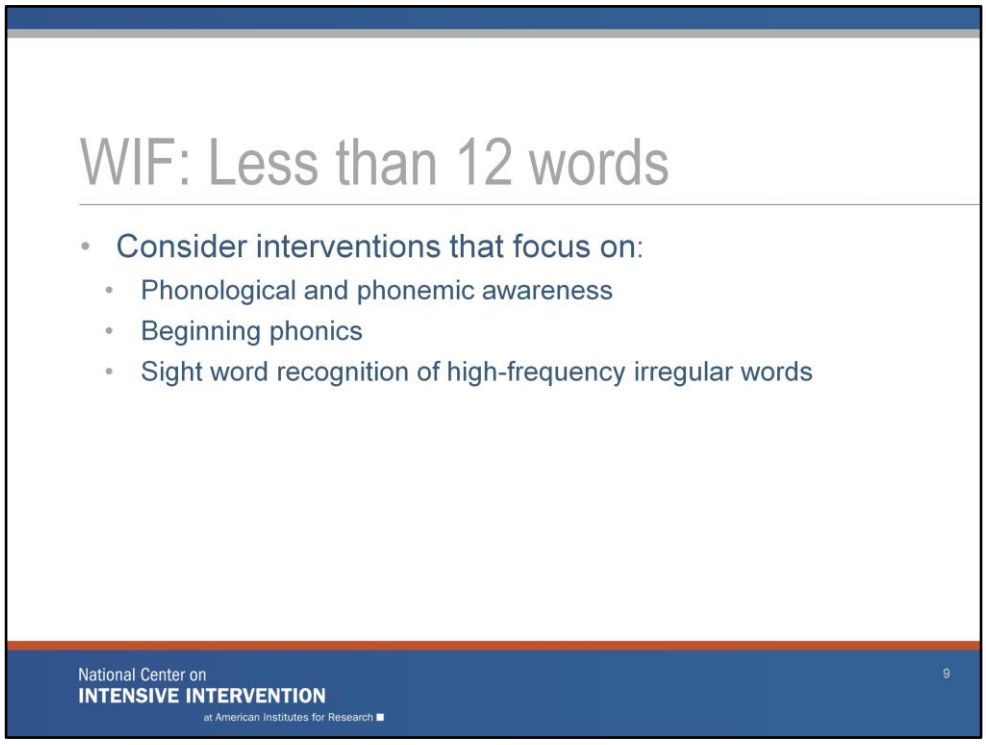
You can use data from progress monitoring to guide your selection of target skills in an instructional intervention. If you don't have progress monitoring data available for your student, administer a quick, one minute assessment, by asking your student to read aloud from a passage or word list at his or her grade level. This will give you an estimated score for Word Identification Fluency (WIF) or Passage Reading Fluency (PRF).

In this section, we will be using WIF and PRF to provide an illustration of identifying target skills in reading. You may have this type of data from progress monitoring, or could also collect either type of data as a quick assessment. We are going to start our discussion by looking at WIF data.

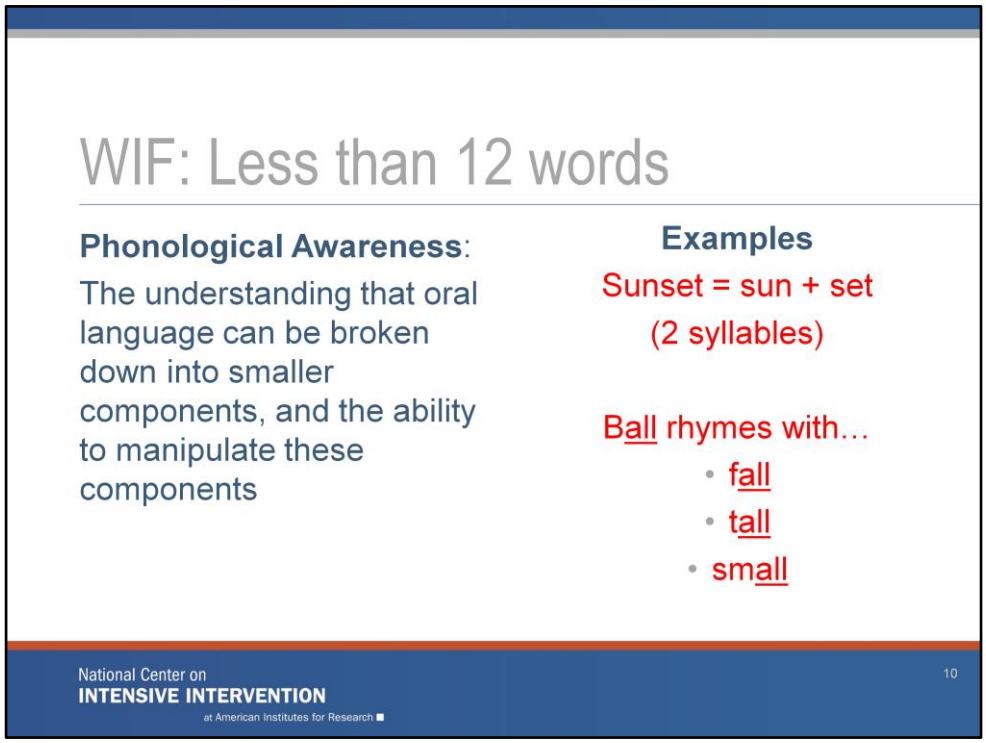
Identifying Target Skills with WIF Data



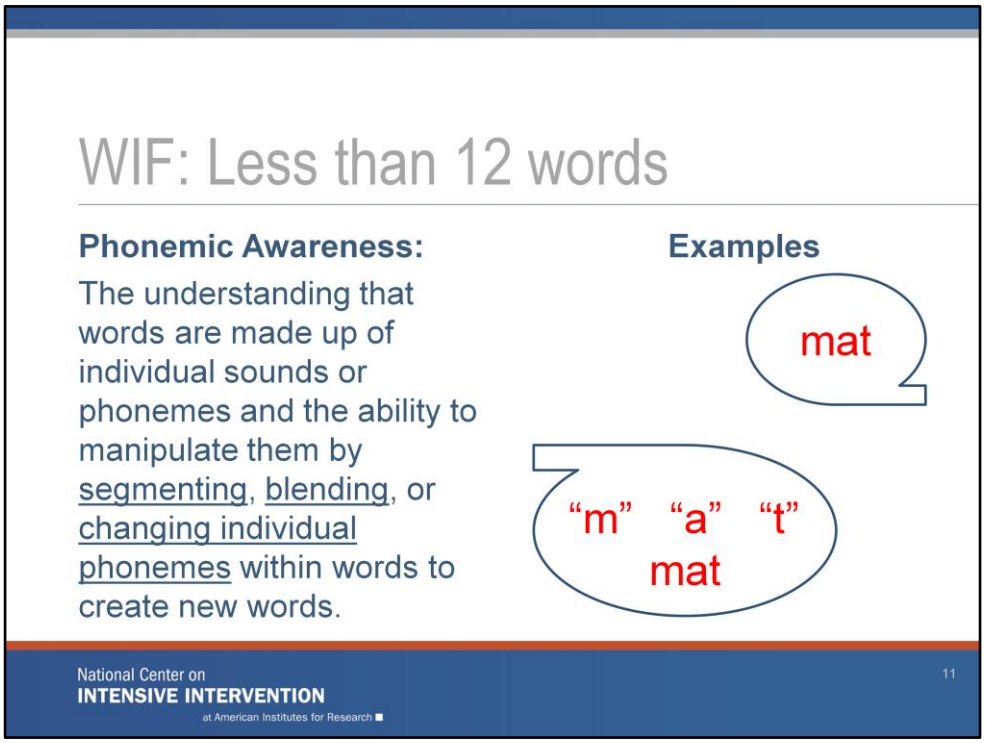
Begin by looking at your students' most recent assessments, noting about how many words they read correctly in one minute. WIF assessments are done by having students read from an isolated word list (these are not connected text passages).



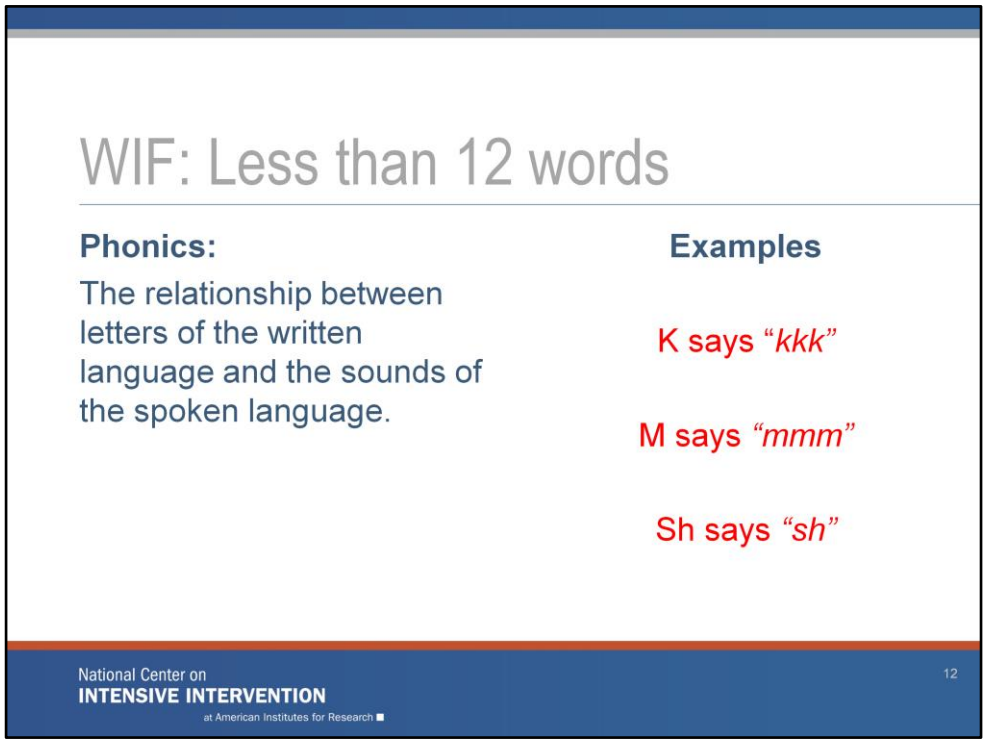
If your student can identify less than 12 words correctly in a minute, you should consider interventions that focus on phonological and phonemic awareness, beginning phonics, and sight word recognition of simple, common irregular words to address their needs.



Phonological awareness is the understanding that oral language can be broken down into smaller components and the ability to manipulate these components. For example, the ability to count the number of syllables in a spoken word and the ability to rhyme are some aspects of phonological awareness.



Phonemic awareness is a subset of phonological awareness. It is the understanding that words are made up of individual sounds or phonemes and the ability to manipulate these phonemes either by segmenting, blending, or changing individual phonemes within words to create new words.



Phonics is the relationship between letters of the written language and the sounds of the spoken language. The first steps of phonics instruction focus on the relationship between single letter sounds.

WIF: Less than 12 words

Examples of phonological awareness activities:

- Counting Syllables
- Identifying Simple Rhyming Words
- Isolating Initial and Final Sounds
- Blending Phonemes into Words
- Segmenting Words into Phonemes

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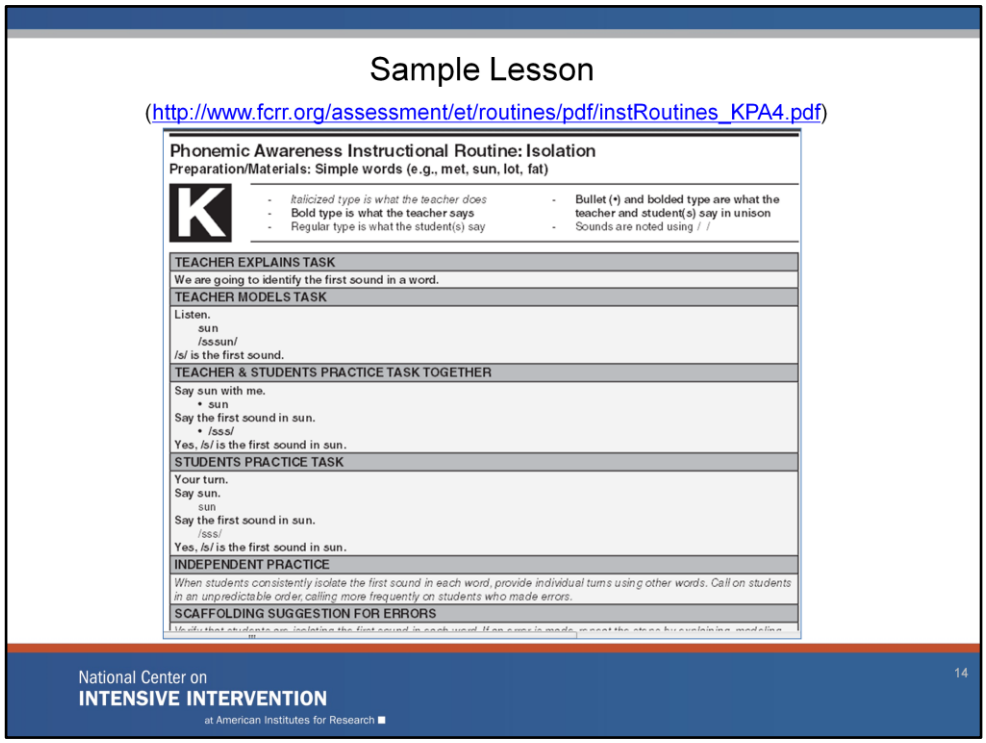
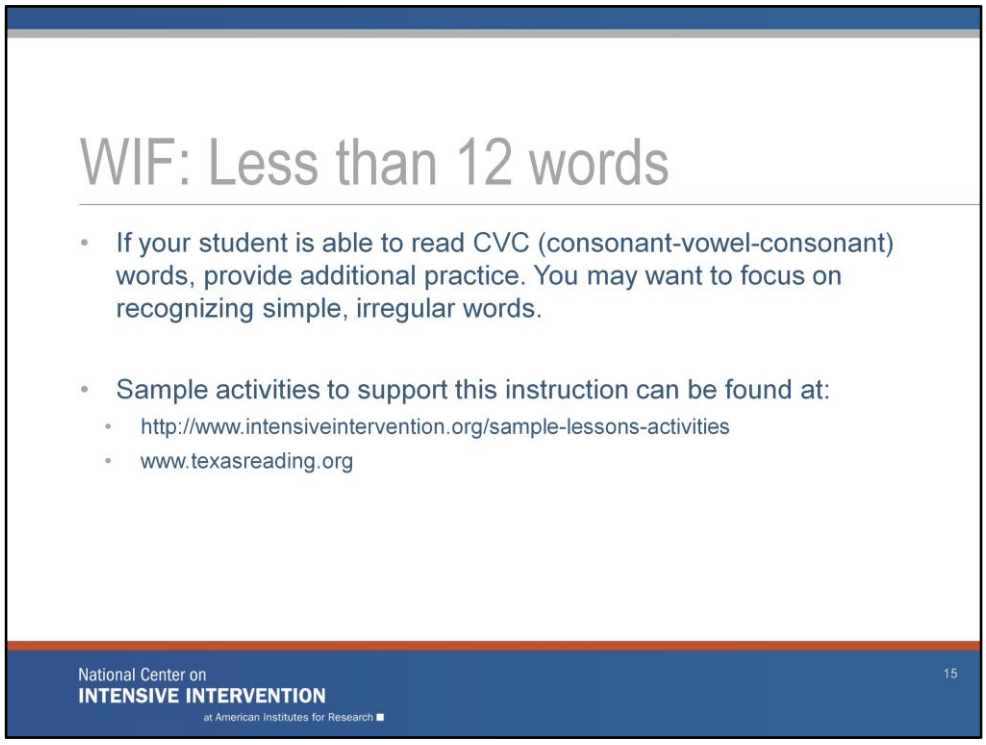
Here are some examples of phonological awareness activities, listed in order from easiest to most challenging. Keep this in mind when selecting skills to target your instruction.

