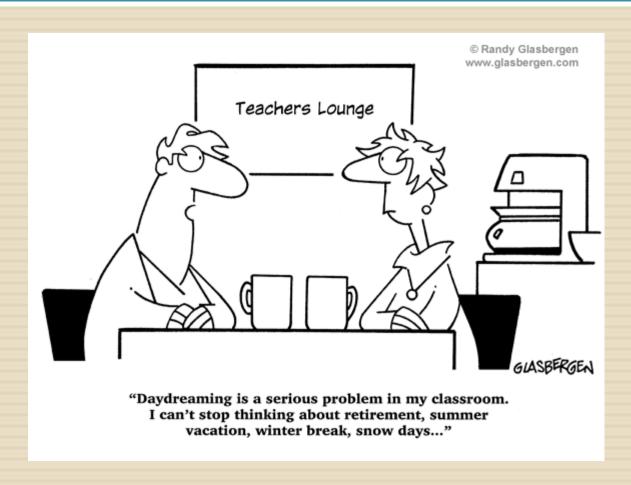


### Humor!



# Agenda

- Evidence Based Best Practices
- Infinitech
- Transition

# We Improve Achievement with Problem Solving

Evaluate the data and determine if the plan is working.

Carry out the intervention as intended.

Chapter 4-15, 6, 8, 9, 10

Identify gaps between performance and grade-level expectations.

Identify the instructional variables to be included in plan to address the gap.

# We Are Always Evolving a Picture of the Learner to Improve Response to Instruction

 Present Levels of Problem Solving Prior Academic and to Suspicion of **Functional Performance** Disability Formal Evaluation Process

# Problem Solving



#### The Role of Assessment

"The single most important factor in planning for a child with a learning disability is an intensive diagnostic study. Without a comprehensive evaluation of his deficits and assets, the educational program may be too general, or even inappropriate."

-Johnson and Myklebust, 1967

What is remarkable about this quote?

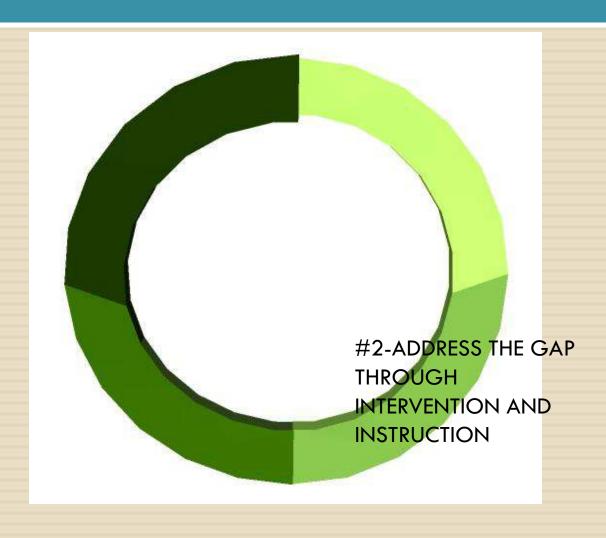
#### Value of Assessment

- Inform and improve instruction
- Promote student learning
  - Instruction at an appropriate level of difficulty
  - What has and has not been mastered
  - Focus on specific instructional needs of the student
  - Eliminates a "one size fits all" approach
- Frequent assessments can help students monitor their own learning
  - Metacognitive goal
  - Expectations and feedback
- Evaluate instructional methods being used with students
  - Redirect, modify or intensify

### Diagnostic Assessment Tools

Shout it out! What are you currently using?

# Problem Solving



#### Evidence Based Instruction

"The integration of professional wisdom with the best available empirical evidence in making decisions about how to deliver instruction."

-Whitehurst, 2002

PROGRAM, METHODOLOGY and/or PRACTICES that have a record of success!

\*\*\*Still must be a good match for the student needs!

