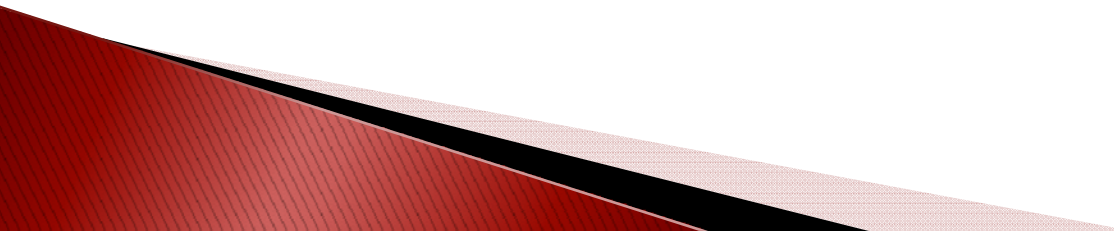


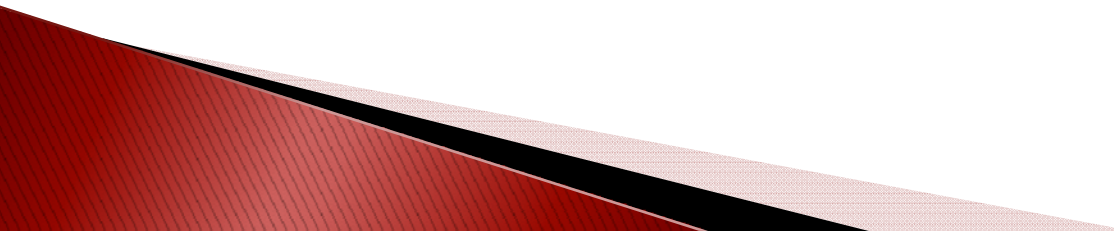
Differentiated » Instruction Model

- ❖ Math Train Problem
- ❖ Planning Template
- ❖ Assessment Tool

Purpose

- ▶ Provide an experience as a student of differentiated instruction
 - ▶ Provide opportunity to reflect on a differentiated lesson as a teacher
 - ▶ Provide templates for planning differentiated instruction
- 

Activity

- ▶ Introduction.
 - ▶ Create groups.
 - ▶ Work on the task by your self for 5 minutes.
 - ▶ Share your solutions as a group and determine a group solution.
 - ▶ Debrief as a whole group.
- 

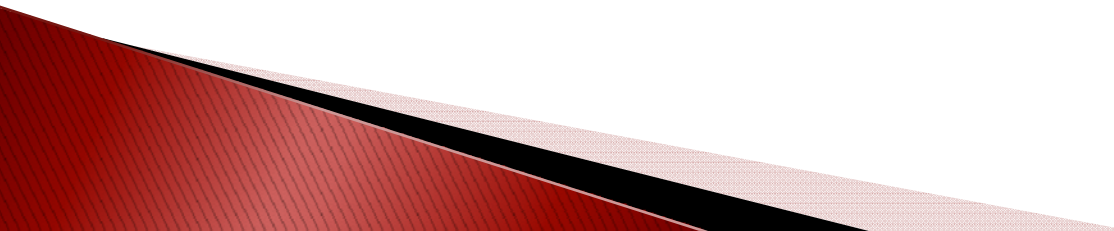
Exit Slip

- ▶ What is a variable and why do we use them?
- ▶ Describe the perimeter of the following train.

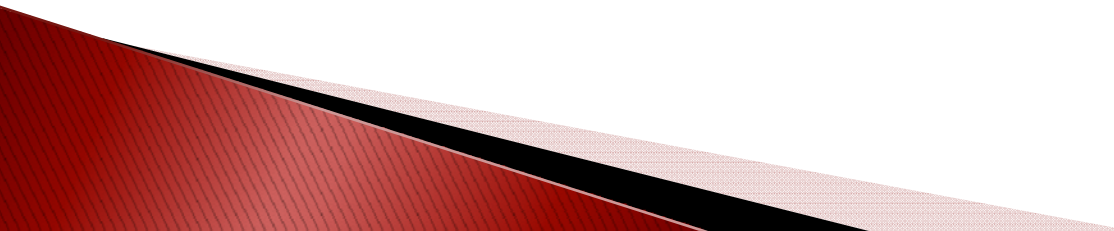


- ▶ Write an expression for the train.

Thoughts

- ▶ What components of DI did you see?
 - ▶ What ideas do you have to improve the differentiation?
 - ▶ What can you incorporate in your classrooms?
- 

Planning Talk-a-loud

- ▶ Using the template, walk through the template.
 - ▶ Look for differentiated components of the lesson.
 - ▶ Look for different types of assessment.
- 

High Impact, Low » Prep Strategies, Materials, & Activities

- ❖ Math Strategies, Materials, & Activities
- ❖ Literacy Strategies & Activities
- ❖ Learning Environment
- ❖ Teaching Tools & Materials

“Fair is giving students what they need.”

- Carol Ann Tomlinson

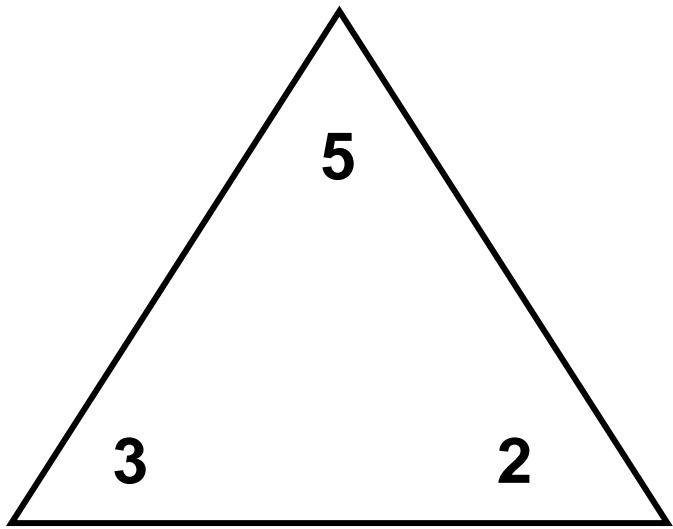


Low Prep, High Impact Strategies, Materials, and Activities

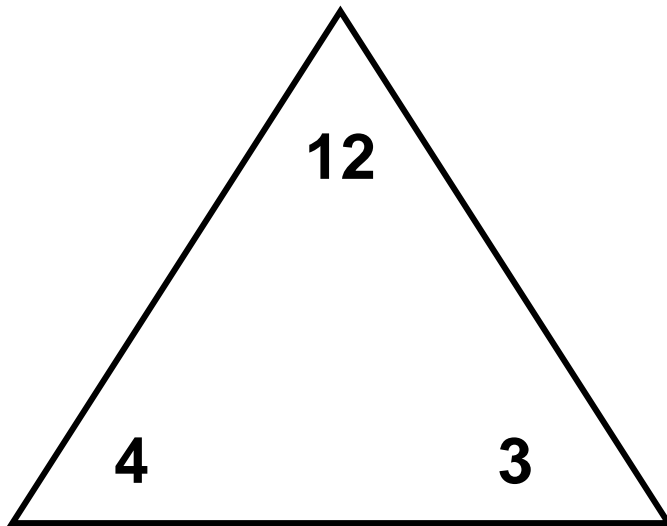
Math Strategies, Materials, and Activities

1. Three-cornered flashcards
2. Master Ruler
3. Turn lined paper sideways
4. Gallon Guy
5. We Have, Who Has?
6. Other

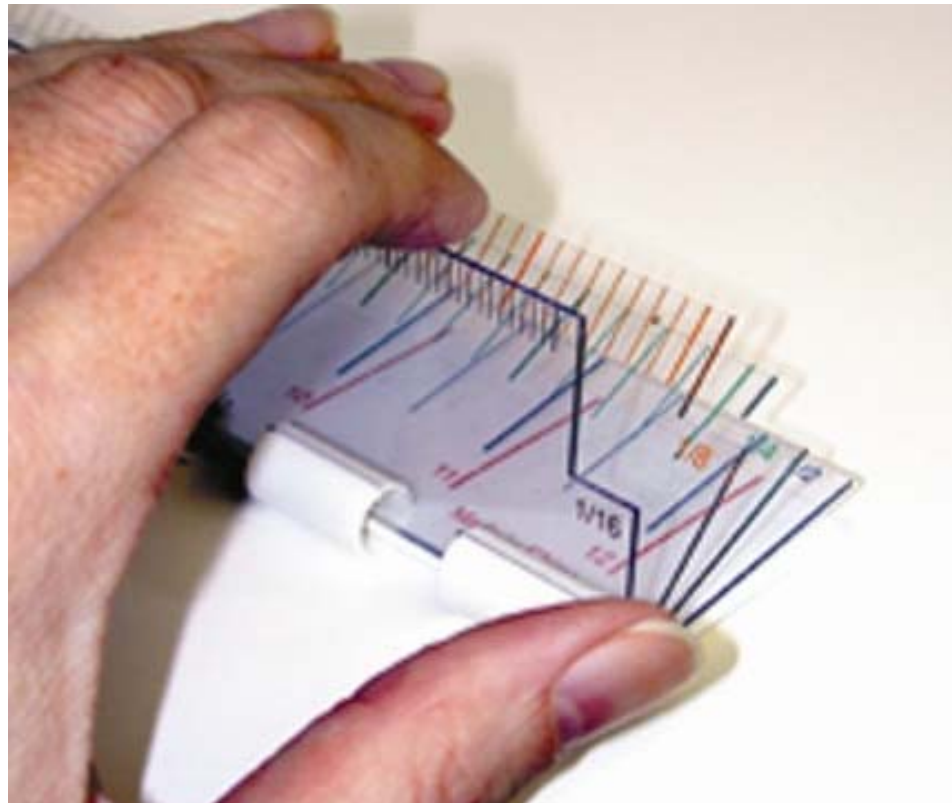




+ **-**



X



1 foot (ft.) = 12 inches (in.)
 1 yard (yd.) = 36 inches
 1 yard = 3 Feet
 1 mile = 5280 feet
 1 mile = 1760 yards