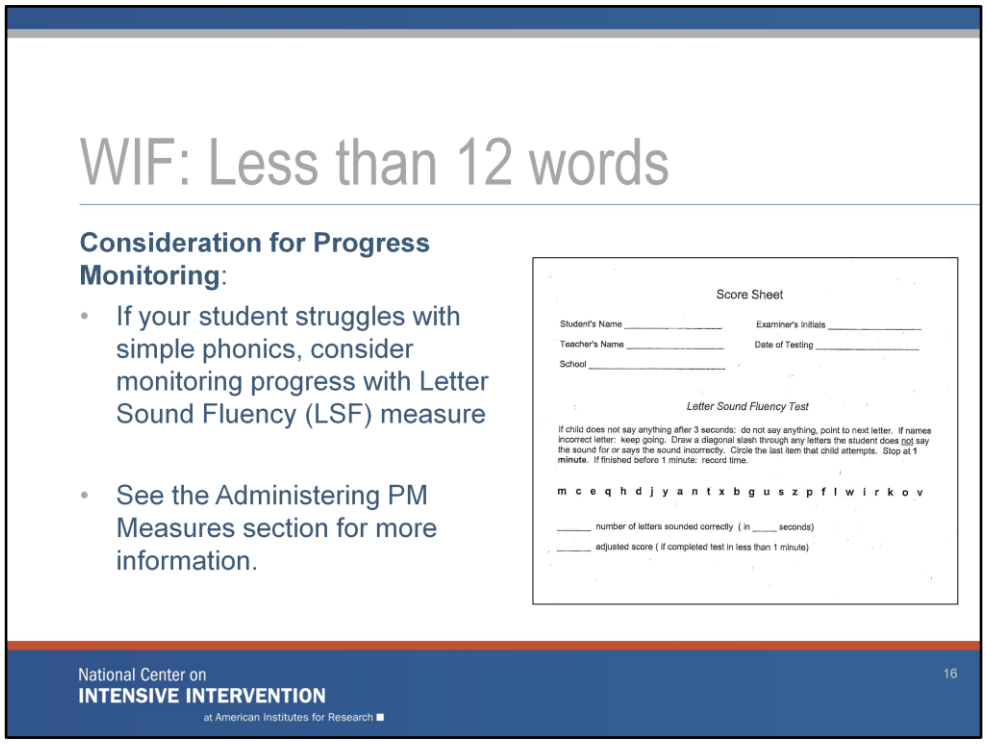


This is a sample instructional routine for phonemic awareness instruction focused on teaching isolation of sounds. This particular lesson is taken from the Florida Center on Reading Research (FCRR). NCII has created a set of adapted lessons, including lessons from FCRR, that are available at this link: http://www.intensiveintervention.org/sample-lessons-activities



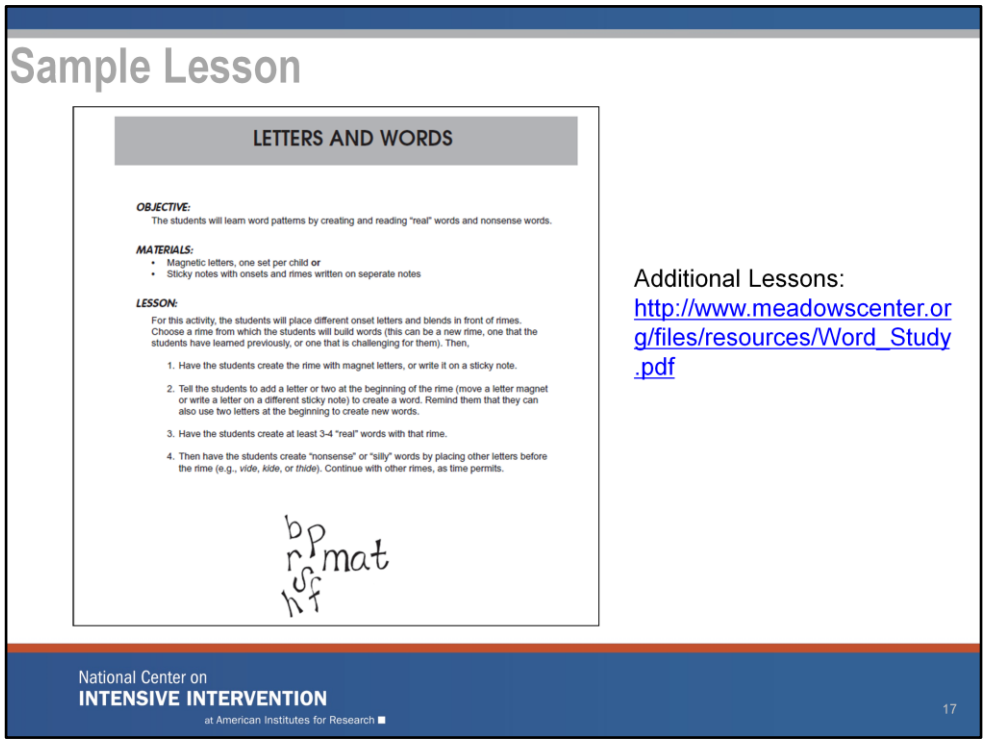
If your student is able to read CVC (consonant-vowel-consonant) words, you can provide additional practice with activities such as Letters and Words, Change One Letter, Silly Stories, or Bag of Tricks. These activities are available at: http://www.intensiveintervention.org/sample-lessons-activities

In addition, you may want to consider an intervention that focuses on recognizing simple, irregular words, such as Reading Irregular Words from www.texasreading.org.

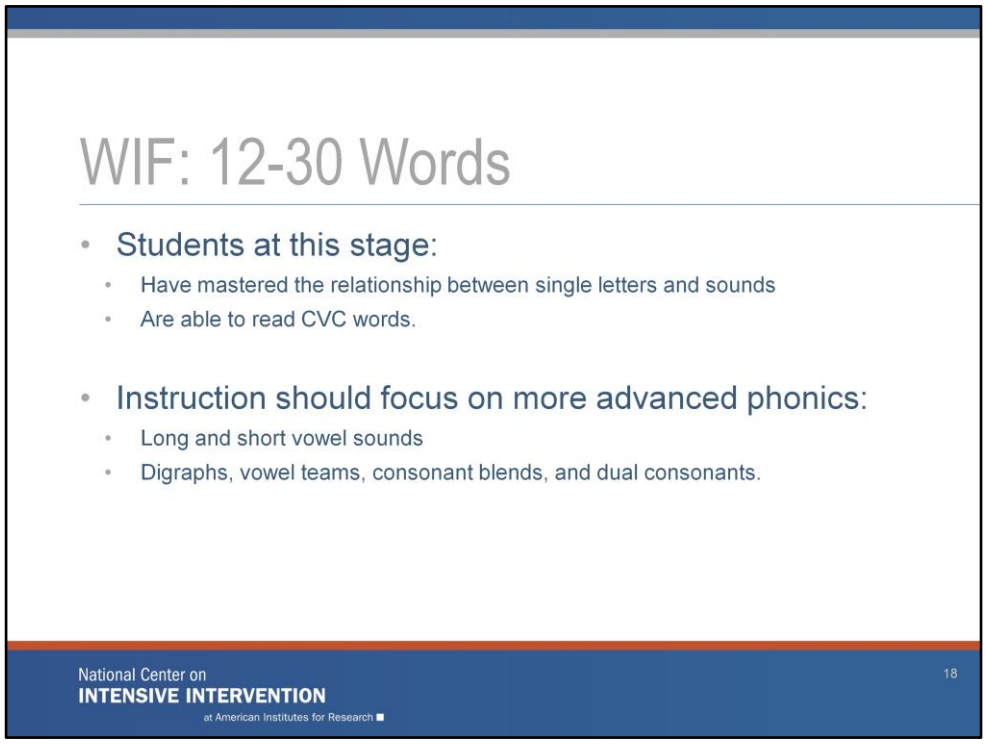


Additionally, if your student struggles even with simple phonics, you might consider monitoring the student's progress with Letter Sound Fluency (LSF). The "Administering Progress Monitoring Measures" section of this module includes more information about administering the LSF progress monitoring measure.

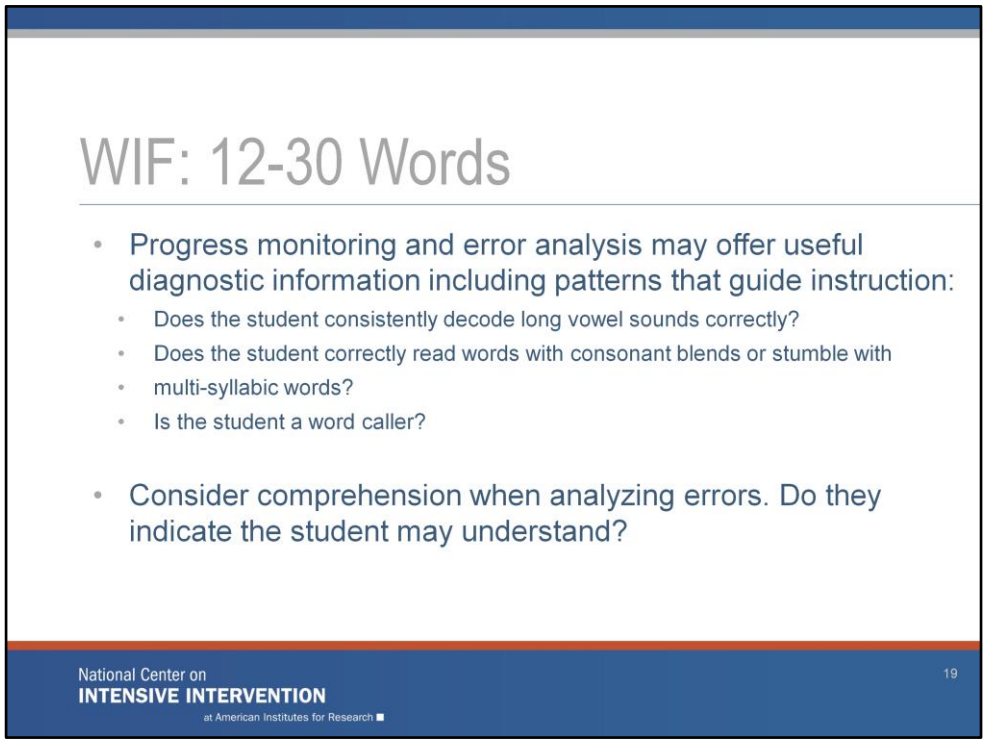
The Progress Monitoring Handout also includes instructions for administering the LSF progress monitoring measure and a sample assessment on pp. 2-4.



Additional sample reading lessons and activities are available on the NCII website. These lessons can be used for students scoring less that 12 words on the WIF who still require support with phonological awareness, phonemic awareness, and phonics. For example, this "Letters and Words" activity is from a Meadow's Center resource, Word Study for Students with Learning Disabilities and English Language Learners. This resource can be found at this link: http://www.meadowscenter.org/files/resources/Word_Study.pdf

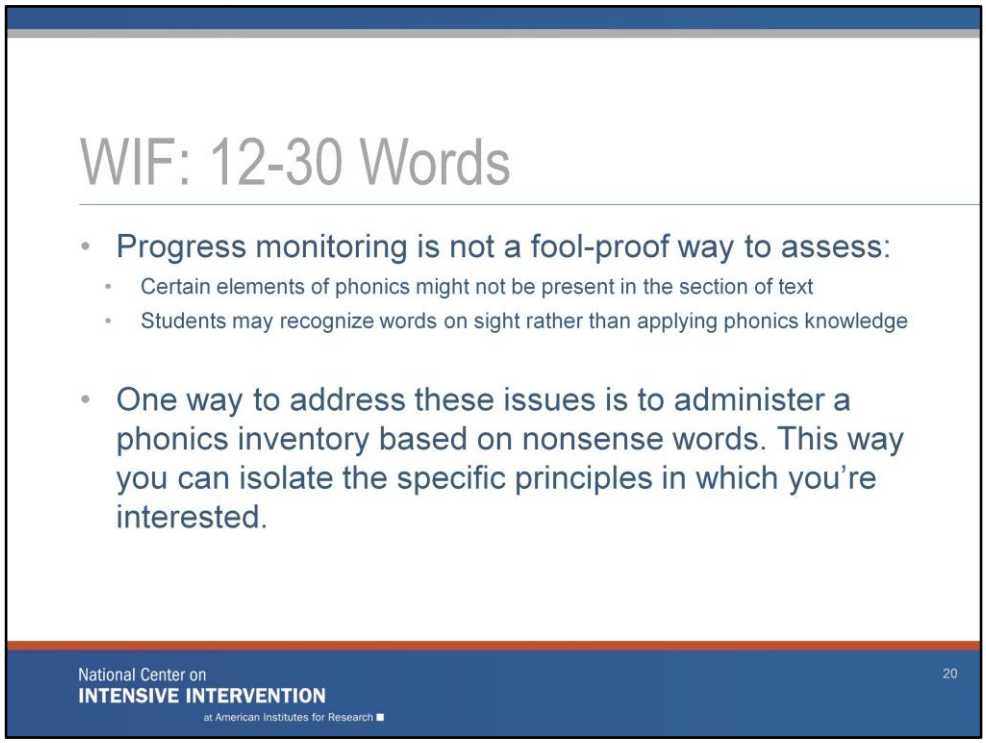


Students at this stage of reading development are likely to benefit from systematic instruction in phonics. Instruction should focus on more advanced principles of phonics, including distinguishing between long and short vowels, digraphs, vowel teams, consonant blends, and dual consonants