### TEACHER EFFECT



- You do make a difference!
  - "Students' responses to instruction are indicators of the quality of instruction they are receiving."
    - Three variables:
      - The amount of time on task
      - The student's level of success
      - The content covered
    - -Archer and Issacson, 1989

### Ten Effective Teaching Principles

- Active student engagement
- Build in success
- Increased opportunity to learn
- Direct instruction
- Scaffold instruction

- Address different forms of knowledge
- Organize and activate knowledge
- Teach strategically
- Explicit instruction
- Teach sameness

#### Self Evaluation!!!

### AND THERE ARE MORE...

- Activate prior knowledge
- Differentiated instruction
- Higher-order thinking skills
- Feedback
- Expectations/climate of success
- Peer mediated instruction



# Basic Reading Skills

Phonological Awareness

**Phonics-Decoding** 

Sight Word Recognition

### Definitions...

#### **Phonological Awareness**

"An oral language ability that provides the foundation for learning to apply phonics knowledge to reading and spelling"

#### **Phonics**

"A particular type of reading approach in which individuals are taught speech sounds and their corresponding letters directly"

### Phonological Awareness/Beginning Phonics

#### Sequence

- Recognizing rhymes
- Producing rhymes
- Sound blending
- Segmenting sounds
- Analyzing initial, final and medial sounds
- Deleting sounds
- Inserting sounds
- Manipulating sounds
- Teach connections between phonemes and graphemes explicitly

#### **Curriculum/Intervention**

- Elkonin boxes
- Road to the Code
- Phonic Reading Lessons
- Phoneme-GraphemeMapping
- Read, Write, and Type (computer program)

### Phonics Instruction-Decoding

#### Sequence

- Blending and segmentation
- Single consonants and short vowels in closed syllables
- CVCe syllables
- Consonant blends
- Open syllables
- Vowel digraphs and dipthongs (vowel team syllable)
- Silent letters
- Common prefixes and suffixes
- Additional syllable types (rcontrolled and consonant –le)
- Latin and Greek roots

#### **Curriculum/Intervention**

- Corrective Reading
- Explode the Code
- Fundations
- Glass Analysis
- Herman Method
- Language!
- Phonics Reading Lessons
- Primary Phonics
- Spalding Method
- S.P.I.R.E.
- Touch Phonics
- Wilson Reading System
- Decoding Multisyllabic Words
- Mega-Words
- Patterns for Success in Reading and Spelling
- WORDS
- REWARDS

\*\*\*Decodable Text Books

### Sight Word Recognition

- What are you using?
  - Curriculum
  - Intervention
  - Strategies

#### **Website Resources**

- Cambridge Online Dictionary
- Dolch Sight Words
- Florida Center for Reading Research
- Fry Instant Words
- National Right to Read Foundation
- Read Well
- Read-Write-Think
- Reading Rockets
- Starfall
- Vaugh Gross Center for Reading and Language Arts



The ability to read connected text rapidly, smoothly, effortlessly, and automatically with little conscious attention to the mechanics of reading, such as decoding.

#### Intervention/Strategies

- Speed Drills
- Choral Reading or Neurological Impress Method
- Repeated Reading
  - Use other genres
  - Partner or paired reading
  - Classwide peer tutoring
  - Reread to meet a performance criterion
  - Monitor progress
- Previewing
- Taped Books and Technology (for improved prosody)

# Recommendations for Increasing Fluency

- Select interesting passages
- Ensure active engagement
- Have students engage in multiple readings (3-4 times)
- Use instructional level text
- Read passages aloud to an adult
- Provide extra practice with trained tutors
- Provide corrective feedback on word errors
- Establish a performance goal or criterion of the number of words per minute
- Provide, short, frequent periods of fluency practice
- Provide concrete measures of progress using charts and graphs

- Commercial Programs
  - Great Leaps
  - Read Naturally
  - Quick Reads
  - Six Minute Solution
  - RAVE-O

- Websites and Programs
  - Concept Phonics
  - Kurzweil 3000
  - OKAPI
  - One Minute Reader
  - Online Leveled Library K-6
  - Read Well
  - Reader's Theater Scripts
  - Recordings for the Blind & the Dyslexic
  - Soliloquy Reading Assistant

# Reading Comprehension



### Vocabulary

"Vocabulary has a strong influence on reading comprehension and young children with limited word knowledge are at high risk for experiencing reading difficulties."