$1/4 = .25 = 25\%$
 $1/2 = .50 = 50\%$
 $3/4 = .75 = 75\%$

$1/8 = .125 = 12 \frac{1}{2}\%$
 $3/8 = .375 = 37 \frac{1}{2}\%$
 $5/8 = .625 = 62 \frac{1}{2}\%$
 $7/8 = .875 = 87 \frac{1}{2}\%$
 $1/16 = .0625 = 6 \frac{1}{4}\%$

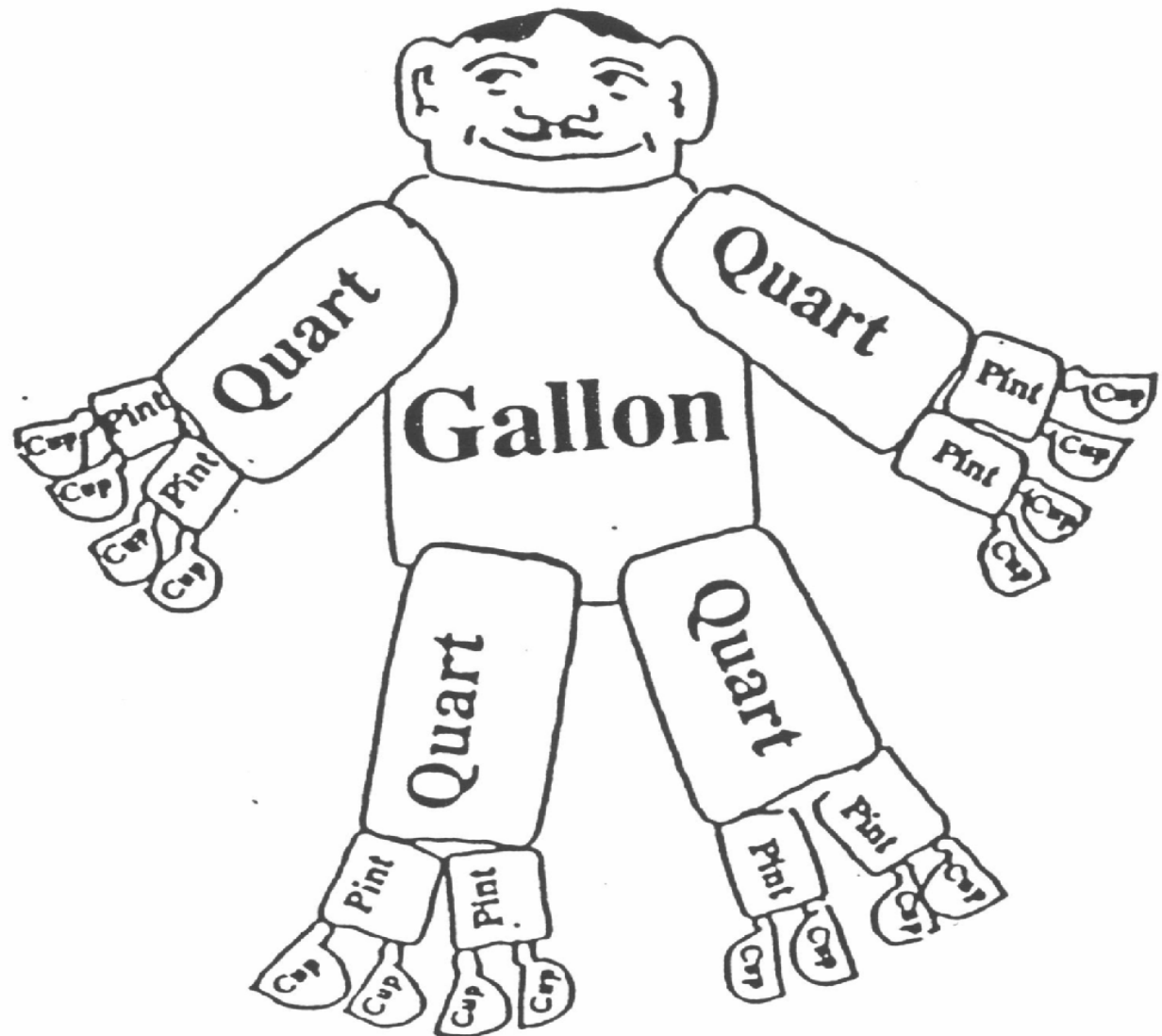
GOOD LUCK WITH YOUR ADDITION!

3	4	6
+ 5	5	0
<hr/>		
8	7	0
9	4	0
+ 6	8	8
<hr/>		

6	3	1
+ 7	8	0
<hr/>		
3	3	6
4	7	7
+ 2	3	6
<hr/>		

4	4	8
+ 5	5	1
<hr/>		
4	0	0
2	5	7
+ 7	6	0
<hr/>		

Gallon Guy



We Have, Who Has



Low Prep, High Impact Strategies, Materials, and Activities

Literacy Strategies and Activities

- 7. Question-Answer Relationships
- 8. Word Map
- 9. Show, Don't Tell
- 10. Word Splash
- 11. Cubing
- 12. Other



From Results Now (Schmoker)

“ (These are) the options one of my daughters was given to demonstrate, of all things, her understanding of a novel:

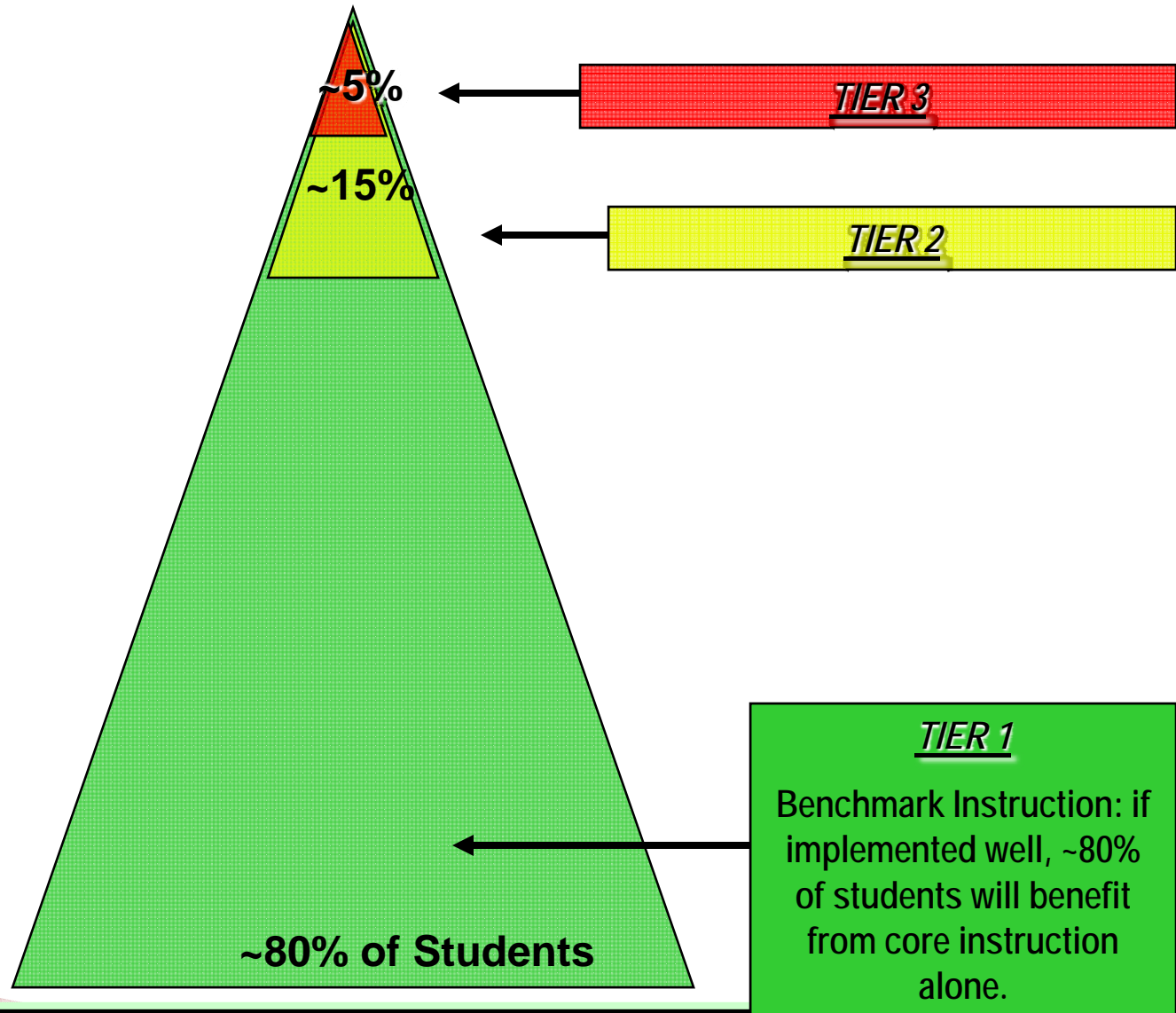
- A diorama (a miniature stage set with dolls or characters)*
- An illustrated map*
- A book jacket*
- A movie poster*
- A 3-D mobile*

This assignment was for honors English, and was justified, as I’ve heard many teachers aver, in the name of “creativity.”