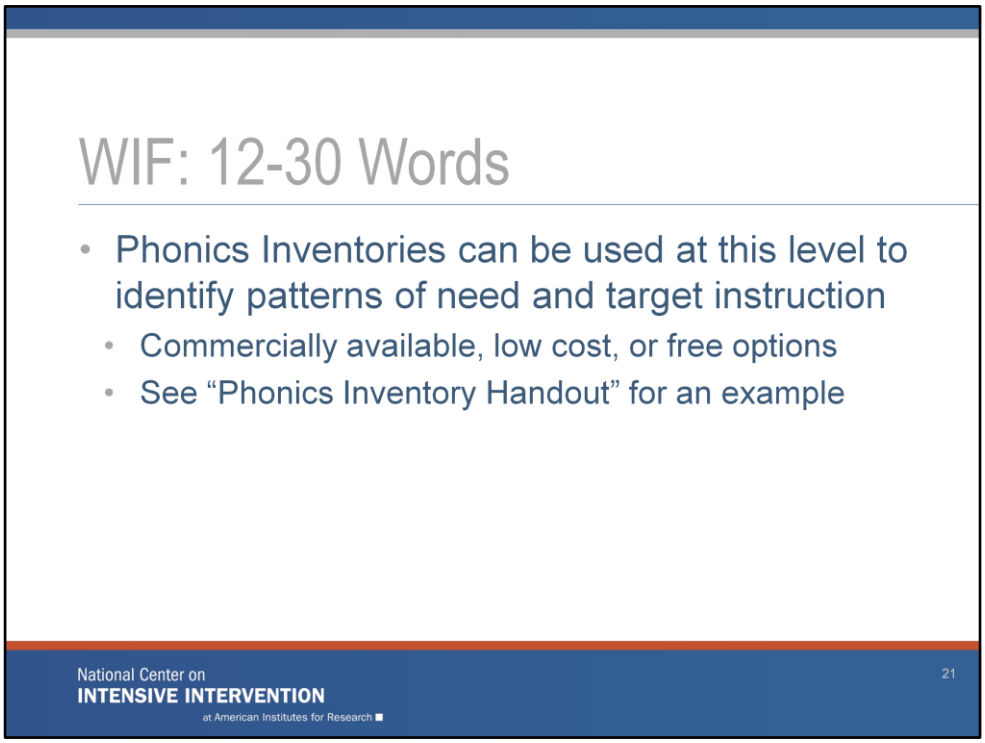
Progress monitoring assessments may give useful diagnostic information about your students. Think back to the error analysis activity you completed. Are there patterns in the incorrectly read words that can guide instruction? *Read bulleted list.*

Sometimes reading errors indicate the student is comprehending the passage. For example, students may use the word “woman” in place of the word “lady” because it fits the meaning of the sentence. It is important to note these patterns when collecting diagnostic information.



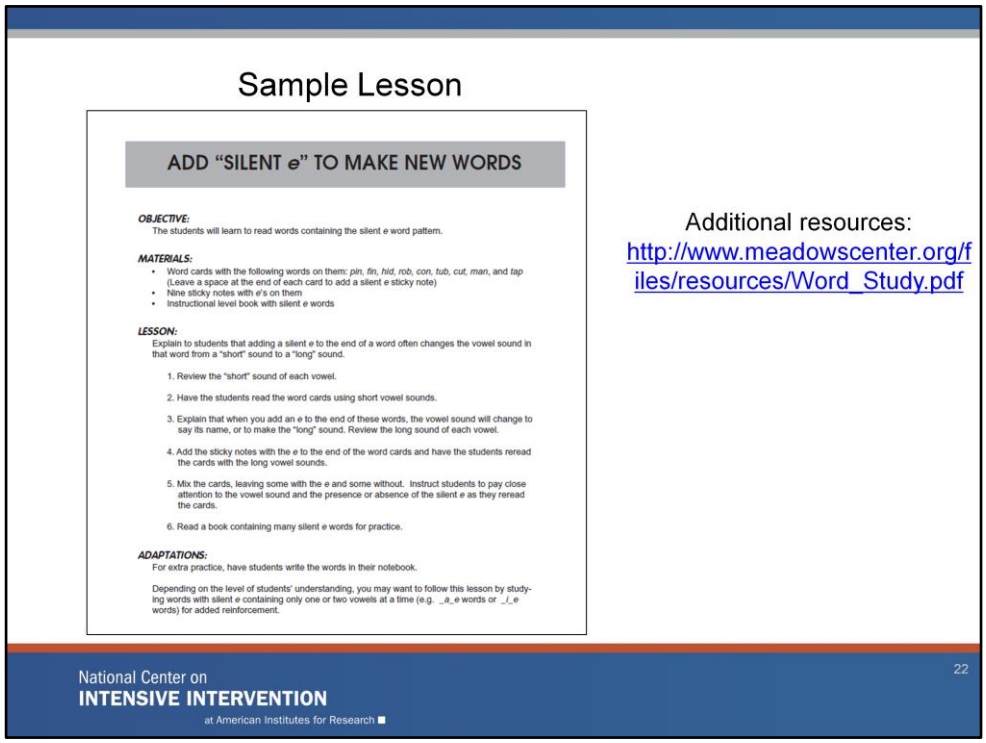
It is possible that you may run into a few problems when collecting diagnostic information. Not all phonics elements are present in all texts, so you'll want to make sure that the elements you're looking for are present in the text the students read. It is also important to consider that when a student reads a text they may actually recognize the words based on sight rather than applying their knowledge of phonics to decipher them.

One way to circumvent these problems is to administer a phonic inventory that uses nonsense words. This will help to incorporate specific phonics principles and will eliminate the use of sight recognition in reading.

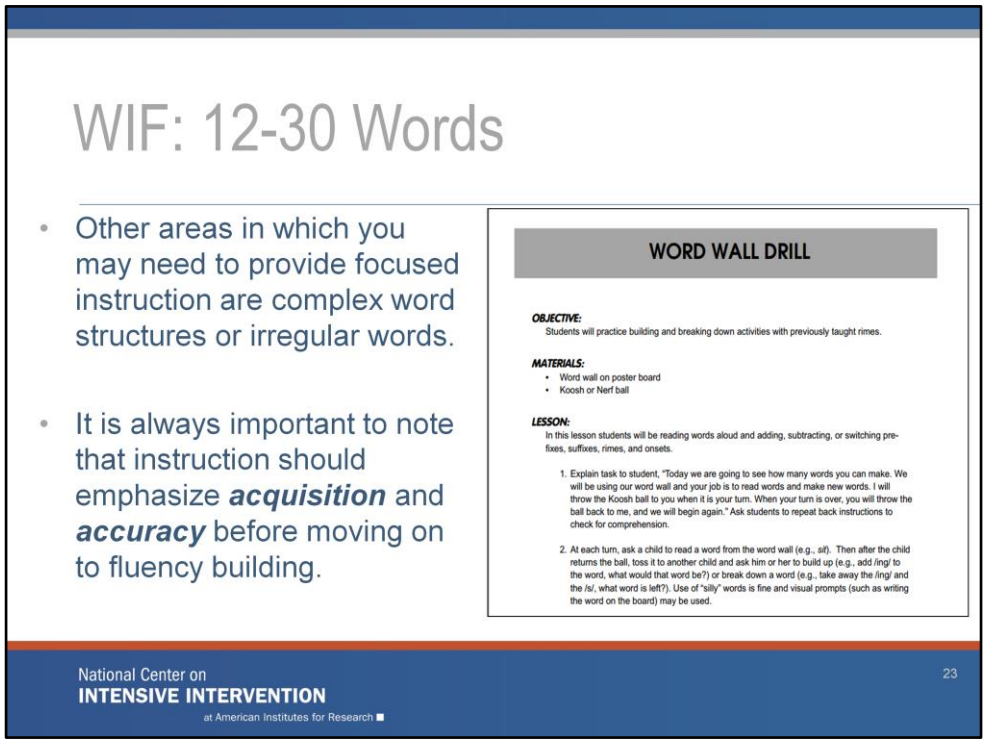


There are several commercially available phonics inventories available for little or no cost. If you'd like to look at a phonics inventory that assesses a student's skill at decoding both single syllable and multi-syllabic syllables, see the Phonics Inventory handout. As you administer the inventory, take note of the types of phonics patterns that your student has difficulty decoding and target your instruction to address these patterns.

For example, if the student doesn't decode "Final e" words correctly, you could try focusing addressing this issue by specifically targeting your instruction at words following that pattern.



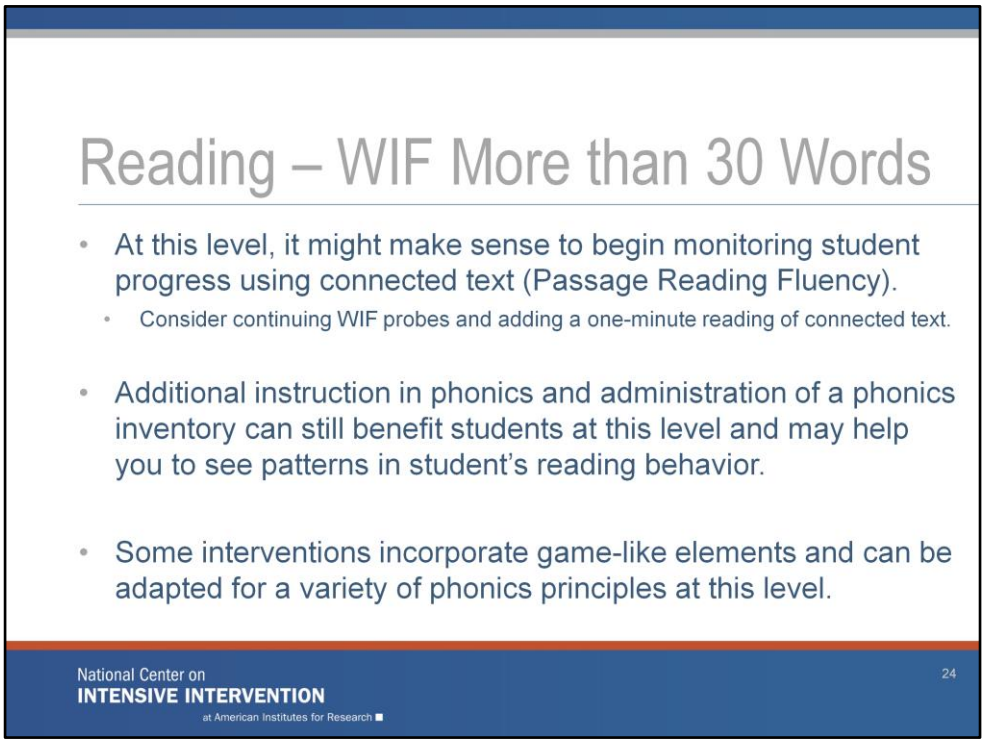
For example, this lesson, found in the Meadows Center for Preventing Educational Risk's library of resources specifically addresses silent 'e' rules and words. For additional resources in word study that especially target students with learning disabilities or English Learners, you can to the link above.



Word Hunt and Word Wall are activities that can be used with both simple phonetic structures and more complex word structures including suffixes and prefixes. Another area of focus might want to be on recognition of irregular words. Identifying Irregular Words is the first step in a series of interventions designed to build automaticity in this skill. Increasing Accuracy and Rate and Rapid Word Identification are interventions that would follow.

It is always important to remember that instruction should emphasize acquisition and accuracy before moving on to fluency building activities.

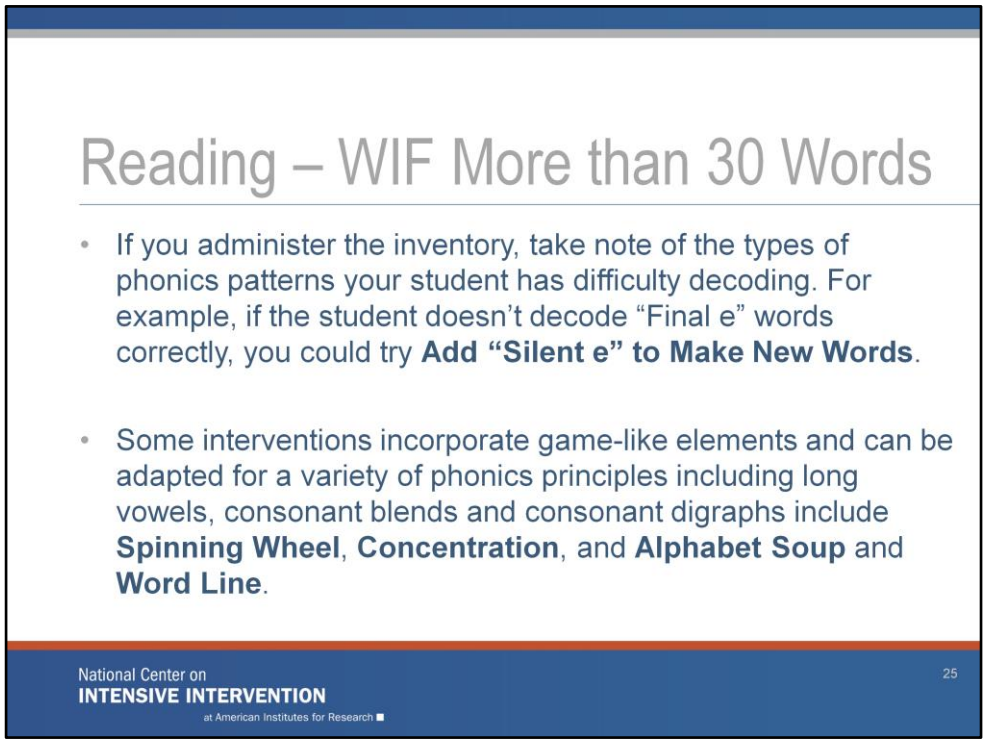
Additional activities can be found in the Meadows Center Library at this link: http://www.meadowscenter.org/files/resources/Word_Study.pdf



If your student is reading at this level it may make sense to begin monitoring passage reading fluency. You may want to continue WIF probes, but consider adding connected text.

Students at this level may also benefit from additional instruction in phonics. As we discussed earlier, a sample phonics inventory is included in the Phonics Inventory handout. Non-sense words phonics inventories can continue to isolate any weaknesses that need to be addressed.

Additionally, interventions that incorporate game-like elements help address the needs at this level.