#### NRP Findings

- Vocab should be taught directly and indirectly
- Words must be seen multiple times in multiple contexts
- Language rich environments foster learning of vocab
- No one single method works best all of the time for teaching vocab

"Simply teaching words and their definitions is insufficient..."

#### Incidental

- Read aloud
- Books on tape
- Word consciousness
  - "knowledge of and interest in words"
  - Hink-Pinks, puns, board games, charades, limericks

#### Intentional/Explicit

- STAR-Select, Teach,Activate/Analyze/Apply, andRevisit
- Synonyms, antonyms and multiple meaning words
- Semantic maps, word webs, graphic organizers
- Preteach vocab words
- Examples and non-examples
- Keyword method (visual imagery)

### Dialogical Read Alouds

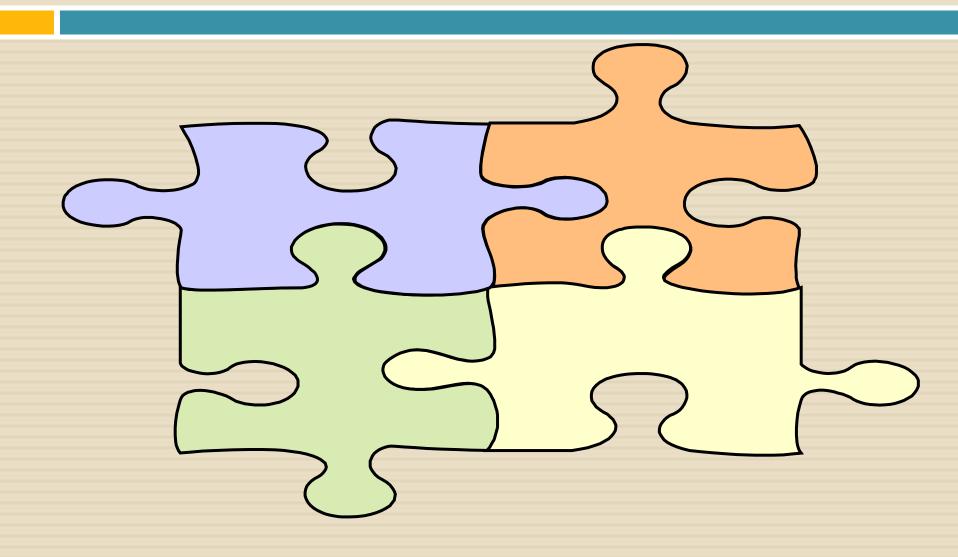
- Select a book appropriate for the child's age and interests.
- Read the story aloud to the child and use the PEER steps to interact.
  - P-Prompt the child by asking about a picture or element of the story. Example, point to a truck and say, "What is this?"
  - E-Evaluate the child's response by affirming or correcting as needed. Example, "Yes, that is a truck."
  - E-Expand the child's response by adding more description. Example, "That is a red fire truck."
  - R-Repeat. Have the child repeat the expanded response. Example, "Can you say 'red fire truck'?"

### Reading Comprehension

"...constructing meaning by interacting with text through the combination of prior knowledge and previous experience, information in the text, and the stance the reader takes in relationship to the ideas presented in the text."

-Pardo, 2004

# JIGSAW ACTIVITY



### Strategies

#### 7 Most Effective Strategies

- Comprehension monitoring (click or clunk)
- Cooperative learning
- Graphic and semantic organizers
- Question answering
- Question generating
- Story structure
- Summarization

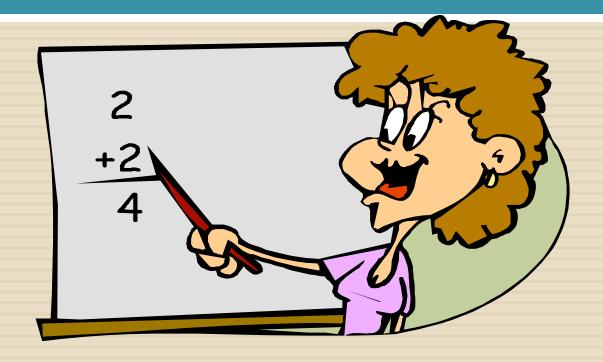
#### **Strategy Instruction**

- DR-TA
- □ K-W-L
- □ SQ3R
- MULTIPASS
- Predicting
- Think aloud
- Visualization
- Repeated reading
- Retelling
- Reader's Theater