From Results Now (cont'd)

“That year,...my daughter was never taught how to write and was never taught the state writing criteria...in the area of reading,...my daughters never received instruction on how to infer or interpret, to comb through a text to support assertions with evidence, or to analyze an author’s purpose or bias...She did, however, spend months of class time on what can only be called “literature-based arts and crafts.”

pp. 92–93

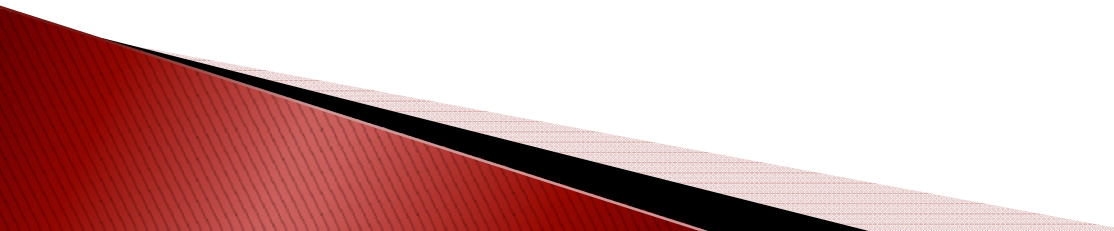


Response to Intervention (RtI)

Metacognition

K	I	2	3	4	5	6	7	8
Students will...								
R.MT.00.01 self-monitor comprehension when reading or listening to familiar text by using simple strategies to increase comprehension including making credible predictions based on illustrations. (M .01 with .02)	R.MT.01.01 self-monitor comprehension by recognizing when meaning is breaking down and use simple fix-up strategies including making credible predictions based on a preview of the book cover and pictures to increase comprehension when reading or listening to text. (M .01, .02, and .03 with .04)	R.MT.02.01 self-monitor comprehension by recognizing when meaning is breaking down and use strategies including making credible predictions to increase comprehension when reading or listening to text. (M .01, .02, and .03 with .04)	R.MT.03.01 self-monitor comprehension when reading or listening to texts by automatically applying strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and summarizing.	R.MT.04.01 self-monitor comprehension when reading or listening to text by automatically applying and discussing the strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and engaging in interpretive discussions.	R.MT.05.01 self-monitor comprehension when reading or listening to text by automatically applying and discussing the strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and engaging in interpretive discussions.	R.MT.06.01 self-monitor comprehension when reading or listening to text by automatically applying and discussing the strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and engaging in interpretive discussions.	R.MT.07.01 self-monitor comprehension when reading or listening to text by automatically applying and discussing the strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and engaging in interpretive discussions.	R.MT.08.01 self-monitor comprehension when reading or listening to text by automatically applying and discussing the strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and engaging in interpretive discussions.

R.MT.04.01 self-monitor comprehension when reading or listening to text by automatically applying and discussing the strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and engaging in interpretive discussions.



QUESTION-ANSWER RELATIONSHIPS

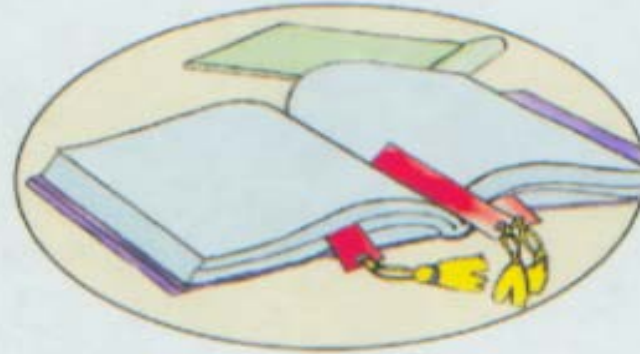
Level I

In-the-Book Questions
Right There



Level II

In-the-Book Questions
Think, Search, and Find



Level III

In-My-Head Questions
Author and Me



Level IV

In-My-Head Questions
On My Own



"Right There"

"Right There" questions require you to go back to the passage and find the correct information to answer the question. These are sometimes called literal questions because the correct answer can be found somewhere in the passage. "Right There" questions sometimes include the words "According to the passage..." "How many..." "Who is..." "Where is..." "What is..."



"Think and Search"

"Think and Search" questions usually require you to think about how ideas or information in the passage relate to each other. You will need to look back at the passage, find the information that the question refers to, and then think about how the information or ideas fit together. "Think and Search" questions sometimes include the words "The main idea of the passage..." "What caused..." "Compare/contrast..."



Question-Answer Relationships



"On My Own"

"On My Own" questions can be answered using your background knowledge on a topic. This type of question does not usually appear on tests of reading comprehension because it does not require you to refer to the passage. "On My Own" questions sometimes include the words "In your opinion..." "Based on your experience..." "Think about someone/something you know..."

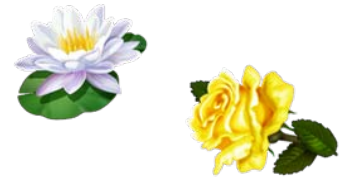
"Author and You"

"Author and You" questions require you to use ideas and information that is not stated directly in the passage to answer the question. These questions require you to think about what you have read and formulate your own ideas or opinions. "Author and You" questions sometimes include the words "The author implies..." "The passage suggests..." "The speaker's attitude..."

Let's look at an example...

LOOK

Mary Ann's Flowers

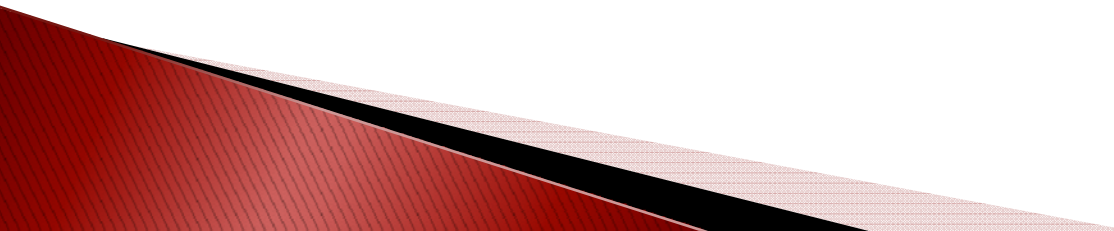


One of Mary Ann's favorite things to do is to plant flowers. Every year she plants flowers in her yard. One spring Mary Ann planted her flowers directly under the roof. The flowers did not get any sun, and they died.

That same year she planted some of the flowers too close to the porch. When it rained, the flowers did not get any water. They died.

Mary Ann also planted flowers in the middle of the yard. There all the flowers got lots of sun and plenty of rain. The flowers bloomed and grew and grew. The flowers were beautiful colors. They were red, pink, white, and yellow. Mary Ann picked many flowers and gave them to her friends.

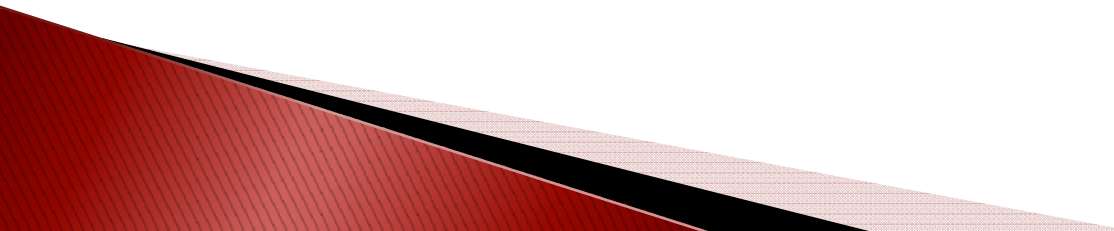


- ▶ Level One Question (Right There)
 - What is one of Mary Ann's favorite things to do?
 - ▶ Level 2 Question (Think and Search)
 - For what reasons did the flowers die?
 - ▶ Level 3 Question (Author and Me/You)
 - What kind of person is Mary Ann?
 - ▶ Level 4 Question (On My/Your Own)
 - What else do plants need to live and thrive?
- 

How Do I Teach the Strategy?



Three Easy Steps

1. I Do It: The teacher defines and models the strategy.
 2. We Do It: The students classify the different types of questions.
 3. You Do It: The students create their own examples of the questions.
- 

Scaffolding Instruction To Build Agents

Teacher
Support

Student-Learner
Responsibility

Students as
Agents of Their
Learning

TO

WITH

BY

BECOME

Exposure

Explanation

Modeling whole activity

Step-by-step modeling

Guidance while using

Feedback on whole and parts
model with focus on parts

Encourage use

Guided practice

Independent practice
and use

In control of their
own learning

They are readers,
writers, speakers and
listeners

new
skill/knowledge

modify
skill/knowledge

automatic, internalized
skill/knowledge

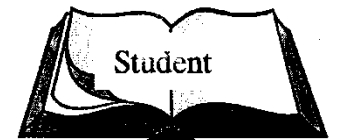
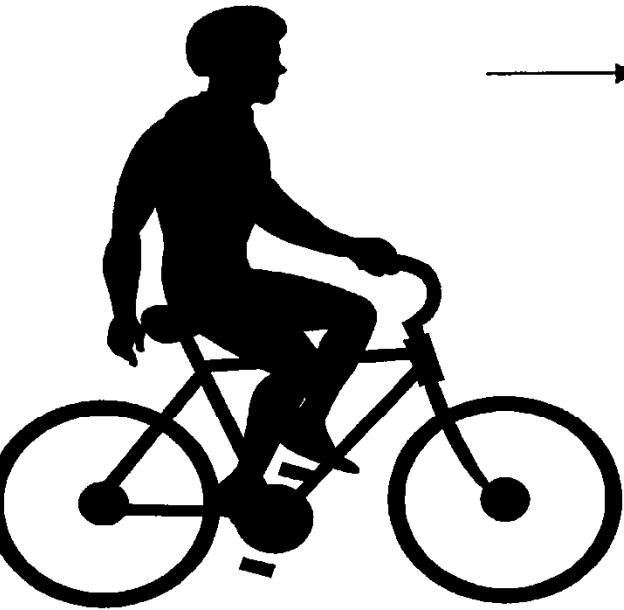
Responsible for
skill/knowledge