Reading – WIF More than 30 Words
If you administer the inventory, take note of the types of phonics patterns your student has difficulty decoding. For example, if the student doesn't decode "Final e" words correctly, you could try **Add "Silent e" to Make New Words**.
Some interventions incorporate game-like elements and can be adapted for a variety of phonics principles including long vowels, consonant blends and consonant digraphs include **Spinning Wheel**, **Concentration**, and **Alphabet Soup** and **Word Line**.
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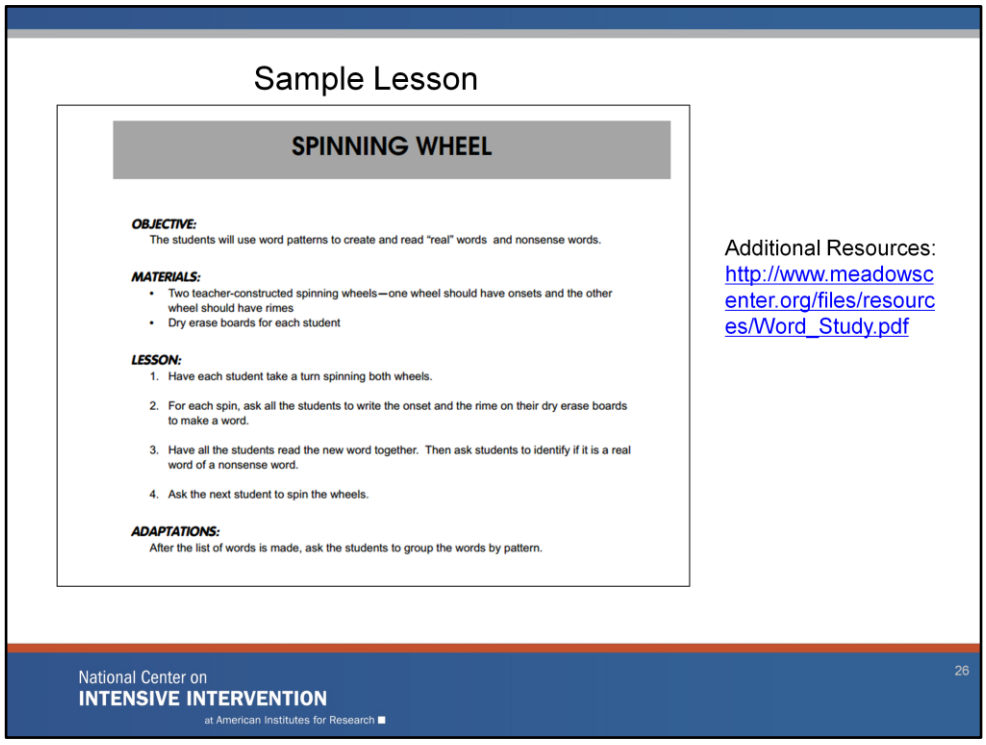
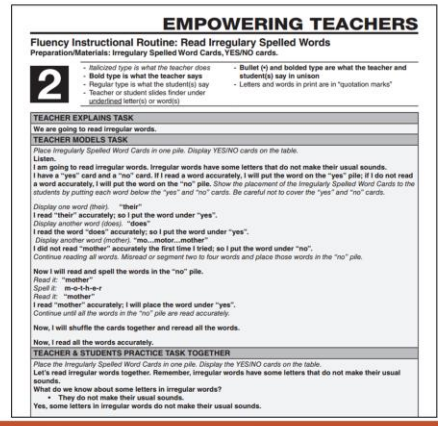
Read slide.



For example, this word study lesson focuses on creating a "spinning wheel" of real and nonsense words. This, and other word study activities specifically targeted at students with learning disabilities and English Learners can be found in the Meadows Center Library at the link on this slide.

Reading – WIF More than 30 Words

- Recognizing irregular words may also need to be an area of instructional focus
- Focus on ***acquisition*** and ***accuracy*** before building fluency in a skill.
- (http://www.fcrr.org/assessment/et/routines/pdf/instRoutines_KPA4.pdf



EMPOWERING TEACHERS

Fluency Instructional Routine: Read Irregulary Spelled Words

Preparation/Materials: Irregulary Spelled Word Cards, YES/NO cards.

2

- *Italicized type is what the teacher does*
- **Bold type is what the teacher says**
- Regular type is what the student(s) say
- Teacher or student slides finder under underlined letter(s) or word(s)
- **Bullet (•) and bolded type are what the teacher and student(s) say in unison**
- Letters and words in print are in "quotation marks"

TEACHER EXPLAINS TASK

We are going to read irregular words.

TEACHER MODELS TASK

Place Irregularly Spelled Word Cards in one pile. Display YES/NO cards on the table.

Listen.

I am going to read irregular words. Irregular words have some letters that do not make their usual sounds.

I have a "yes" card and a "no" card. If I read a word accurately, I will put the word on the "yes" pile; if I do not read a word accurately, I will put the word on the "no" pile. *Show the placement of the Irregularly Spelled Word Cards to the students by putting each word below the "yes" and "no" cards. Be careful not to cover the "yes" and "no" cards.*

Display one word (their). **"their"**

I read "their" accurately; so I put the word under "yes".

Display another word (does). **"does"**

I read the word "does" accurately; so I put the word under "yes".

Display another word (mother). **"mo…motor…mother"**

I did not read "mother" accurately the first time I tried; so I put the word under "no".

Continue reading all words. Misread or segment two to four words and place those words in the "no" pile.

Now I will read and spell the words in the "no" pile.

Read it: **"mother"**

Spell it: **m-o-t-h-e-r**

Read it: **"mother"**

I read "mother" accurately; I will place the word under "yes".

Continue until all the words in the "no" pile are read accurately.

Now, I will shuffle the cards together and reread all the words.

Now, I read all the words accurately.

TEACHER & STUDENTS PRACTICE TASK TOGETHER

Place the Irregularly Spelled Word Cards in one pile. Display the YES/NO cards on the table.

Let's read irregular words together. Remember, irregular words have some letters that do not make their usual sounds.

What do we know about some letters in irregular words?

- **They do not make their usual sounds.**

Yes, some letters in irregular words do not make their usual sounds.

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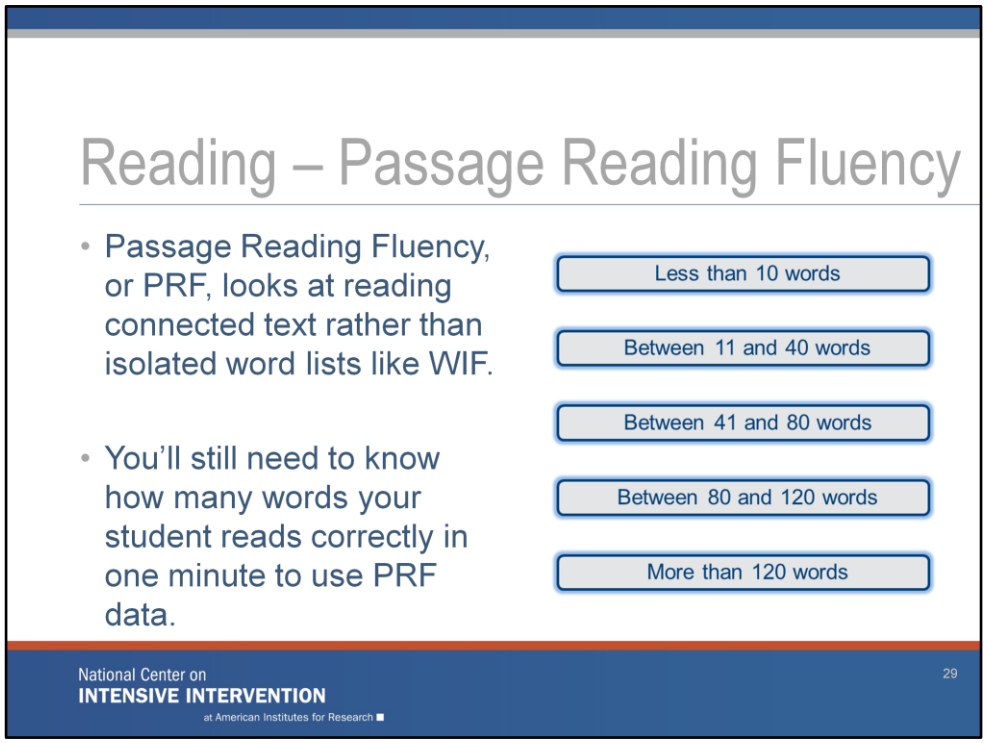
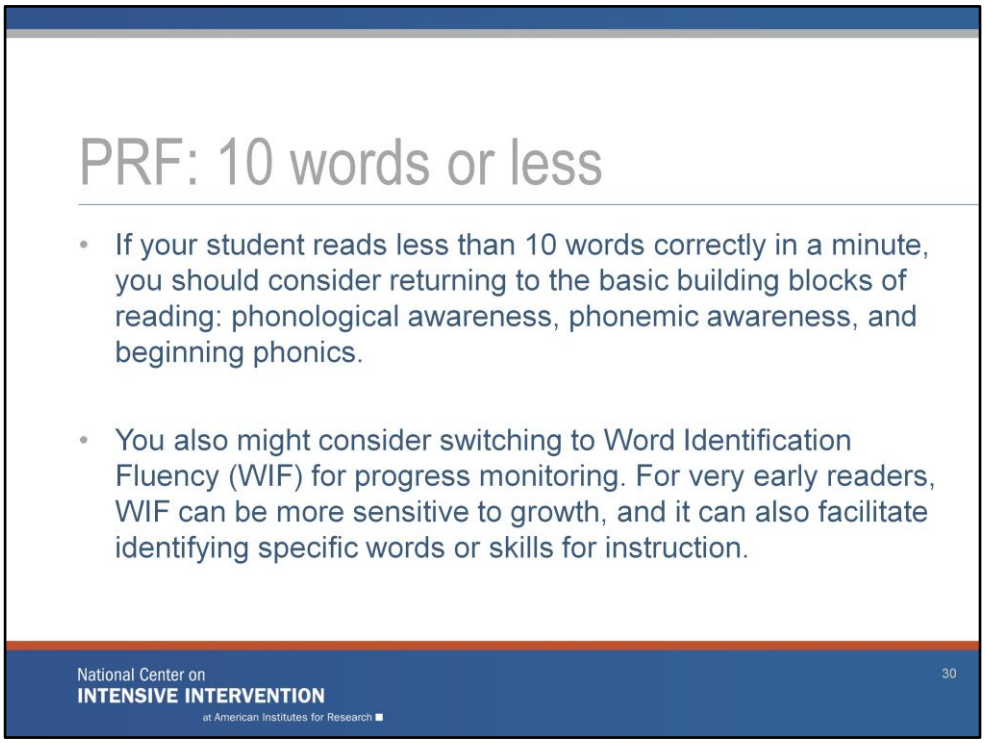
Working on recognition of irregular words may need to be one area of instructional focus with students reading at this level. A sample lesson on irregular words can be found on the Florida Center for Reading's website at the link above.

Remember, always focus on acquisition and accuracy before addressing skill fluency

Identifying Target Skills with PRF Data



Passage Reading Fluency is often also known as Oral Reading Fluency or ORF. Here we say passage reading fluency because it is referring to the reading of connected text. PRF is based on a one minute reading of connected text rather than reading from an isolated word list like the WIF assessment



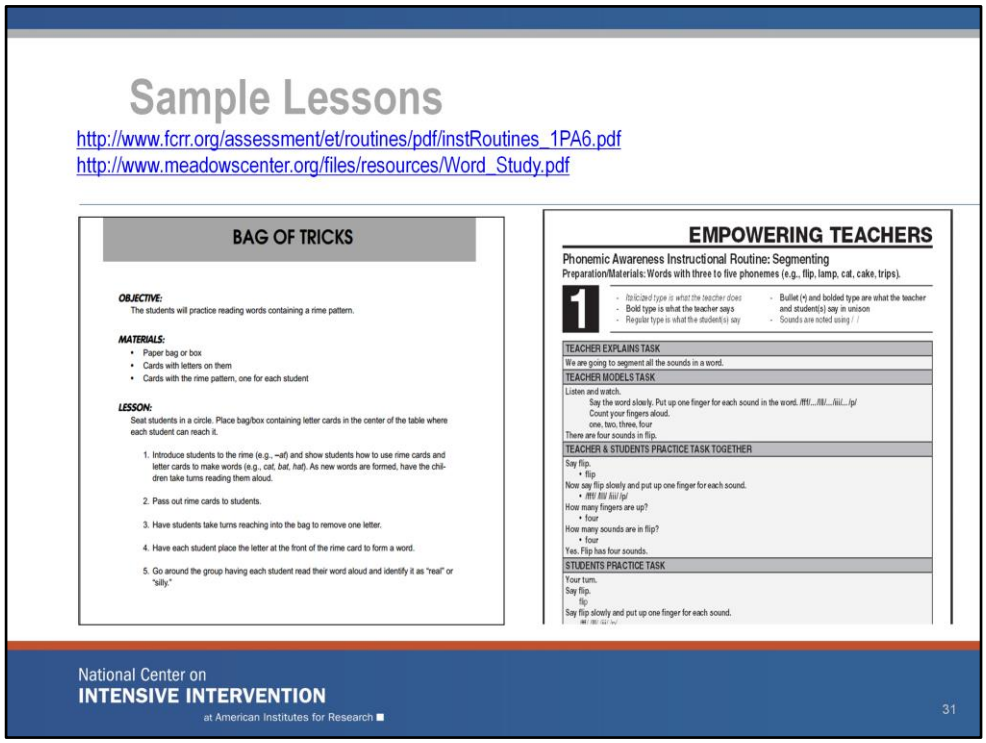
If your student is reading less than 10 words correctly in a minute, you may need to consider providing additional phonological awareness instruction.

Refer to previous slides or review building blocks as needed:

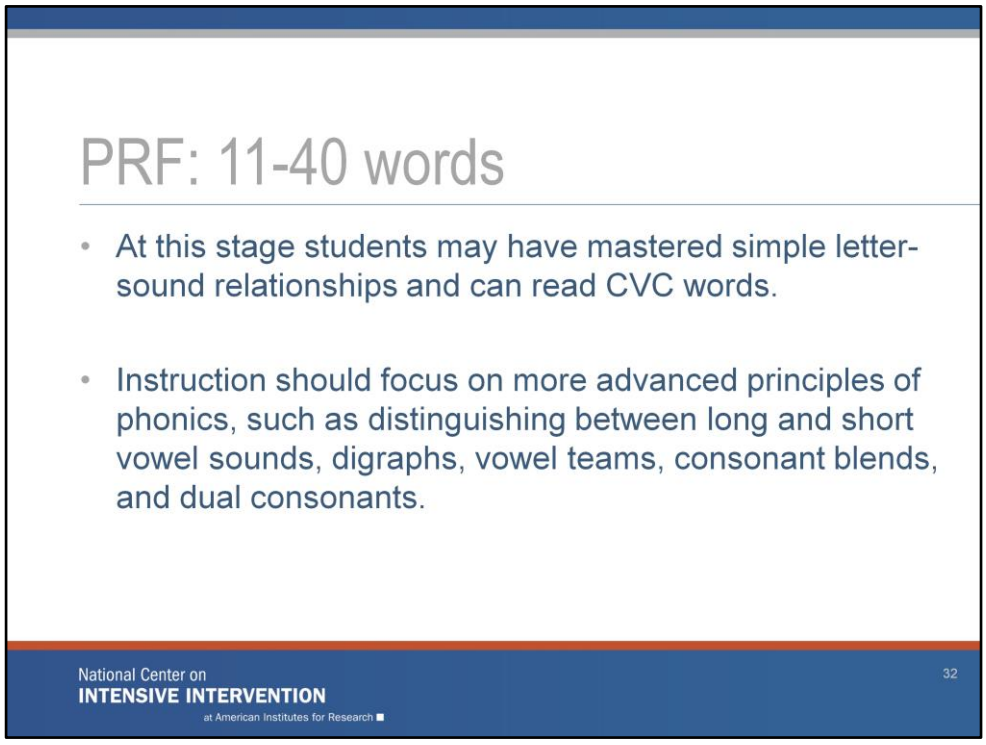
Phonological awareness is the understanding that oral language can be broken down into smaller components and the ability to manipulate these components. For example, the ability to count the number of syllables in a spoken word demonstrates one aspect of phonological awareness.