# Effective Instruction in Reading Comprehension

- Reciprocal teaching
- Collaborative strategic reading (CSR)
- Students achieving independent learning (SAIL)
- Peer-Assisted Learning Strategies (PALS)

# Math Calculation



#### Effective Instruction

- Direct, explicit instruction with cumulative review
- Strategy instruction
- Concrete level (manipulatives) instruction
- Concrete, representational/semi-concrete, abstract teaching sequence
- Drill and practice
- Ongoing monitoring of student performance
- Teach self-regulating behaviors
- Peer mediated instruction

### More on effective instruction...

 "Effective instruction of basic skills provides: modeling, guided practice, independent practice, error correction, goal setting and progress monitoring."

- Practice can include:
  - Board games
  - Computer assisted instruction
  - Self-correcting materials
  - Cover-copy-compare
  - Explicit timings
  - Peer tutoring
    - Reciprocal teaching
    - Peer assisted learning strategies
    - Cross-age tutoring

### Calculation Continued!

#### Software/Internet Based

- Accelerated Math
- Destination Math Series
- Larson's Elementary Math
- Math Amigo
- Math Blasters Series
- Math + Music
- Skills Tutor
- Success Maker
- The Numbers Race

#### **Commercial Products**

- Number Worlds
- PALS Math
- Touch Math
- Structural Arithmetic
- V-Math

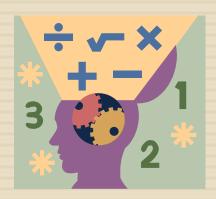
# Math Reasoning



### Effective problem solving requires that an individual can:

- Represent the problem accurately
- Visualize the elements of the problem
- c. Understand the relationships among numbers
- Use self-regulation, and
- Understand the meaning of the language and vocabulary

"The combination of direct/explicit instruction and cognitive strategy instruction is the most effective intervention for students struggling with math problem solving."



### Problem Solvers...

#### Good

- Use a variety of strategies including self-monitoring
- Read the problem for understanding
- Paraphrase the problem
- Identify key info (underline)
- Ask themselves "what is the ? Or what am I looking for?"
- Formulate a plan (verbal and visual)
- Estimate the answer
- Compute and check
- Understands the language of mathematics

#### Poor

- Poor number sense
- Little or no use of strategies including self monitoring
- Little or no use of visualization
- Little or no planning
- Little or not use of estimation
- Limited math vocabulary
- May compute prior to understanding the problem
- Little or no checking of procedures or answer for accuracy

"Over 30% of individuals with ADHD are also diagnosed with math learning disabilities."

#### Evidence-Based Features of Effective Math Instruction

- Clarity of objectives
- One skill or concept
- Use of manipulatives or representations including diagrams and hands on materials
- Instruction approach includes modeling and are explicit
- Teacher examples-Think aloud!
- Provision of adequate practice both guided and independent
- Have students verbalize their understanding and rational of they strategies they employ
- Review of prerequisite math skills
- Error correction and feedback
- Vocabulary
- Strategies-TAUGHT and PRACTICED
- Progress Monitoring

### Math Problem Solving Strategies

- Draw a pic, make a model or act it out
- Work backward from the answer
- Make a table or systematic list
- Guess, check and revise
- Look for a pattern
- Solve a simpler, related problem
- Break it down into subordinate problems
- Eliminate possibilities
- Use algebra

# Written Expression

"Poor writers lack awareness of what good writing is and do not know how to produce it. In addition, they lack knowledge of text structures (genres) and content, do not plan before or during writing, do not monitor their own performance and show poor attention and concentration."