Gradual Release of Responsibility

Model

Support

Observe



Kinesthetic Symbols

▶ RIGHT THERE:



▶ SEARCH AND FIND:



▶ AUTHOR AND ME:



▶ ON MY OWN:

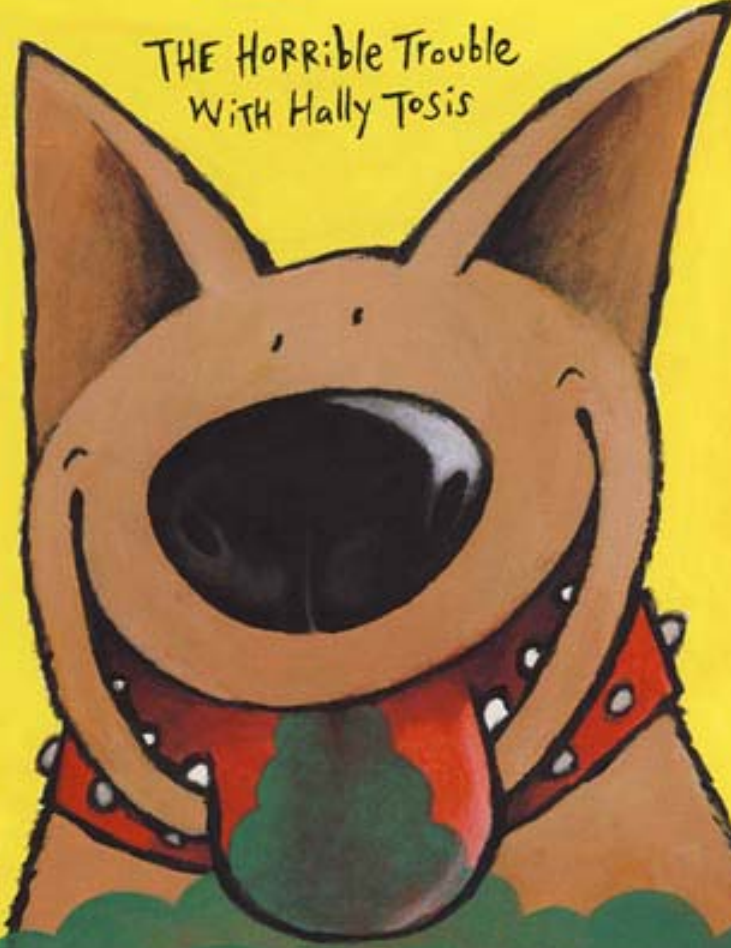




VOTE BY COLOR

DOG BREATH

THE HORRIBLE TROUBLE
WITH HALLY TOSIS



by DAV PILKEY



Question Stems

RIGHT THERE	THINK AND SEARCH	AUTHOR AND ME	ON MY OWN
<i>What? Where?</i>	<i>What examples?</i>	<i>What kind of person is?</i>	<i>If you could?</i>
<i>Who? When?</i>	<i>What are three or four?</i>	<i>What would you do if you?</i>	<i>Do you agree with?</i>
<i>Define Name</i>	<i>What happened before/after?</i>	<i>What part of the text made you ?</i>	<i>Have you ever?</i>
<i>How many? Why does the?</i>	<i>Compare Where did?</i>	<i>What will probably ?</i>	<i>What's your opinion?</i>

Pause to Process...

How can you use the Question–Answer Relationship strategy with your students?



Low-Prep, High-Impact Strategies, Materials, & Activities

Literacy Strategies and Activities

- 7. Question-Answer Relationships
- 8. Word Map
- 9. Show, Don't Tell
- 10. Word Splash
- 11. Cubing
- 12. Other



Vocabulary								
K	I	2	3	4	5	6	7	8
Students will...								
R.WS.00.10 In context, determine the meaning of a few words, familiar and repeated phrases including objects, actions, concepts, content vocabulary, and literary terms, using strategies and resources including picture clues, prediction, and other people. (M/PC .11 with .12)	R.WS.01.10 In context, determine the meaning of words and phrases including objects, actions, concepts, content vocabulary, and literary terms, using strategies and resources including context clues, mental pictures, and questioning. (M/PC .11 with .12)	R.WS.02.11 In context, determine the meaning of words and phrases including objects, actions, concepts, content vocabulary, and literary terms, using strategies and resources including context clues, mental pictures, and questioning. (M/PC .12 with .13)	R.WS.03.08 In context, determine the meaning of words and phrases including synonyms, homonyms, multiple meaning words, content vocabulary, and literary terms using strategies and resources including context clues, concept mapping, and the dictionary.	R.WS.04.07 In context, determine the meaning of words and phrases including similes, metaphors, content vocabulary, and literary terms using strategies and resources including context clues, semantic feature analysis, and a thesaurus.	R.WS.05.07 In context, determine the meaning of words and phrases including symbols, idioms, recently coined words, content vocabulary, and literary terms using strategies and resources including analogies, content glossaries, and electronic resources.	R.WS.06.07 In context, determine the meaning of words and phrases including regional idioms, literary and technical terms, and content vocabulary using strategies including connotation, denotation, and authentic content-related resources.	R.WS.07.07 In context, determine the meaning of words and phrases including cross-cultural expressions, mathematical expressions, scientific procedures, and literary terms using strategies and authentic content-related resources.	R.WS.08.07 In context, determine the meaning of words and phrases including content area vocabulary and literary terms using strategies including activating prior knowledge, using text features/ structures, and authentic content-related resources.

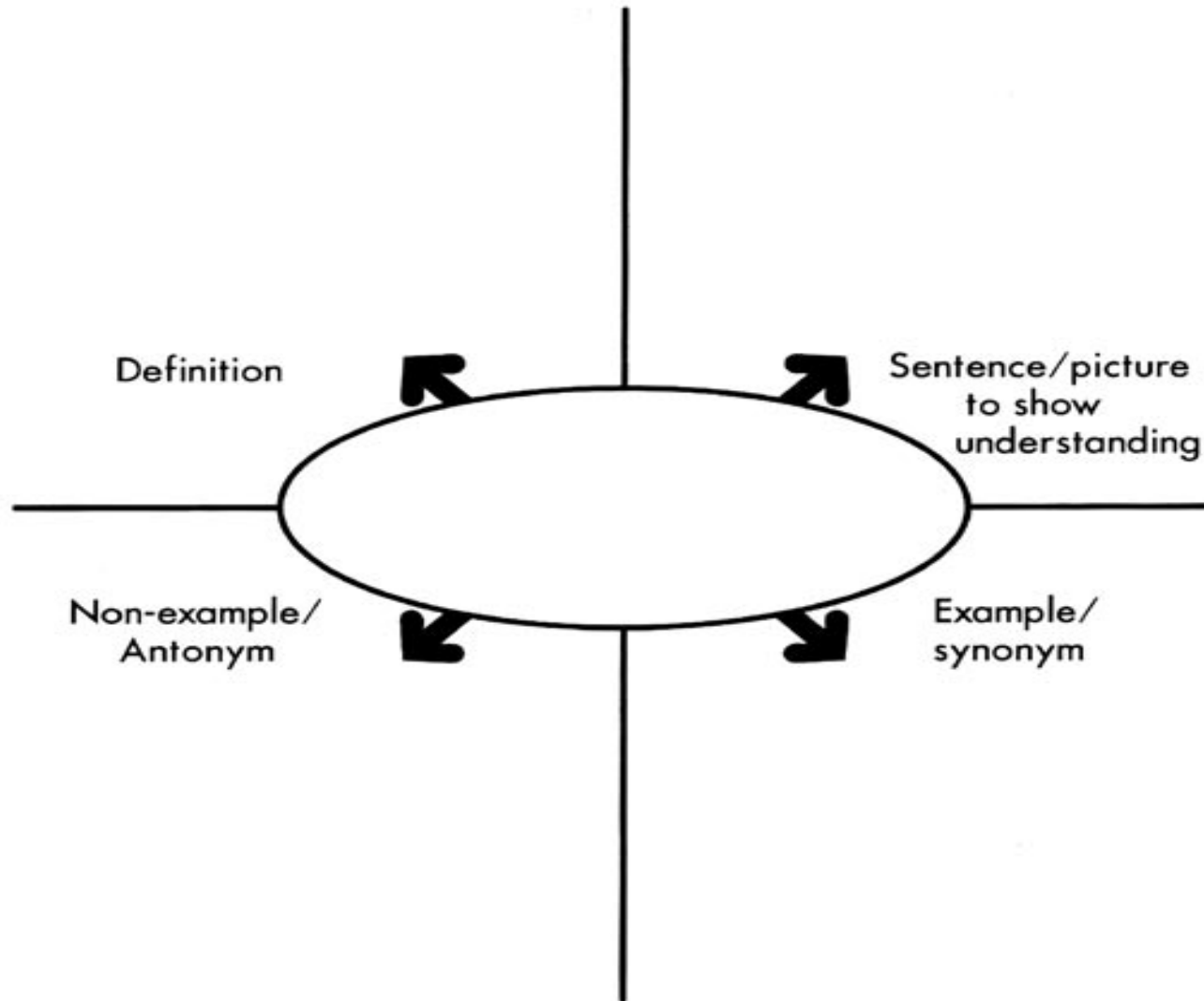
Fluency

Vocabulary

Students will...

R.WS.05.07 in context, determine the meaning of words and phrases including symbols, idioms, recently coined words, content vocabulary, and literary terms using strategies and resources including analogies, content glossaries, and electronic resources.