Phonemic awareness is a subset of phonological awareness. It is the understanding that words are made up of individual sounds or phonemes and the ability to manipulate these phonemes either by segmenting, blending, or changing individual phonemes within words to create new words.

Phonics is the relationship between letters of the written language and the sounds of the spoken language. The first steps of phonics instruction focus on the relationship between single letters and sounds.



Sample lessons that address returning to basic phonological awareness principles include segmenting and identifying rime patterns. These lessons, in addition to others addressing word study for students with LD and English Language Learners can be found on the Florida Center for Reading and Meadow Center webpages at the links above.


PRF: 11-40 words
• At this stage students may have mastered simple letter-sound relationships and can read CVC words.
• Instruction should focus on more advanced principles of phonics, such as distinguishing between long and short vowel sounds, digraphs, vowel teams, consonant blends, and dual consonants.
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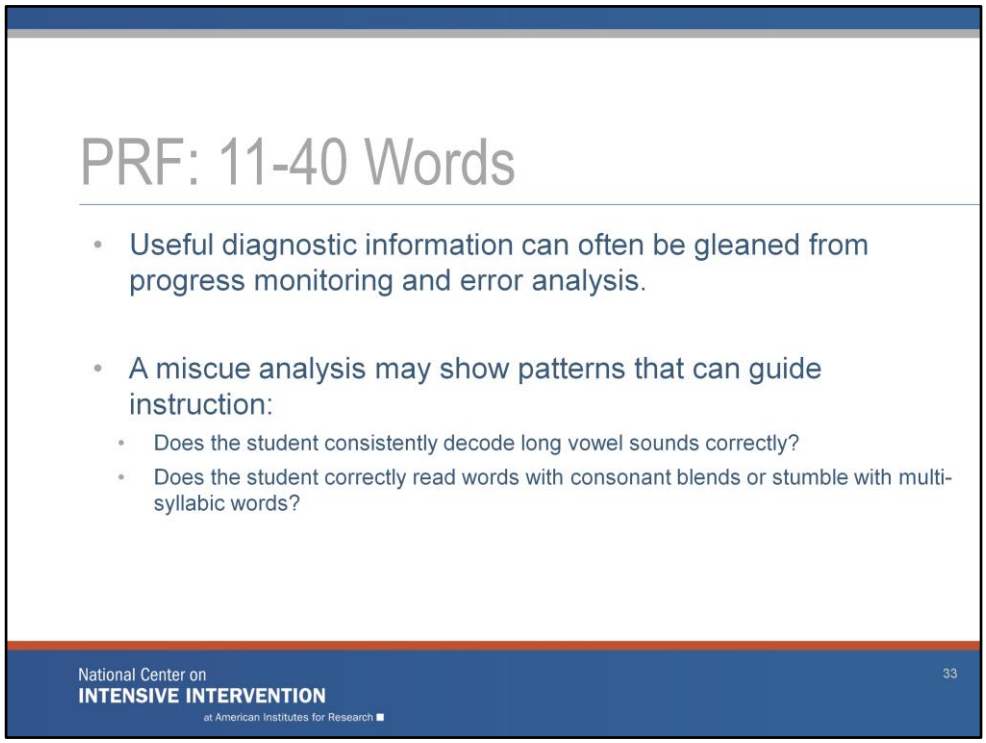
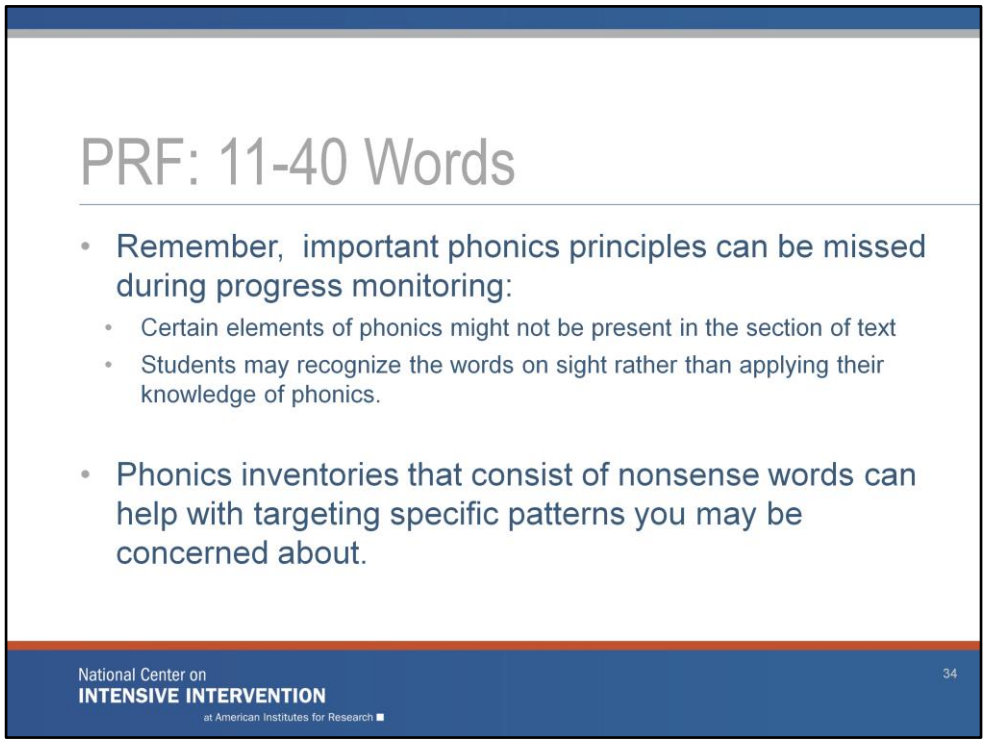
Read slide.



Progress monitoring assessments may give useful diagnostic information about your students. Think back to the error analysis activity you completed. Are there patterns in the incorrectly read words that can guide instruction? *Read bulleted list.*

For more information on this see the section on Miscue Analysis

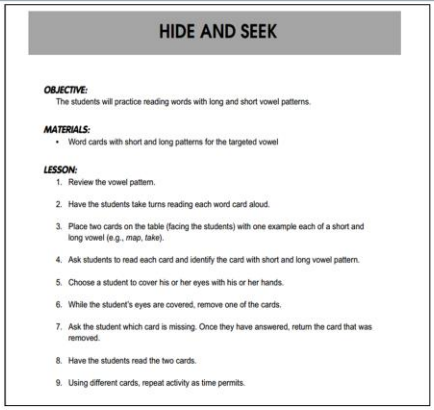


It is possible that you may run into a few problems when collecting diagnostic information. Not all phonics elements are present in all texts, so you'll want to make sure that the elements you're looking for are present in the text the students read. It is also important to consider that when students read a text they may actually recognize the words based on sight rather than applying their knowledge of phonics to decipher them.

One way to circumvent these problems is to administer a phonics inventory that uses nonsense words. This will help to incorporate specific phonics principles and will eliminate the use of sight recognition in reading.

PRF: 11-40 words

- If students have difficulty distinguishing between long and short vowel sounds, you might try sample interventions that incorporate game-like elements to address these needs.
- http://www.meadowscenter.org/files/resources/Word_Study.pdf



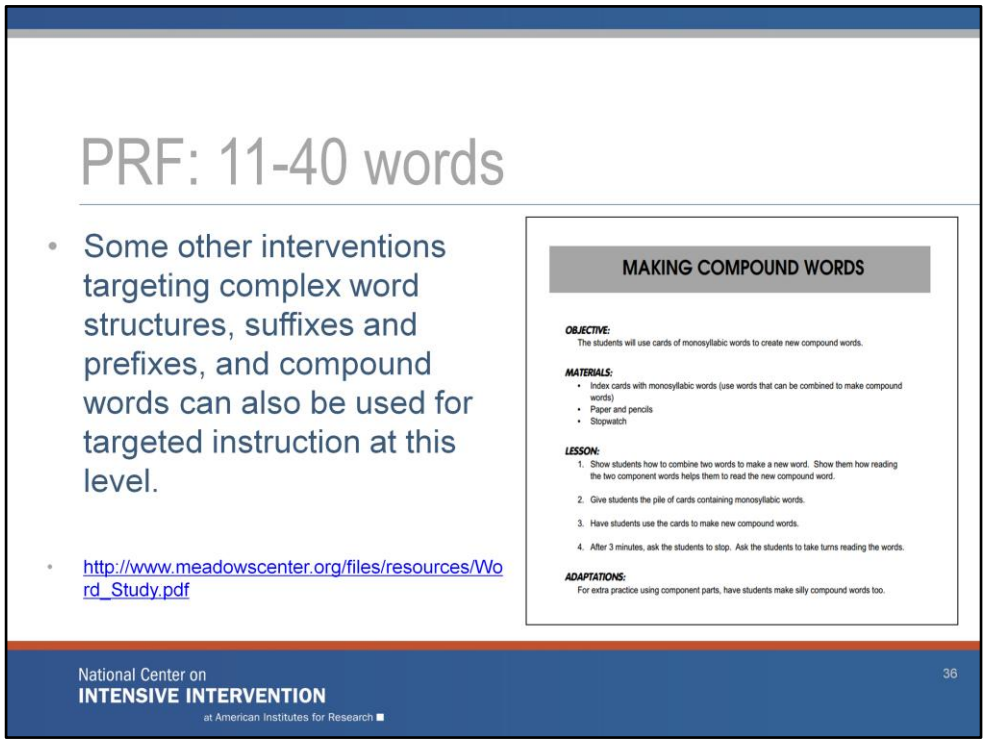
HIDE AND SEEK

OBJECTIVE:
The students will practice reading words with long and short vowel patterns.

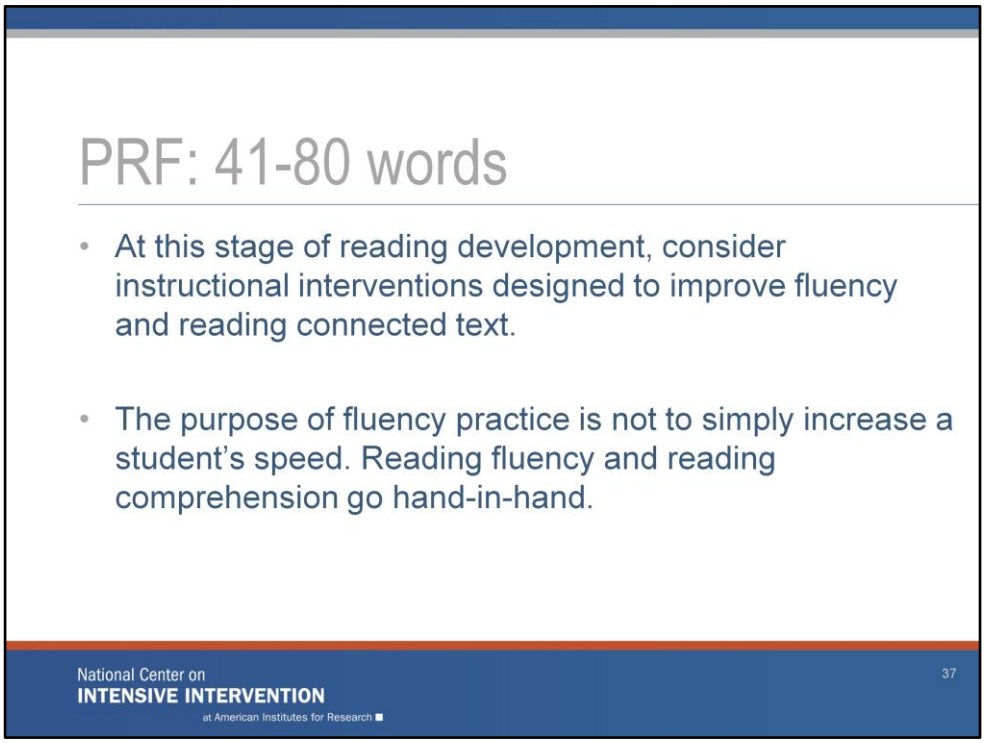
MATERIALS:
- Word cards with short and long patterns for the targeted vowel

LESSON:
1. Review the vowel pattern.
2. Have the students take turns reading each word card aloud.
3. Place two cards on the table (facing the students) with one example each of a short and long vowel (e.g., *map, take*).
4. Ask students to read each card and identify the card with short and long vowel pattern.
5. Choose a student to cover his or her eyes with his or her hands.
6. While the student's eyes are covered, remove one of the cards.
7. Ask the student which card is missing. Once they have answered, return the card that was removed.
8. Have the students read the two cards.
9. Using different cards, repeat activity as time permits.

If students are having difficulty with phonics activities including distinguishing between vowel sounds you can address them with interventions like the one here found in the resources library at the Meadows Center.



Other interventions that target more complex phonetic principles can also be found in the resources library at the Meadows Center (link above). This one looks at building compound words.

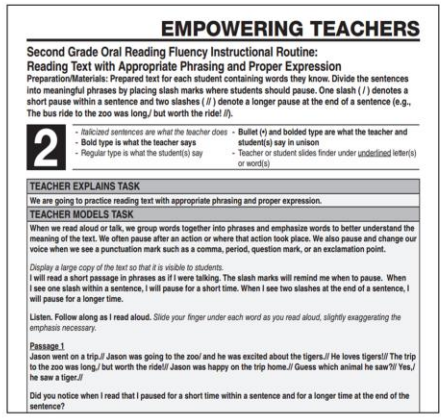


At this stage of development instructional interventions should be focused on improving reading fluency. The purpose of reading fluency isn't just to build speed for the sake of speed, it goes hand in had with reading comprehension. When students read haltingly, they can lose the sense of continuity of the text and have more difficulty understanding the ideas they're reading.

PRF: 41-80 words

- Specific, targeted interventions that address fluency may include repeated practice with connected text and building automaticity in recognition of irregular words

- http://www.fcrr.org/assessment/et/routines/pdf/instRoutines_1PA6.pdf



EMPOWERING TEACHERS

Second Grade Oral Reading Fluency Instructional Routine:
Reading Text with Appropriate Phrasing and Proper Expression

Preparation/Materials: Prepared text for each student containing words they know. Divide the sentences into meaningful phrases by placing slash marks where students should pause. One slash (/) denotes a short pause within a sentence and two slashes (//) denote a longer pause at the end of a sentence (e.g., The bus ride to the zoo was long,/ but worth the ride! //).

2

- *Italicized sentences are what the teacher does*
- **Bold type is what the teacher says**
- Regular type is what the student(s) say
- **Bullet (•) and bolded type are what the teacher and student(s) say in unison**
- Teacher or student slides finger under underlined letter(s) or word(s)

TEACHER EXPLAINS TASK

We are going to practice reading text with appropriate phrasing and proper expression.