(Troia, 2002; Troia and Graham, 2003)

### 3 Elements of Direct/Explicit Instruction

#### 1. Adhere to a basic framework of planning, writing and revision

- a) Teach them the steps explicitly using examples
- b) Use a think sheet, prompt card or mnemonic for support
- e) Planning-use a semantic map, verbalize the steps, use a planning think sheet that presents a series of structure prompts
- d) Writing-1<sup>st</sup> draft using the plan that was created
- e) Revising-peer editing, teacher-student conference

#### Explicitly teach critical steps in the writing process

- Teach text structures (genres)
- b) Use explicit models, prompts and mnemonics

#### 3. Provide feedback guided by the information explicitly taught

- a) Relevant and frequent
- b) Engage in dialogue between teacher and student
- c) Help student develop metacognitive skills

### Other ideas...

- Strategy Instruction-Self Regulated Strategy
   Development (Spring Book Study)
- Mnemonic strategies:
  - TREE-Topic Sentence, Reasons to provide support, Examine the quality of each reason, Ending for the writing.
  - □ STOP-Suspend judgment, Take a side, Organize ideas, Plan more as you write.
  - DARE-Develop your topic sentence, Add supporting ideas, Reject arguments for the other side, End with a conclusion

### Teach Text Structure

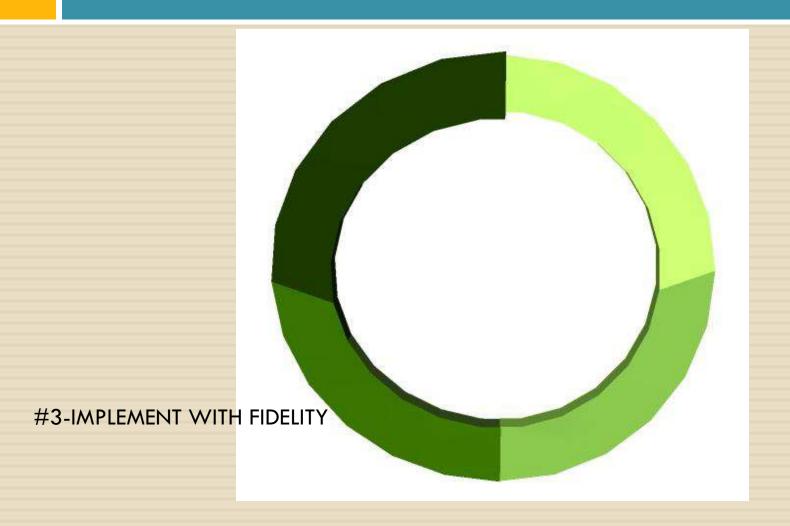
- Narrative writing-SPACE LAUNCH
  - S-Setting
  - P-Problems
  - A-Actions
  - C-Consequences
  - E-Emotional reactions
  - L-List idea words for my story
  - A-Ask if my ideas will meet my writing goal
  - U-Use encouraging self talk
  - N-Now write a story with million dollar words, sharp sentences and lots of detail
  - C-Challenge myself to develop more good ideas
  - H-Have fun

- Expository writing-DEFENDS
  - D-Decide on goals and themes
  - E-Estimate main ideas and details
  - F-Figure best order for main ideas and details
  - E-Express the theme in the first sentence
  - N-Note each main idea and supporting detail
  - D-Drive home the message in the last statement
  - S-Search for errors and correct

### Teaching revision and editing

- Editing checklists
  - COPS
  - SEARCH
- Teach specific evaluation criteria
- Peer revision and teacher-student dialogue
- Explicit strategy instruction
- Word processing

# PROBLEM SOLVING



### Did You Know?

An evidence-based program is one thing...

 Implementation of an evidence-based program is a very different thing.

(Fixsen and Blase, 2006)

# PROBLEM SOLVING

#4-PROGRESS **MONITOR** 

# **REFLECT!**



# Spring Networking Opportunity

- Facilitated Book Study
  - Participants will read "Strategy Instruction for Students with Learning Disabilities"
  - Participants will complete activities and focus questions for sections of the text
  - Participants will participate in discussions with other book study members via Adobe Connect at predetermined times
  - Participants will complete an action research project
  - Participants will earn 12 CEU's upon completion
  - Modification to the expectations and CEU's earned may be a possibility with 1:1 conversation with Keely