WORD MAP

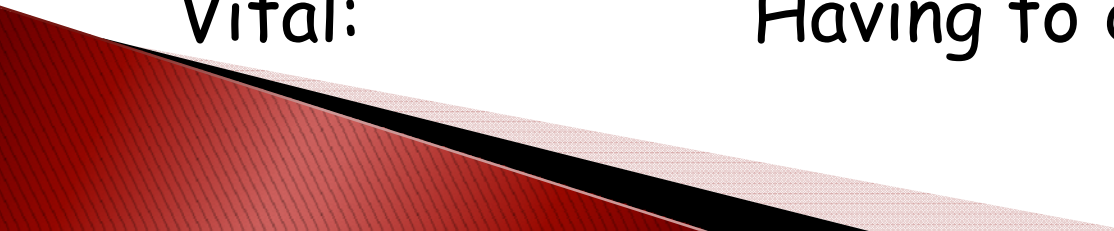


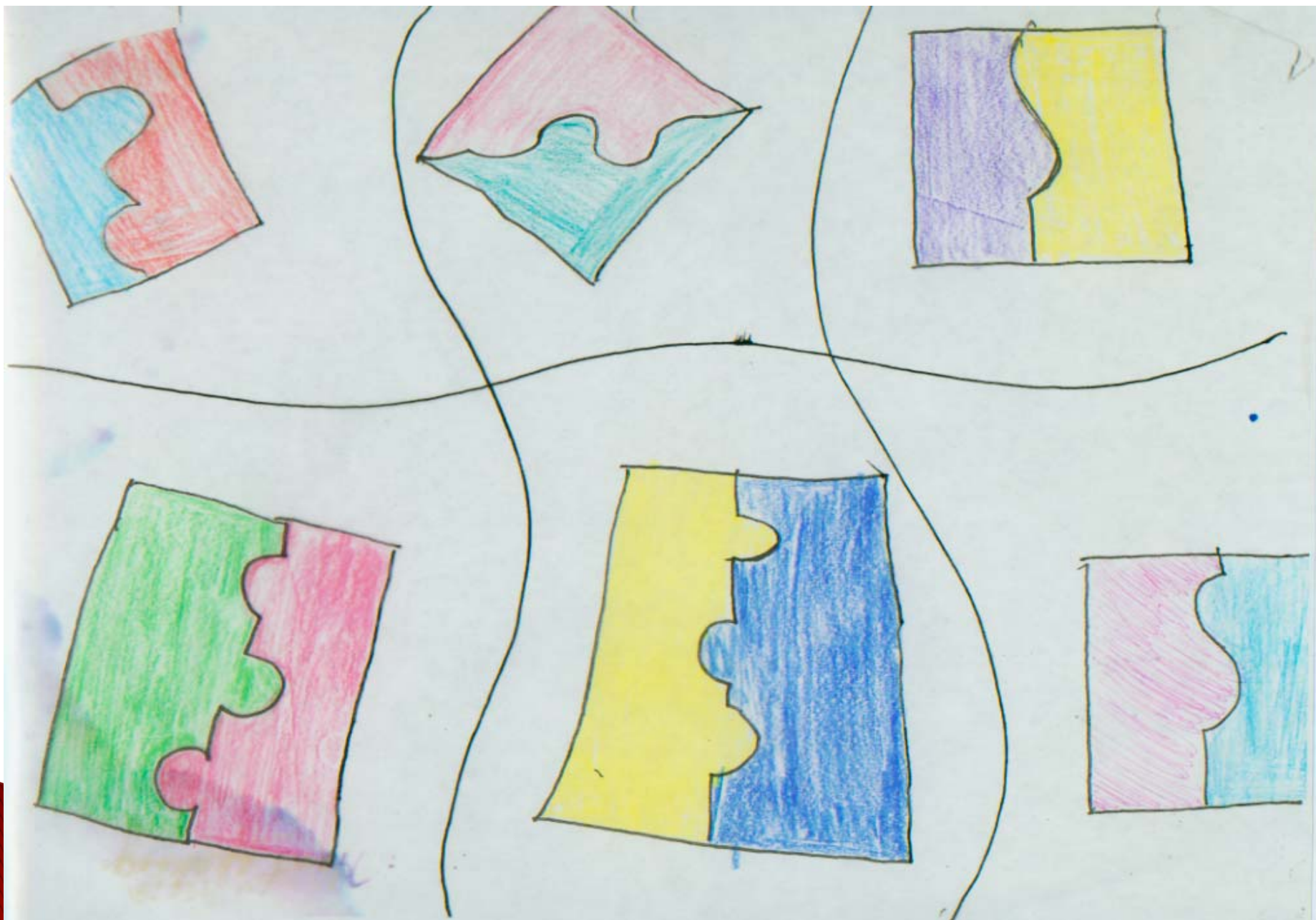
Show, Don't Tell

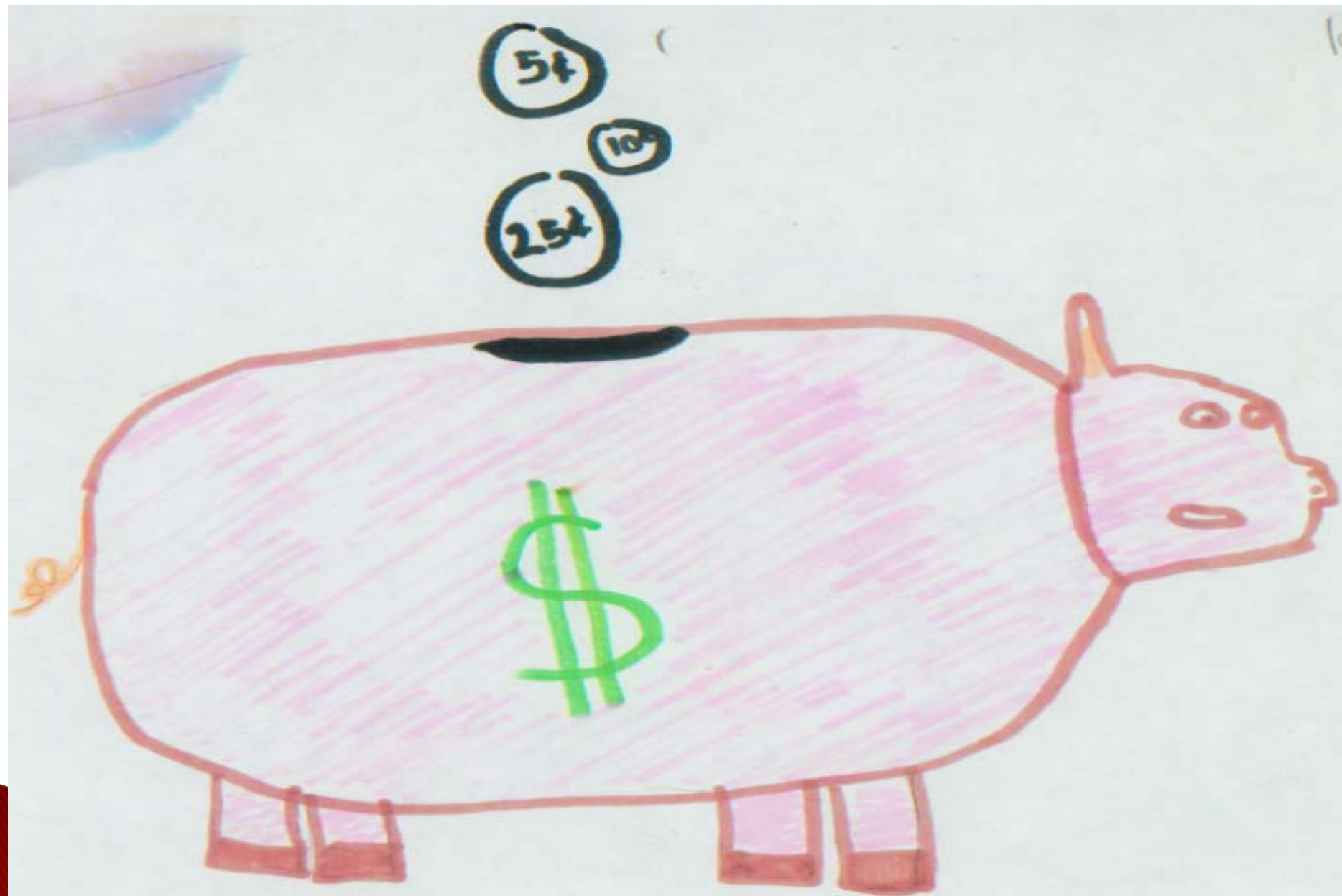


Show, Don't Tell

Astound:	To fill with wonder
Confine:	To keep within limits
Elusive:	Hard to describe or understand
Extinguish:	To put out, do away with
Longevity:	A long duration
Persistent:	Refusing to give up
Remote:	Far off in place or time
Spectacular:	Impressive
Taunt:	To insult or ridicule
Vital:	Having to do or necessary









Marzano's Classroom Strategies that Work

- **Identifying similarities and differences**

- Comparison and classification
- Metaphors and analogies



- **Summarizing and note taking**



- **Reinforcing effort and providing recognition**

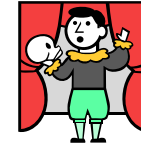


- **Homework and practice**



- **Nonlinguistic representations**

- Asking students to
 - Generate mental images.
 - Draw pictures or pictographs.
 - Construct graphic organizers.
 - Act out.
 - Make physical models of content.