TEACHER MODELS TASK

When we read aloud or talk, we group words together into phrases and emphasize words to better understand the meaning of the text. We often pause after an action or where that action took place. We also pause and change our voice when we see a punctuation mark such as a comma, period, question mark, or an exclamation point.

Display a large copy of the text so that it is visible to students.

I will read a short passage in phrases as if I were talking. The slash marks will remind me when to pause. When I see one slash within a sentence, I will pause for a short time. When I see two slashes at the end of a sentence, I will pause for a longer time.

Listen. Follow along as I read aloud. *Slide your finger under each word as you read aloud, slightly exaggerating the emphasis necessary.*

Passage 1
Jason went on a trip.// Jason was going to the zoo/ and he was excited about the tigers.// He loves tigers!// The trip to the zoo was long,/ but worth the ride!// Jason was happy on the trip home.// Guess which animal he saw?// Yes,/ he saw a tiger.//

Did you notice when I read that I paused for a short time within a sentence and for a longer time at the end of the sentence?

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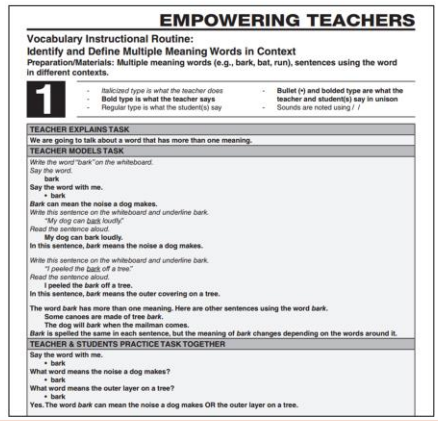
Targeted fluency practice is a critical way to build the skills of readers at this level. Once example lesson in appropriate phrasing and proper expression is demonstrated here. Additional interventions can be found on the Florida Center for Reading's site.

PRF: 81-120 words

- At this stage, students are well on their way to becoming competent readers.
- Students may continue to benefit from repeated readings and instruction in reading multiple meaning words in context
- http://www.fcrr.org/assessment/et/routines/pdf/instRoutines_1V.pdf



EMPOWERING TEACHERS

Vocabulary Instructional Routine:
Identify and Define Multiple Meaning Words in Context
Preparation/Materials: Multiple meaning words (e.g., bark, bat, run), sentences using the word in different contexts.

1

- *Italicized type is what the teacher does*
- **Bold type is what the teacher says**
- Regular type is what the student(s) say
- **Bullet (•) and bolded type are what the teacher and student(s) say in unison**
- Sounds are noted using / /

TEACHER EXPLAINS TASK

We are going to talk about a word that has more than one meaning.

TEACHER MODELS TASK

Write the word "bark" on the whiteboard.
Say the word.
bark
Say the word with me.
• bark
***Bark* can mean the noise a dog makes.**
Write this sentence on the whiteboard and underline bark.
"My dog can bark loudly."
Read the sentence aloud.
My dog can bark loudly.
In this sentence, *bark* means the noise a dog makes.

Write this sentence on the whiteboard and underline bark.
"I peeled the bark off a tree."
Read the sentence aloud.
I peeled the *bark* off a tree.
In this sentence, *bark* means the outer covering on a tree.

The word *bark* has more than one meaning. Here are other sentences using the word *bark*.
Some canoes are made of tree *bark*.
The dog will *bark* when the mailman comes.
***Bark* is spelled the same in each sentence, but the meaning of *bark* changes depending on the words around it.**

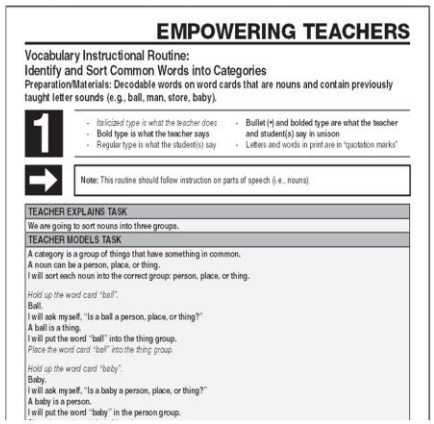
TEACHER & STUDENTS PRACTICE TASK TOGETHER

Say the word with me.
• bark
What word means the noise a dog makes?
• bark
What word means the outer layer on a tree?
• bark
Yes. The word *bark* can mean the noise a dog makes OR the outer layer on a tree.

At this level, students are on their way to becoming competent readers. They still may benefit from interventions and practice targeted at repeated readings and recognizing multiple meaning words in context. Lessons similar to this example can be found on the Florida Center's website at the link above.

PRF: 81-120 words

- At this level, interventions targeted at building vocabulary are also appropriate.
- http://www.fcrr.org/assessment/et/routines/pdf/instRoutines_1VIS2.pdf



EMPOWERING TEACHERS

Vocabulary Instructional Routine:
Identify and Sort Common Words into Categories
Preparation/Materials: Decodable words on word cards that are nouns and contain previously taught letter sounds (e.g., ball, man, store, baby).

1

- *Italicized type is what the teacher does*
- Bold type is what the teacher says
- Regular type is what the student(s) say
- Bullet (•) and bolded type are what the teacher and student(s) say in unison
- Letters and words in print are in "quotation marks"

Note: This routine should follow instruction on parts of speech (i.e., nouns).

TEACHER EXPLAINS TASK

We are going to sort nouns into three groups.

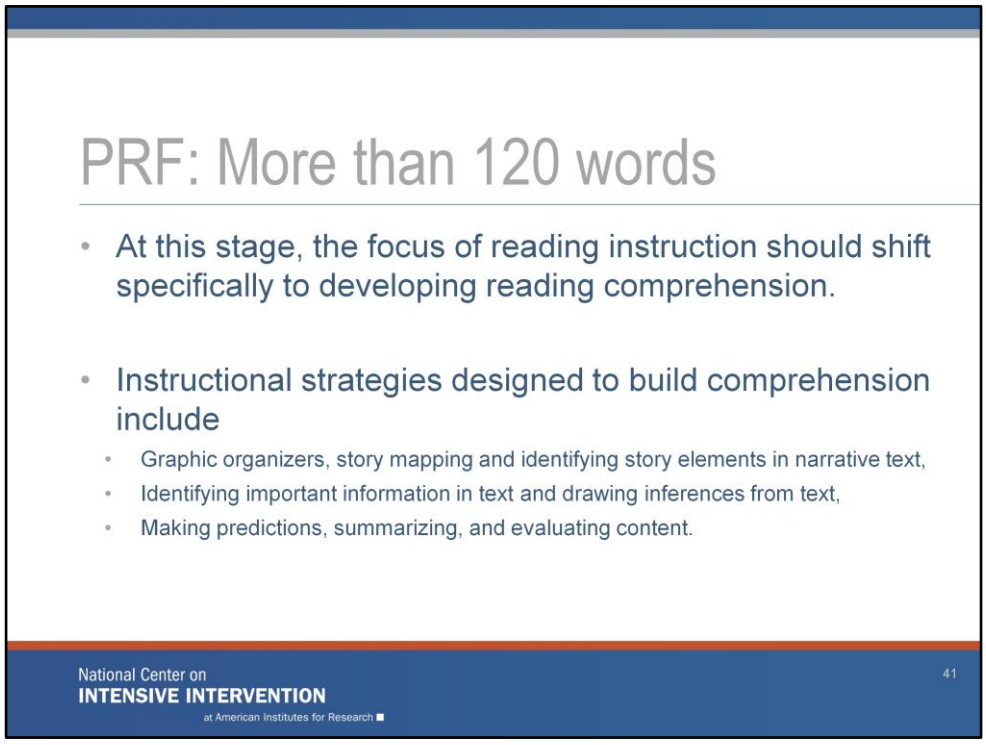
TEACHER MODELS TASK

A category is a group of things that have something in common.
A noun can be a person, place, or thing.
I will sort each noun into the correct group: person, place, or thing.

Hold up the word card "ball".
Ball.
I will ask myself, "Is a ball a person, place, or thing?"
A ball is a thing.
I will put the word "ball" into the thing group.
Place the word card "ball" into the thing group.

Hold up the word card "baby".
Baby.
I will ask myself, "Is a baby a person, place, or thing?"
A baby is a person.
I will put the word "baby" in the person group.

When students read at this level it is important to continue to build their vocabulary. Vocabulary knowledge is directly tied to both comprehension and fluency. Intervention activities like this word sort can help target this skill. This, and additional resources can be found on the Florida Center for Reading's website.


PRF: More than 120 words
At this stage, the focus of reading instruction should shift specifically to developing reading comprehension.
Instructional strategies designed to build comprehension include
Graphic organizers, story mapping and identifying story elements in narrative text,
Identifying important information in text and drawing inferences from text,
Making predictions, summarizing, and evaluating content.
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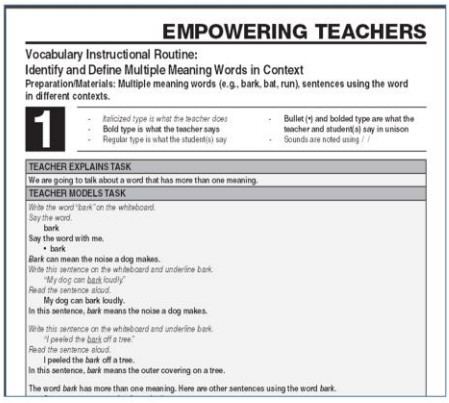
Read Slide

PRF: More than 120 words

- Some specific interventions designed to address reading comprehension include identify text structure, using graphic organizers, and recognizing multiple meaning words in context.
- http://www.fcrr.org/assessment/et/routines/pdf/instRoutines_1V.pdf



EMPOWERING TEACHERS

Vocabulary Instructional Routine:
Identify and Define Multiple Meaning Words in Context
Preparation/Materials: Multiple meaning words (e.g., bark, bat, run), sentences using the word in different contexts.

1

- *Italicized type is what the teacher does*
- **Bold type is what the teacher says**
- Regular type is what the student(s) say
- Bullet (•) and bolded type are what the teacher and student(s) say in unison
- Sounds are noted using / /

TEACHER EXPLAINS TASK

We are going to talk about a word that has more than one meaning.

TEACHER MODELS TASK

Write the word "bark" on the whiteboard.
Say the word.
bark
Say the word with me.
• **bark**
***Bark* can mean the noise a dog makes.**
Write this sentence on the whiteboard and underline bark.
"My dog can bark loudly."
Read the sentence aloud.
My dog can bark loudly.
In this sentence, *bark* means the noise a dog makes.

Write this sentence on the whiteboard and underline bark.
"I peeled the bark off a tree."
Read the sentence aloud.
I peeled the *bark* off a tree.
In this sentence, *bark* means the outer covering on a tree.

The word *bark* has more than one meaning. Here are other sentences using the word *bark*.

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Reading comprehension interventions often focus on identifying text structures, using graphic organizers, and understanding multiple meaning words in context. A sample lesson from Florida's Center for Reading is found here. Additional resources can be found at the link to their center.

Identifying Target Skills: Math

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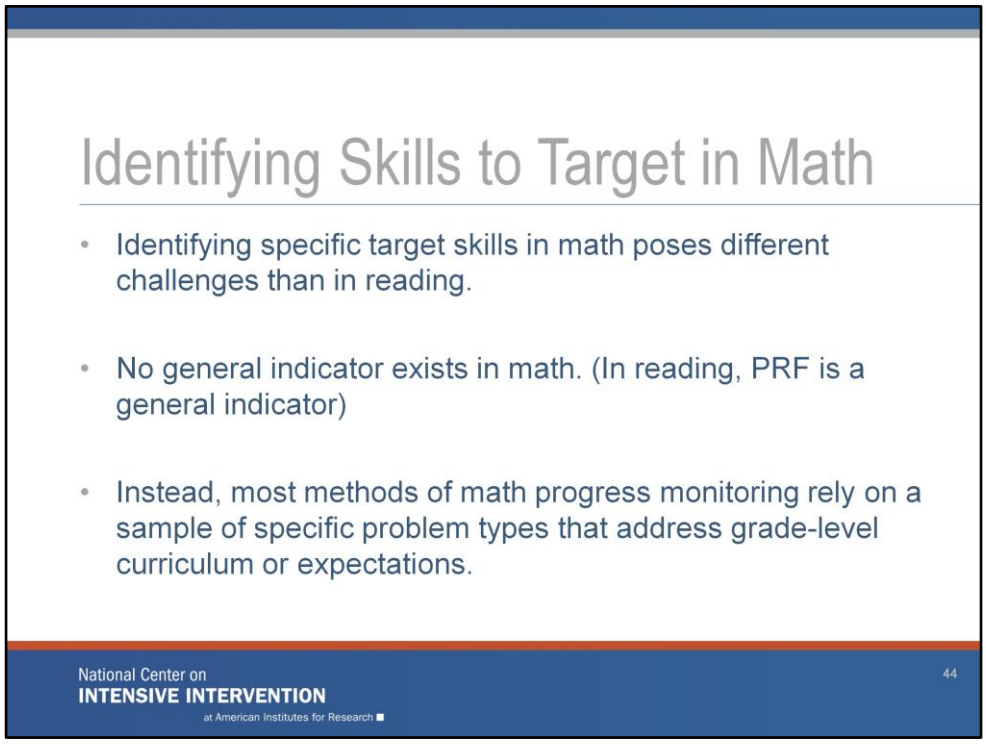
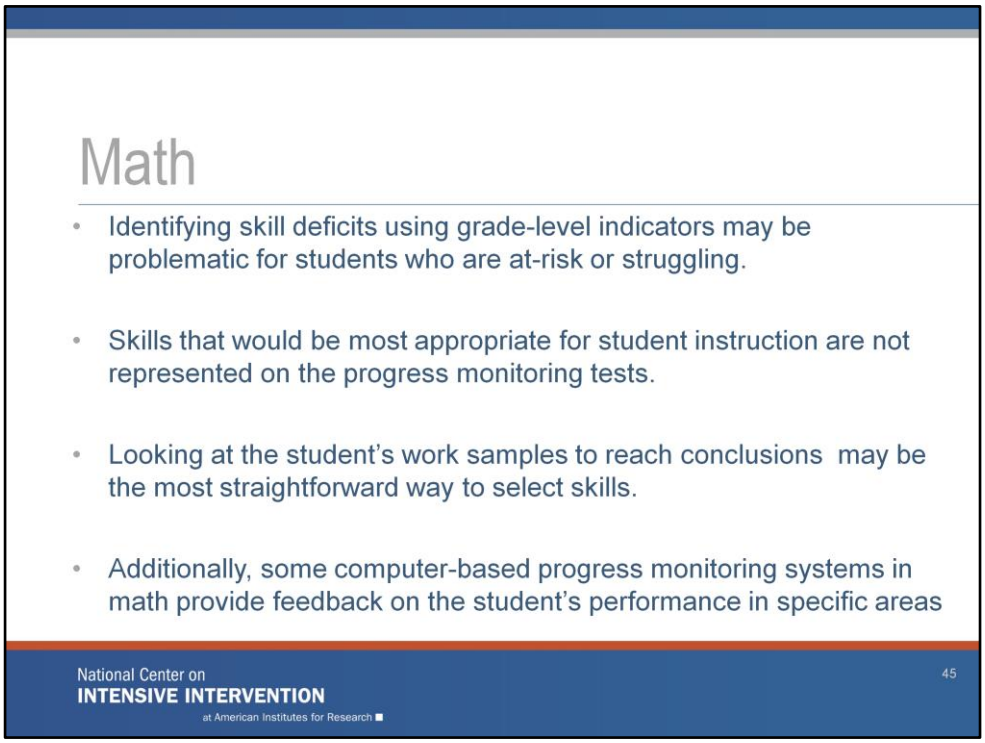


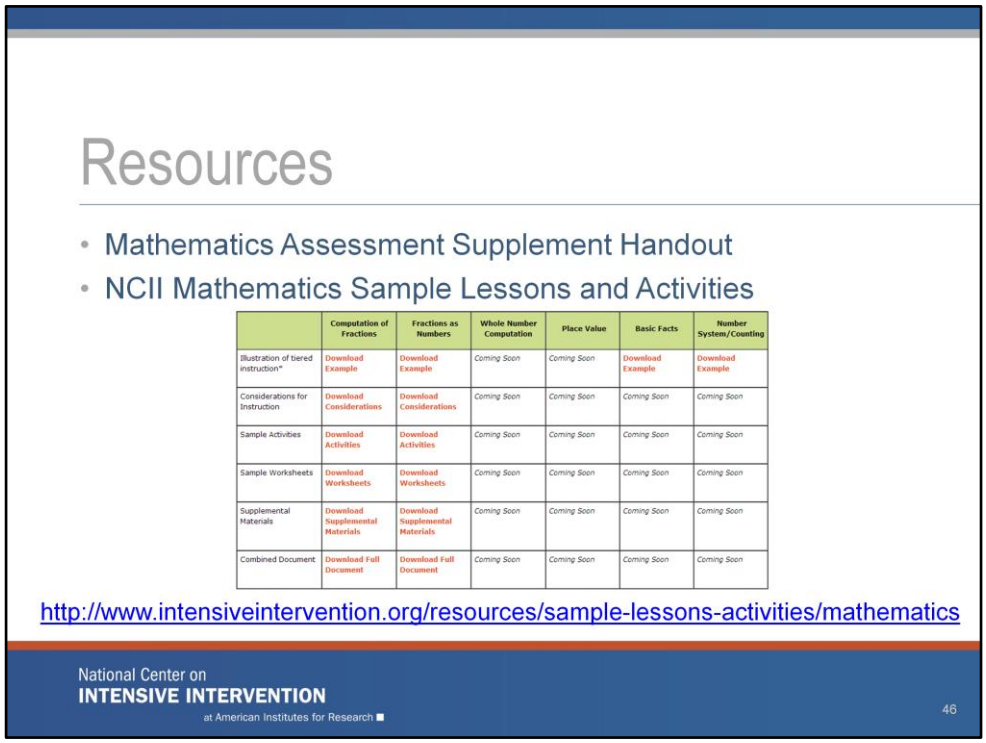
Identifying specific skills to target in math poses different challenges than in reading. One reason is because no general indicator exists in math. For example: in reading, passage reading fluency (PRF) is a well-documented general indicator of comprehensive reading development and can be used to indicate the type of instruction most appropriate for the student. No similar general indicator exists in math. Most methods for identifying target skills sample specific types of math problems or grade-level curriculum.



One reason using progress monitoring in math is problematic is that the skills your student is struggling with may not be present on the assessment or within that level of instruction. For example, if your student is struggling with basic addition but they are assessed with a multiplication measure, their true skill deficit may not be identified.

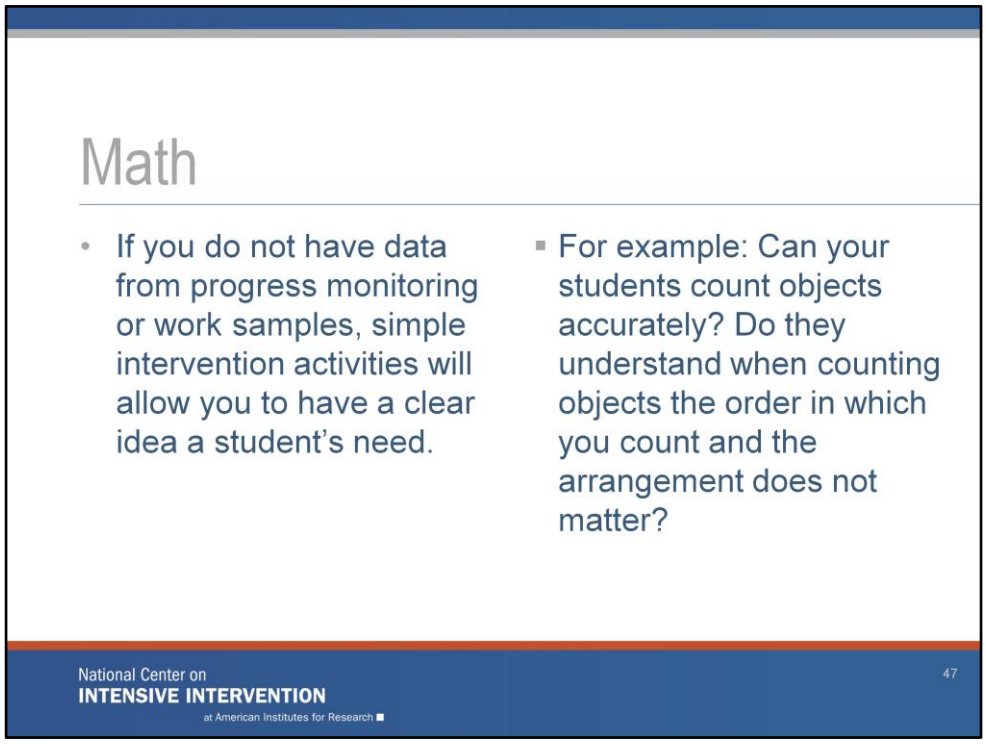
The most straightforward way to use progress monitoring to guide your selection of skills to target for instruction is to directly examine recent assessments.

Alternatively, some computer-based progress monitoring systems in math provide feedback on the student's performance in specific skills areas. This type of feedback can be invaluable in helping you select target skills for instruction.
Because of the variation in progress monitoring systems in math, this module goes back to the basics. Intensive interventions have been developed in certain key areas. Starting with the most basic skills, you will be asked whether your student has demonstrated competence in that area.



These are two specific resources that can be used to assess your students' mastery and understanding of basic skills as well as to supplement instruction with sample lessons and activities in different mathematical concepts. These will be referred to in the following slides.

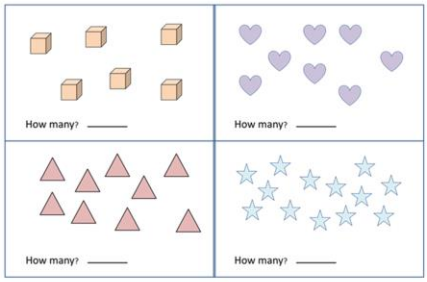
Note that the Mathematics Assessment Supplement Handout is one of the materials that should be made available to participants.



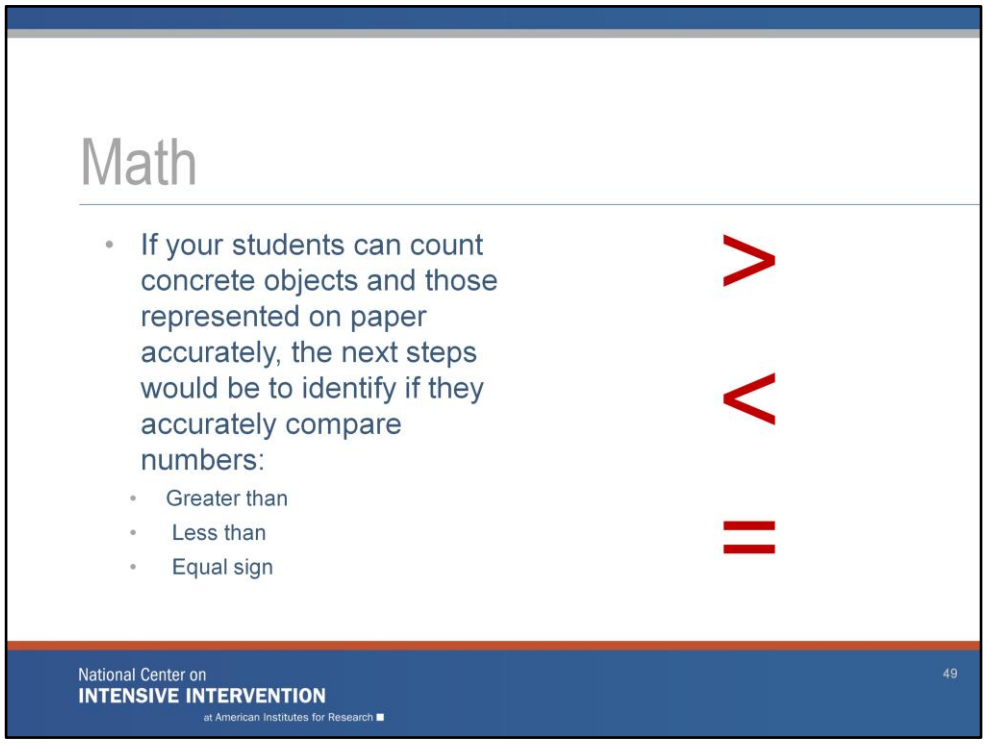
When you start with the most basic skills you can identify and target a students level of performance in math. Using simple intervention activities will help determine whether a student needs work in that area, or whether to move on to a more difficult skill. For example, does your student know the basic principles of counting concrete objects?

Math

- If your student can accurately count concrete objects, can they count objects on paper?
- If you're unsure, try using activities from the Mathematics Assessment Supplement handout



If your student can count concrete objects are they able to count objects on paper? The Mathematics Assessment Supplement handout includes sample activities that assess basic skills.


Math
If your students can count concrete objects and those represented on paper accurately, the next steps would be to identify if they accurately compare numbers:
Greater than
Less than
Equal sign
>
<
=
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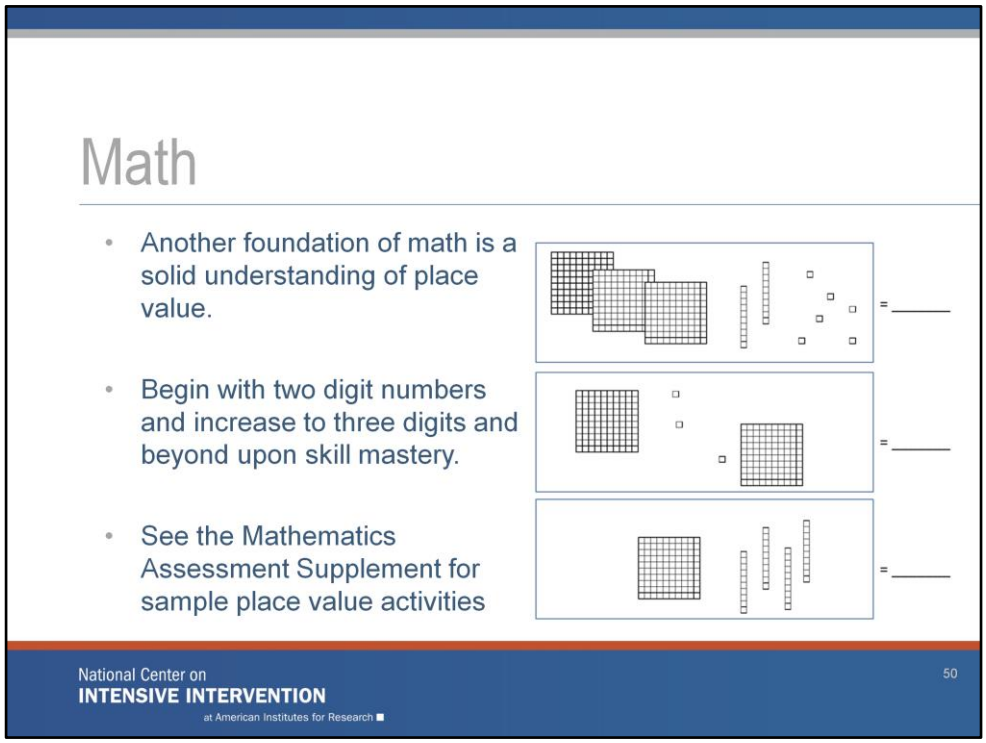
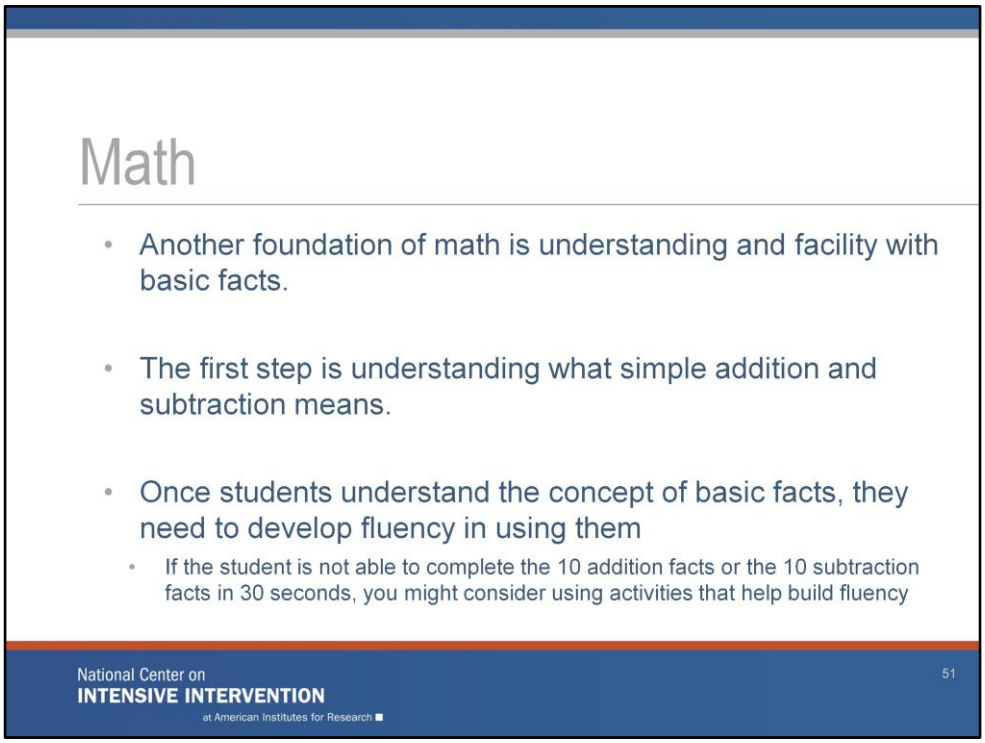
Read Slide