- **Cooperative learning**



- **Setting objectives and providing feedback**



- **Generating and testing hypotheses**

- Engaging students in projects that involve generating and testing hypotheses through
 - Problem solving tasks
 - Decision making tasks
 - Investigation tasks
 - Experimental inquiry tasks
 - Systems analysis tasks
 - Invention tasks



- **Questions, cues and advance organizers**

- Prior to presenting new content:
 - Asking students to recall what they already know about it
 - Providing students with direct links to what they have studied previously
 - Providing ways for students to organize or think about content



Low-Prep, High-Impact Strategies, Materials, & Activities

Literacy Strategies and Activities

- 14. Question-Answer Relationships
- 15. Word Map
- 16. Show, Don't Tell
- 17. Word Splash
- 18. Cubing
- 19. Other



Learning Pyramid

Teach Others/Use Learning

Discussion Group

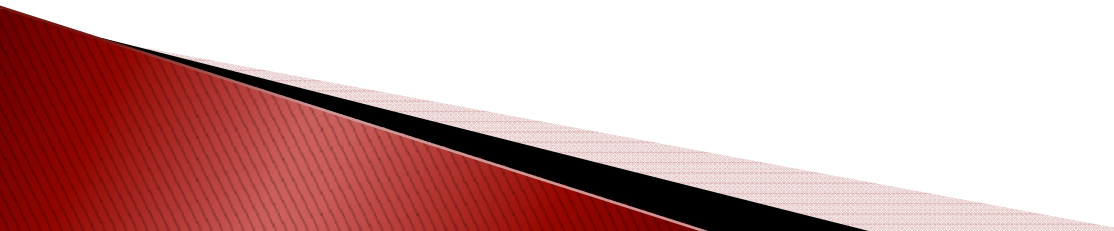
Reading

Practice by Doing

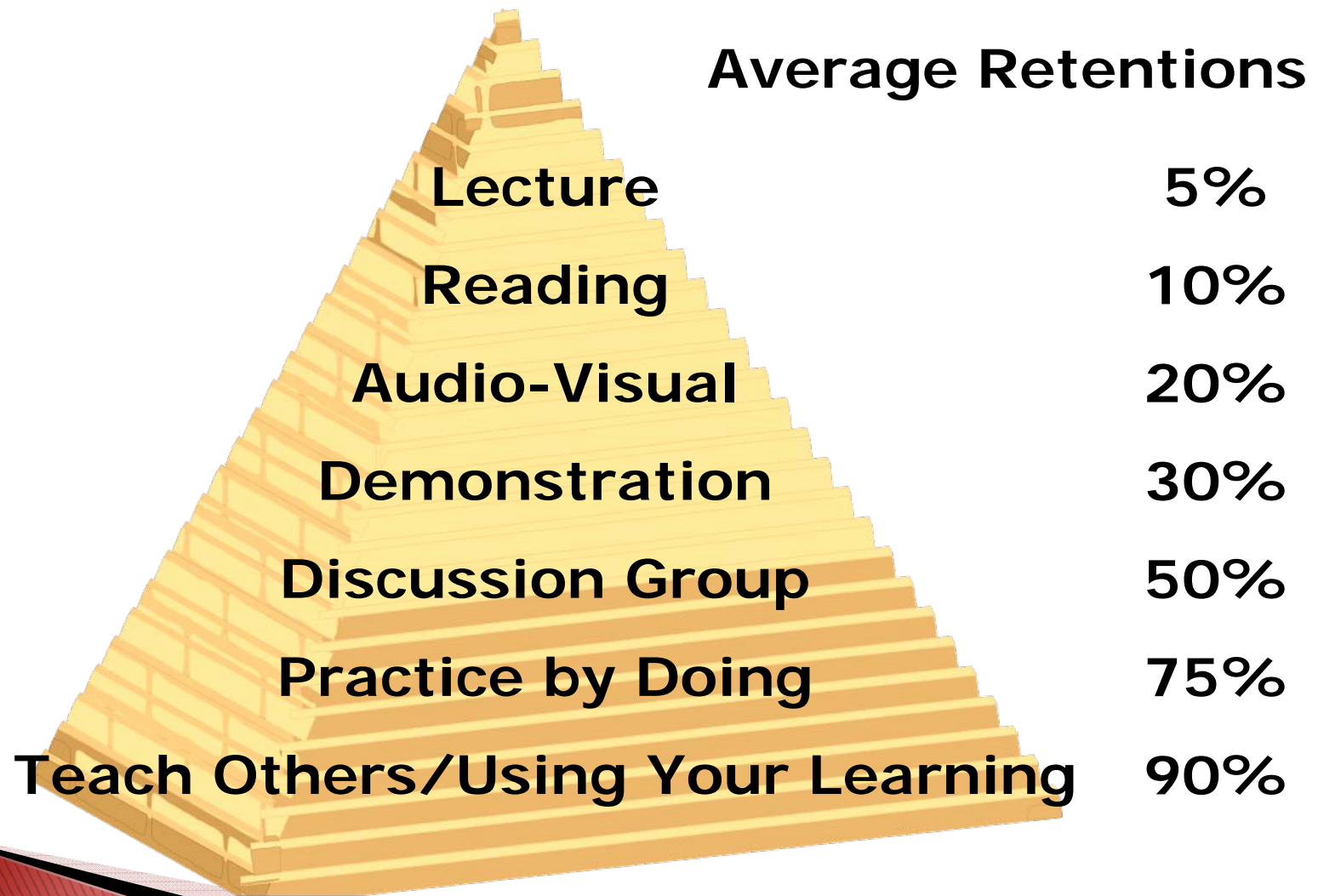
Audio-Visual

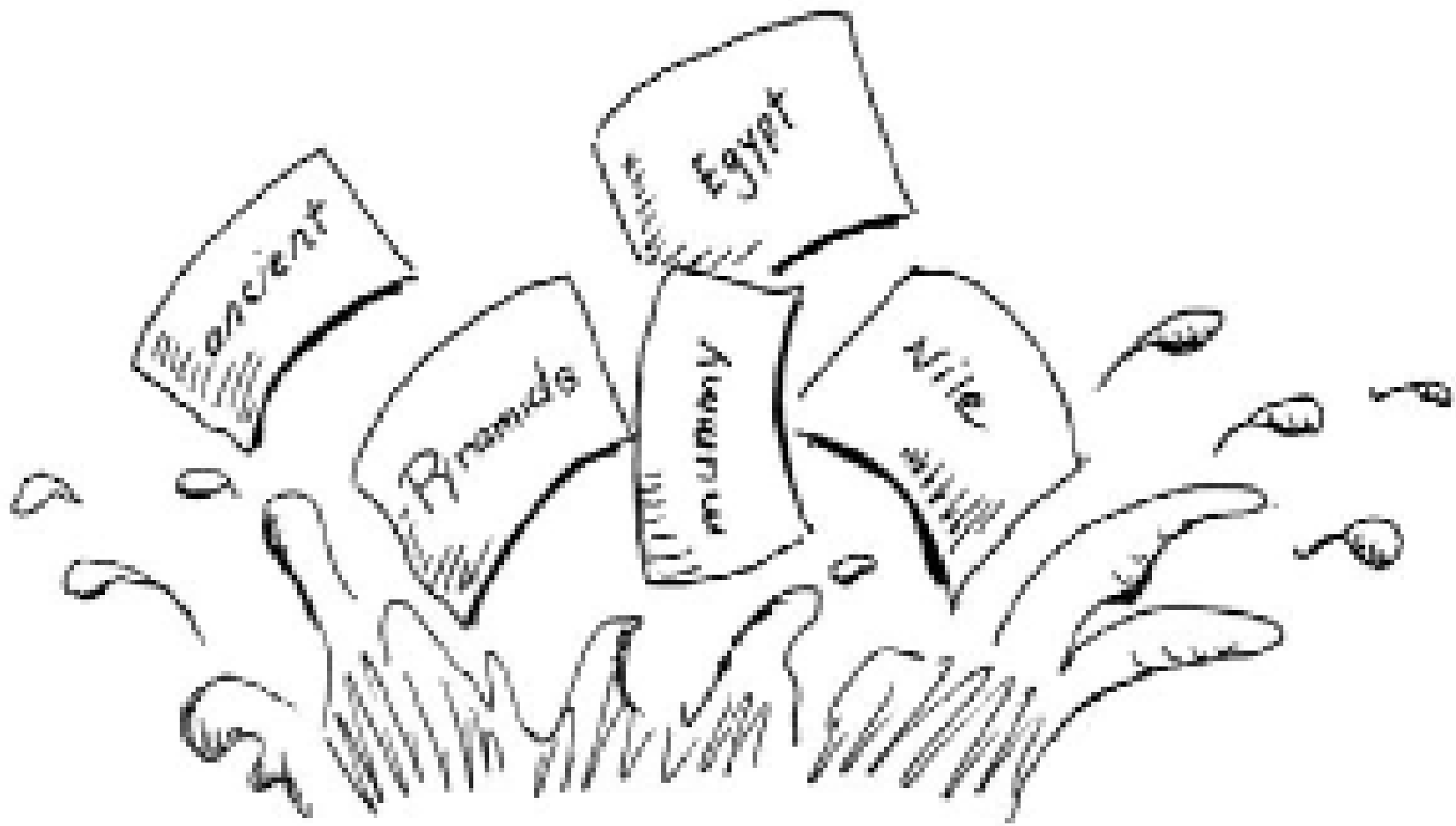
Lecture

Demonstration



Learning Pyramid





Reprinted with permission from Staff Development for Educators (SDE), *Differentiated Instruction: Different Strategies for Different Learners* by Char Forsten, Jim Grant, and Betty Hollas (Peterborough, NH: Crystal Springs Books, 2002), 64.

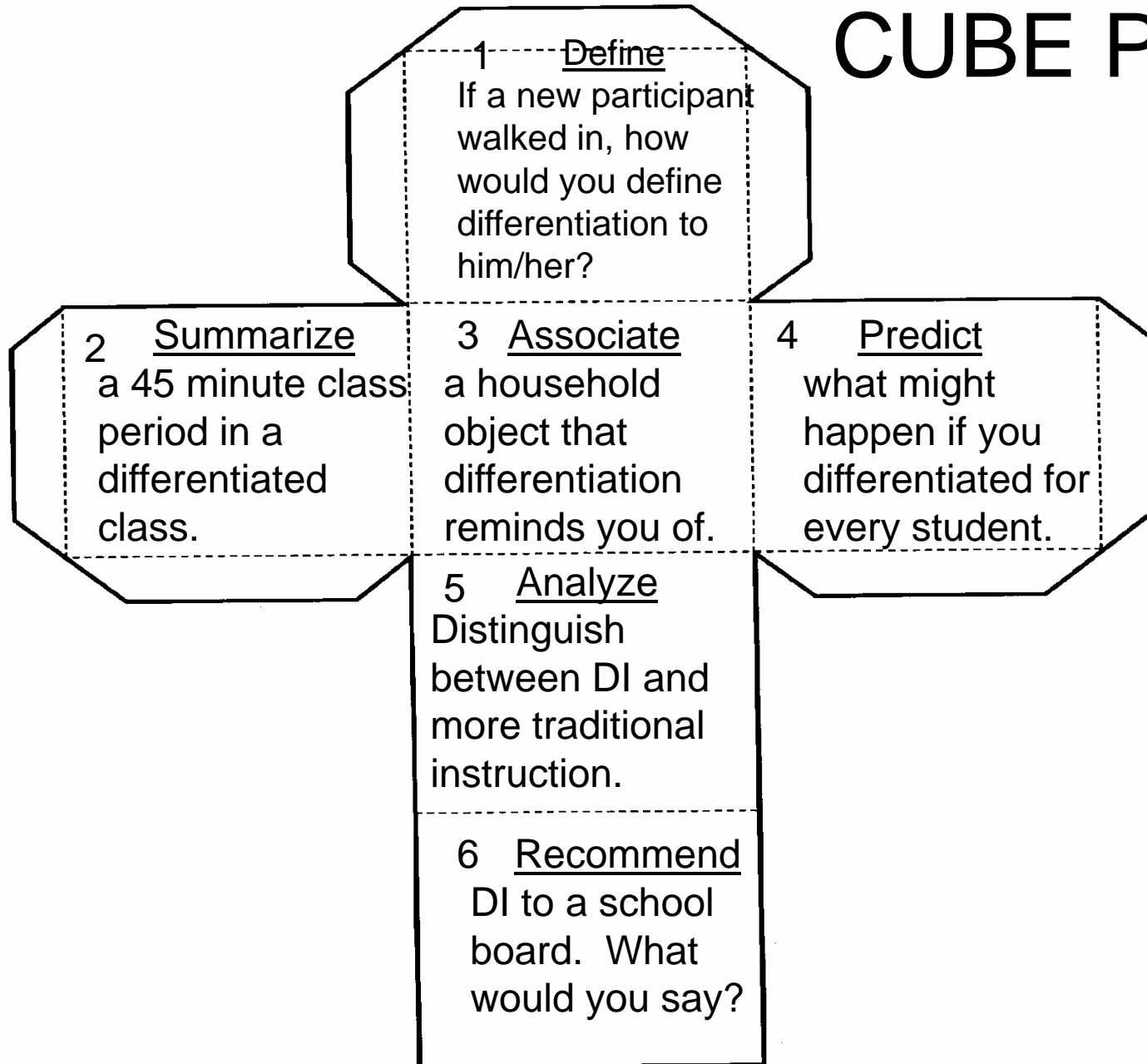
Low-Prep, High-Impact Strategies, Materials, & Activities

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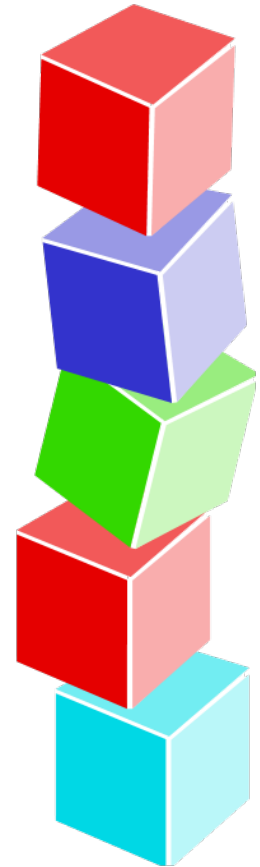


CUBE PATTERN

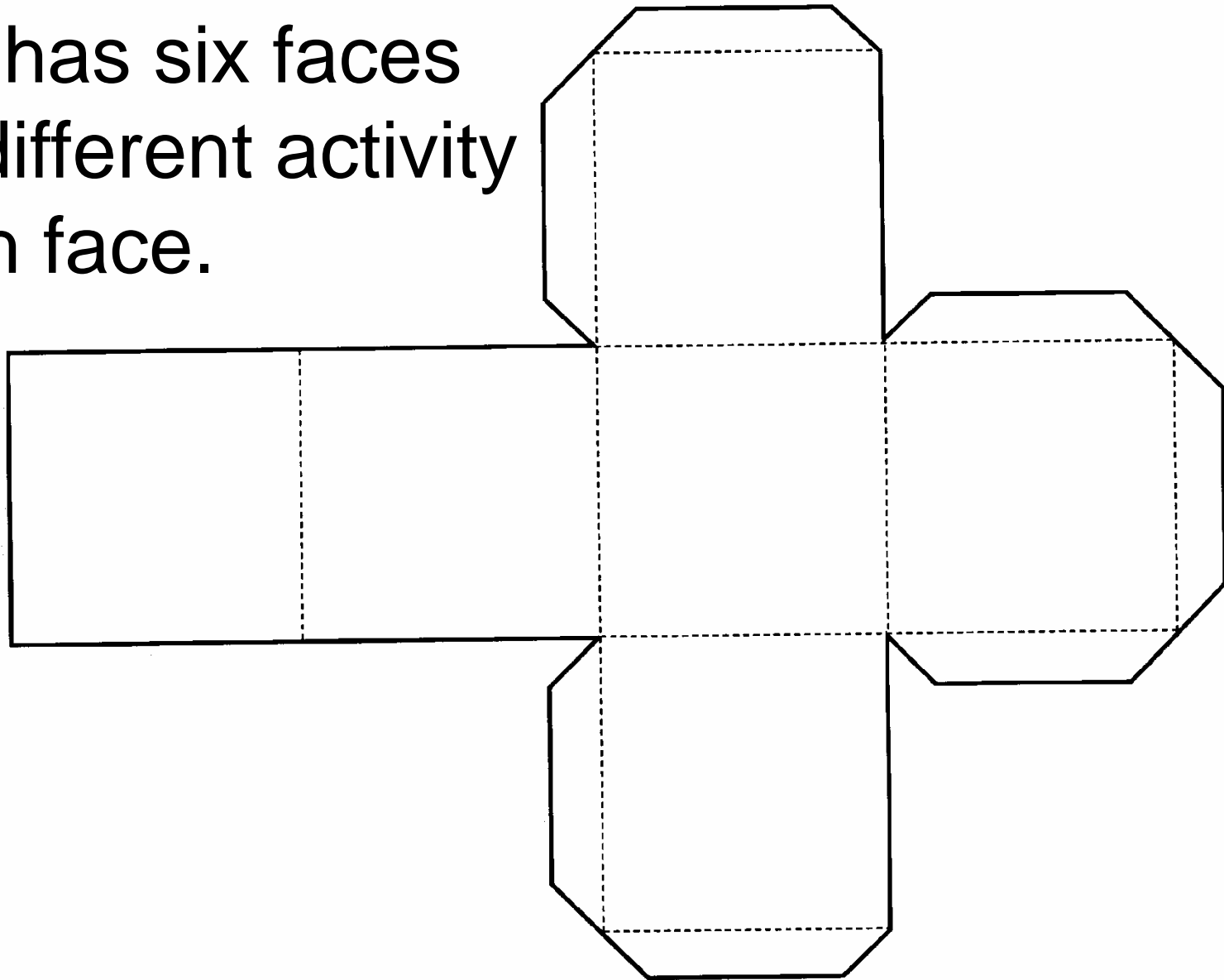


Cubing

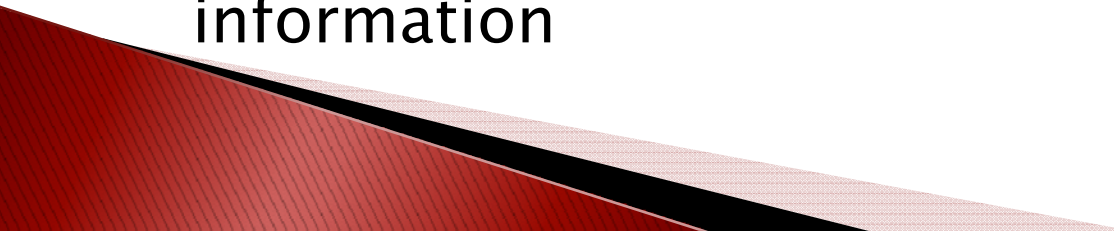
A strategy to address
learner differences and to
stimulate high-level thinking



A cube has six faces
with a different activity
on each face.