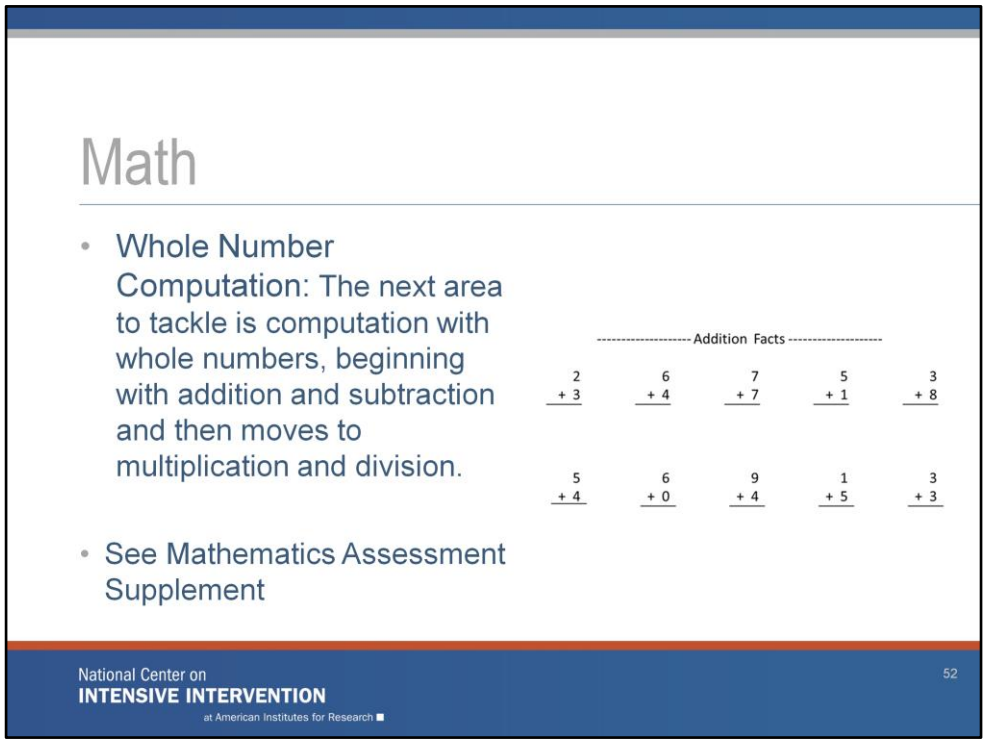
Another foundational skill that is indicative of a solid math foundation is understanding place value. The Mathematics Assessment Supplement includes activities that will allow you to explore your student's competence with this skill. Problems with place value and comparing numbers often cause students to have difficulty in their more advanced math learning, so it is important to give repeated practice and exposure to these skills.

It will be important to target instruction in place value with two digit numbers when you begin. Once students demonstrate mastery and understanding of two digit numbers instruction can focus on three and four digit numbers as appropriate.

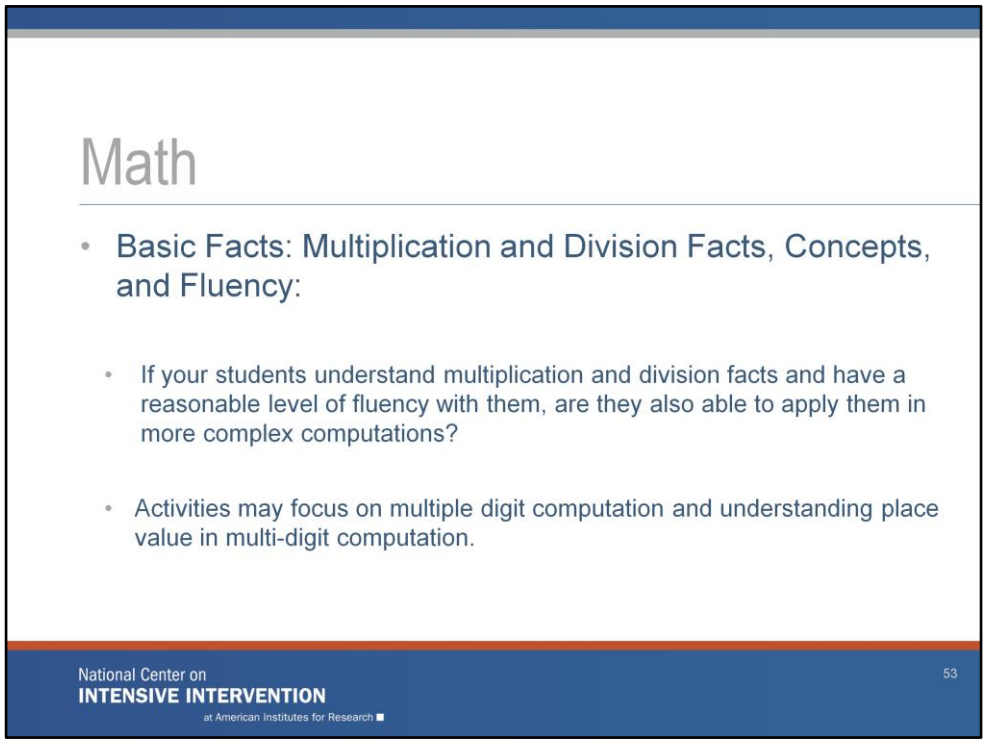


Understanding basic facts is a foundation skill in math that is critical for many other math skills. The first step is understanding what simple addition and subtraction means. Students should start practicing these skills using concrete objects and can then move to demonstrated objects on paper.

Once the student demonstrates their understanding of simple addition and subtraction it is important to build fluency. Remember, just like reading instruction, math instruction should always focus on acquisition and accuracy BEOFRE moving on to fluency practice.



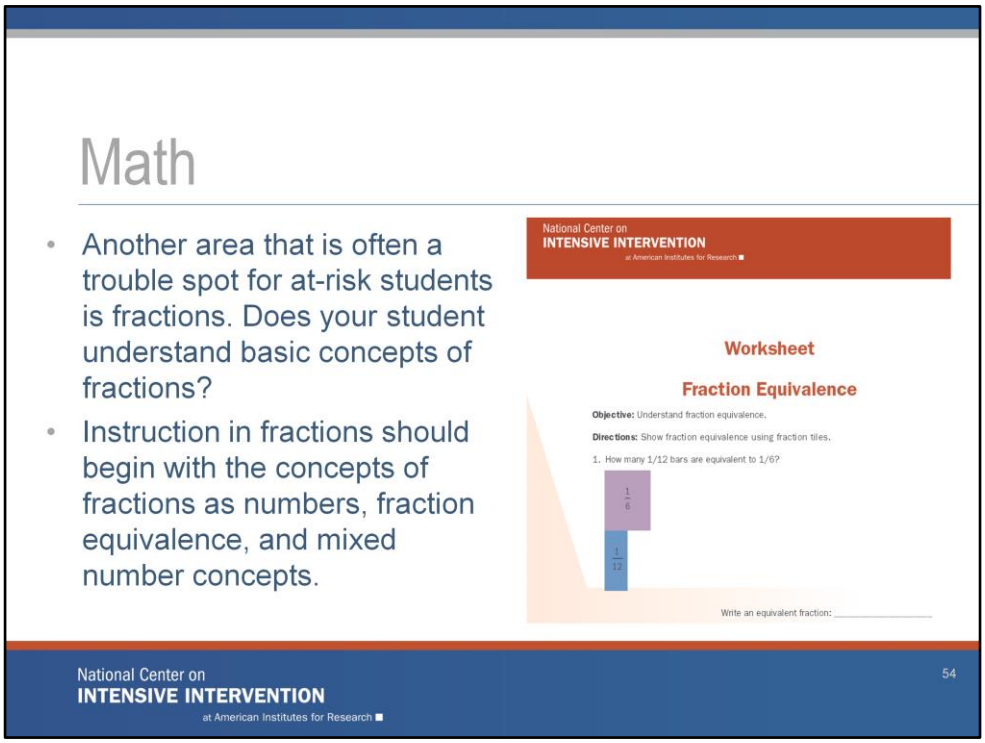
Once basic fact fluency is established the next area to tackle would be whole number computation. The Mathematics Assessment Supplement handout has sample activities and worksheets that can be used to assess these skills.



The next step would be to assess ability to compute basic facts using multiplication and division. If you are unsure whether your student is familiar with multiplication and division facts, you can use some of the activities in the Mathematics Assessment Supplement handout. You may want to consider beginning with multiplication and division with concrete objects before you move on to numbers represented on paper.

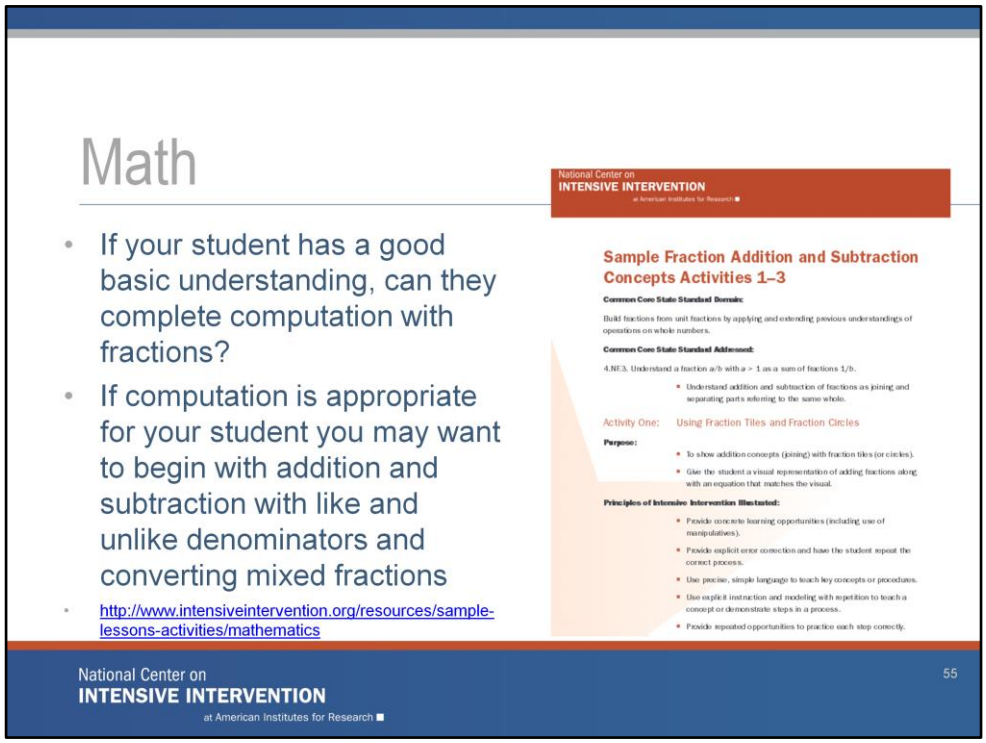
Remember, just like with reading, instruction should focus on acquisition and accuracy before fluency.

Once students demonstrate fluency with basic computation it will be important to see if they can apply these skills to more complex computations.
For practice in these skills, additional activities can be found on the NCII website.



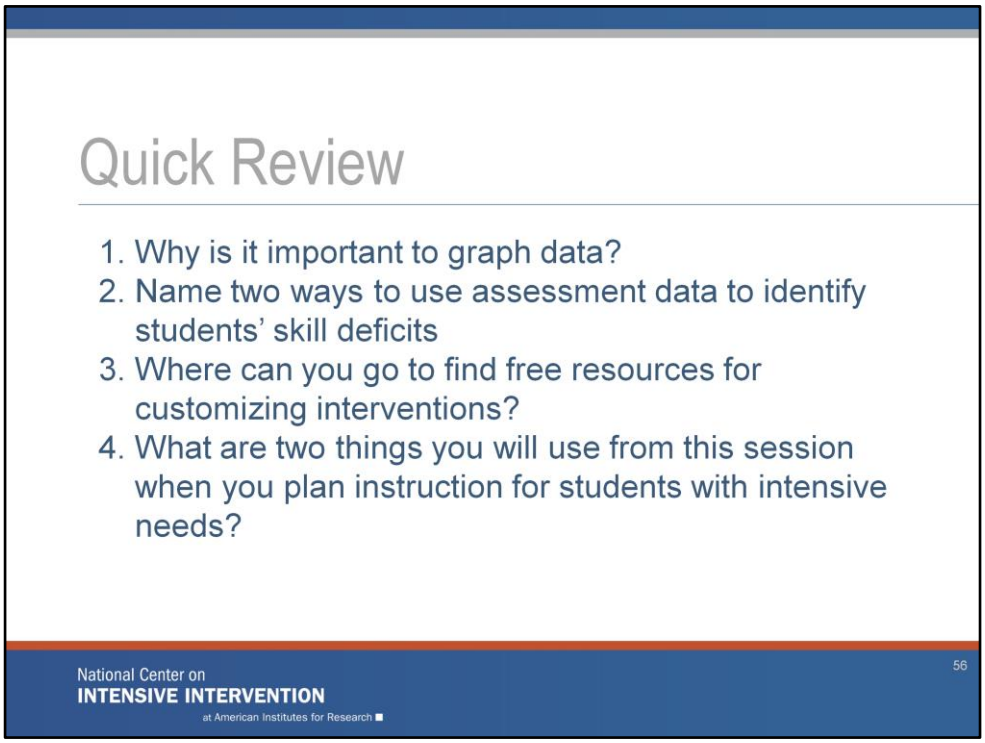
Fractions often cause a lot of trouble for students. It is important to understand if students have the basic concepts of mathematics before moving on to fractions. Basic instruction in fractions should start with concepts including fractions as numbers, equivalence, and mixed numbers.

The National Center on Intensive Intervention has sample activities and worksheets like the one on this page that can help guide instruction in this area.



If your student has a good basic understanding of fractions, are they able to do computation activities with fractions? Targeted intervention in this area could potentially focus on addition and subtraction concepts, adding fractions with unlike denominators, and converting mixed numbers to improper fractions.

The National Center on Intensive Intervention has activities and worksheets that focus on these skills. They can be found at the link above.



Quick Review

1. Why is it important to graph data?
    - Observe trends
    - Determine stability of scores over time
    - Determine whether the student is responding *overall* before digging deeper into the data
2. Name two ways to use assessment data to identify students' skill deficits
    - Miscue analysis of progress monitoring data or work samples
    - Skills analysis
    - Score ranges on progress monitoring measures

3. Where can you go to find free resources for customizing interventions?
    - NCII Moodle
    - Florida Center for Reading Research: http://www.fcrr.org/assessment/et/routines/routines.html
    - Meadows Center for Preventing Educational Risk: http://www.meadowscenter.org/library
    - NCII Website: http://www.intensiveintervention.org/resources/sample-lessons-activities/mathematics

4. What are two things you will use from this session when you plan instruction for students with intensive needs?

Disclaimer

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References

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