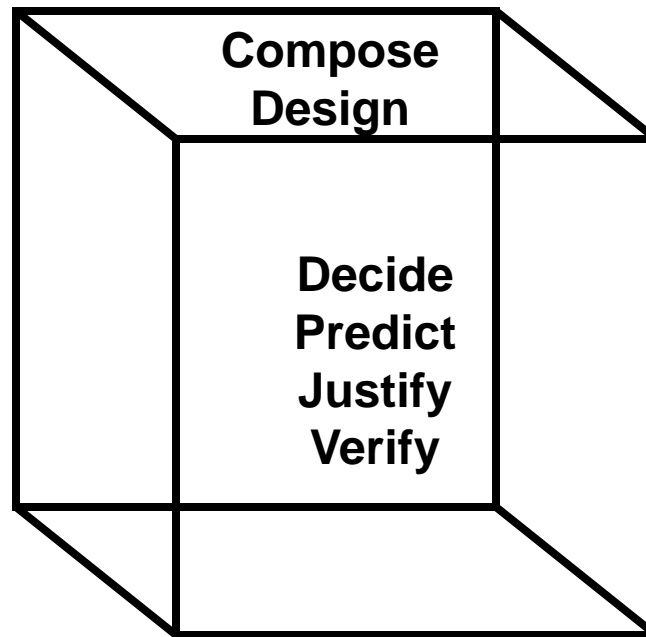


Bloom's Taxonomy

- ▶ **Knowledge Level:** requires students to learn information
 - ▶ **Comprehension Level:** requires students to understand information
 - ▶ **Application Level:** requires students to use the information
 - ▶ **Analysis Level:** requires students to examine specific parts of the information
 - ▶ **Synthesis Level:** requires students to do something new and different with the information
 - ▶ **Evaluation Level:** requires students to judge the information
- 

Cubing

A strategy that invites students to think at higher levels



Bloom's Question Cube

KNOWLEDGE

- Who is the main character?
- State two things that happened in the story.

COMPREHENSION

- Write a summary of the story.
- List 2 words that describe the main character.

EVALUATION

- Write a review of this story for the newspaper.
- Persuade the media specialist to buy or not buy this book.

APPLICATION

- Create a time line of the events in the story.
- Illustrate the climax or turning point in the story.

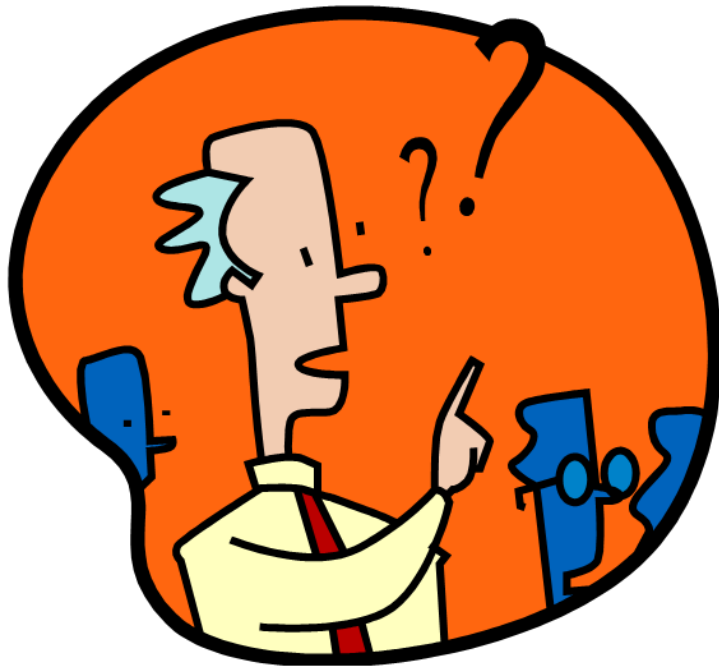
ANALYSIS

- Compare the main character with yourself.
- Compare this story with another one by the same author.

SYNTHESIS

- Create a reader's theater from the text.
- Create an award for this story and explain its significance.

A Question...



WHY IS CUBING
POPULAR IN A
DIFFERENTIATED
CLASSROOM?

Cubes can be
differentiated!



Knowledge

What happened after...?

How many...?

Who was it that...?

Can you name the...?

Describe what happened at...?

Who spoke to...?

Can you tell why...?

Find the meaning of...?

What is...?

Which is true or false...?

Low Prep, High Impact Strategies, Materials, and Activities

Learning Environment

“Effective teachers believe that all students can learn and be successful. Effective teachers consciously create a climate where all students feel included.”

- Gayle Gregory and Carolyn Chapman
in *Differentiated Instructional Strategies*



Learning Environment

- ▶ Intentionally creating an environment
- ▶ Setting a positive tone in the classroom
- ▶ Emphasis on learning
- ▶ Safe environment
- ▶ Respecting students as individuals
- ▶ VAK
- ▶ Interests of students
- ▶ Taking pride in accomplishments

Low Prep, High Impact Strategies, Materials, and Activities

Learning Environment

- 13. “I Can” Can
- 14. Visualization
- 15. Correct with **yellow**
- 16. Praise Behind Your Back
- 17. Search and Sign
- 18. Three Facts and a Fib
- 19. Other



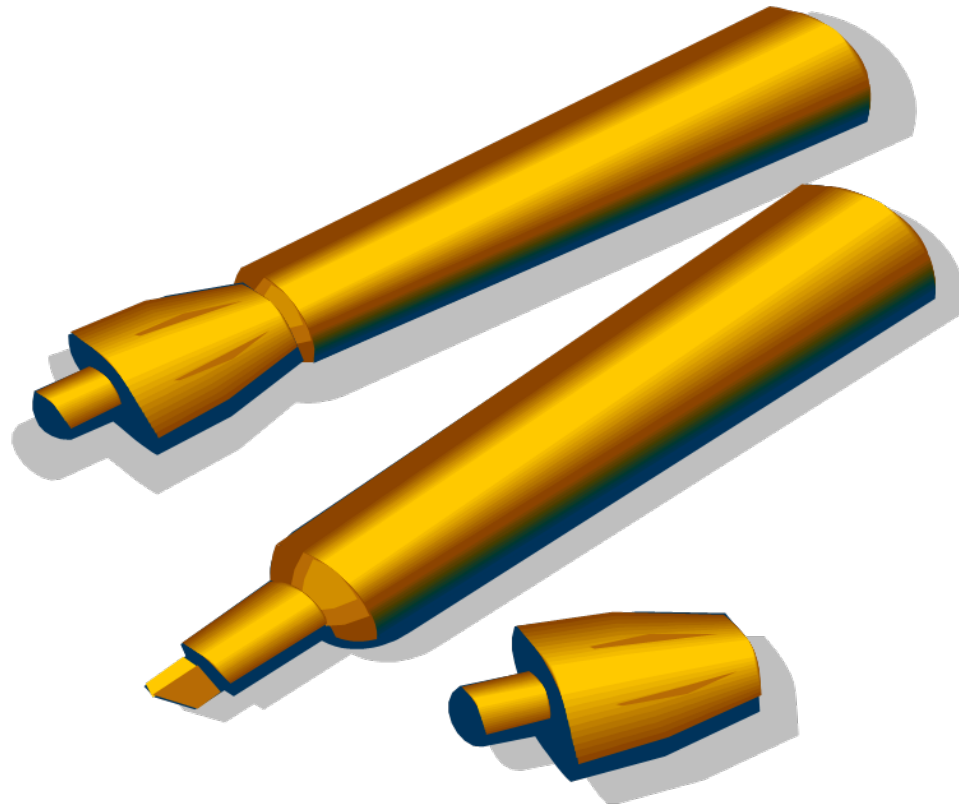
“I Can” Can



Visualization



Correct with Yellow



Praise behind your back



Low Prep, High Impact Strategies, Materials, and Activities

Learning Environment

- 13. “I Can” Can
- 14. Visualization
- 15. Correct with **yellow**
- 16. Praise Behind Your Back
- 17. Search and Sign
- 18. Three Facts and a Fib
- 19. Other



“Fair is giving students what they need.”

- Carol Ann Tomlinson



Low Prep, High Impact Strategies, Materials, and Activities

Teaching Tools and Materials

20. Phonics phone

21. Highlighting tape

22. Sticky notes

23. Left-handed materials

24. Wikki Stix

25. Other



$$\frac{3}{4}$$

$$\frac{4}{6}$$

$$\frac{7}{9}$$

$$\frac{2}{3}$$

$$\frac{4}{8}$$

$$\frac{14}{21}$$

Jack ran behind the back of the barn.

The gnarled old tree stood guard on the hill.

The Animal Story

Put highlighting tape on every adjective in the statement.

Low Prep, High Impact Strategies, Materials, and Activities

Teaching Tools and Materials

- 20. Phonics phone
- 21. Highlighting tape
- 22. **Sticky notes**
- 23. Left-handed materials
- 24. Wikki Stix
- 25. Other



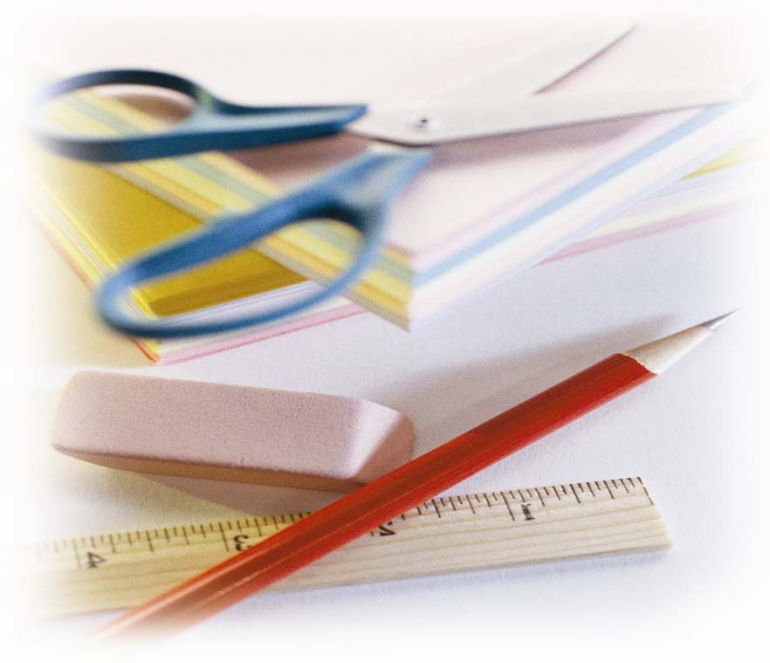
The Mayan Culture



LOW-PREP, HIGH-IMPACT Strategies, Materials, & Activities

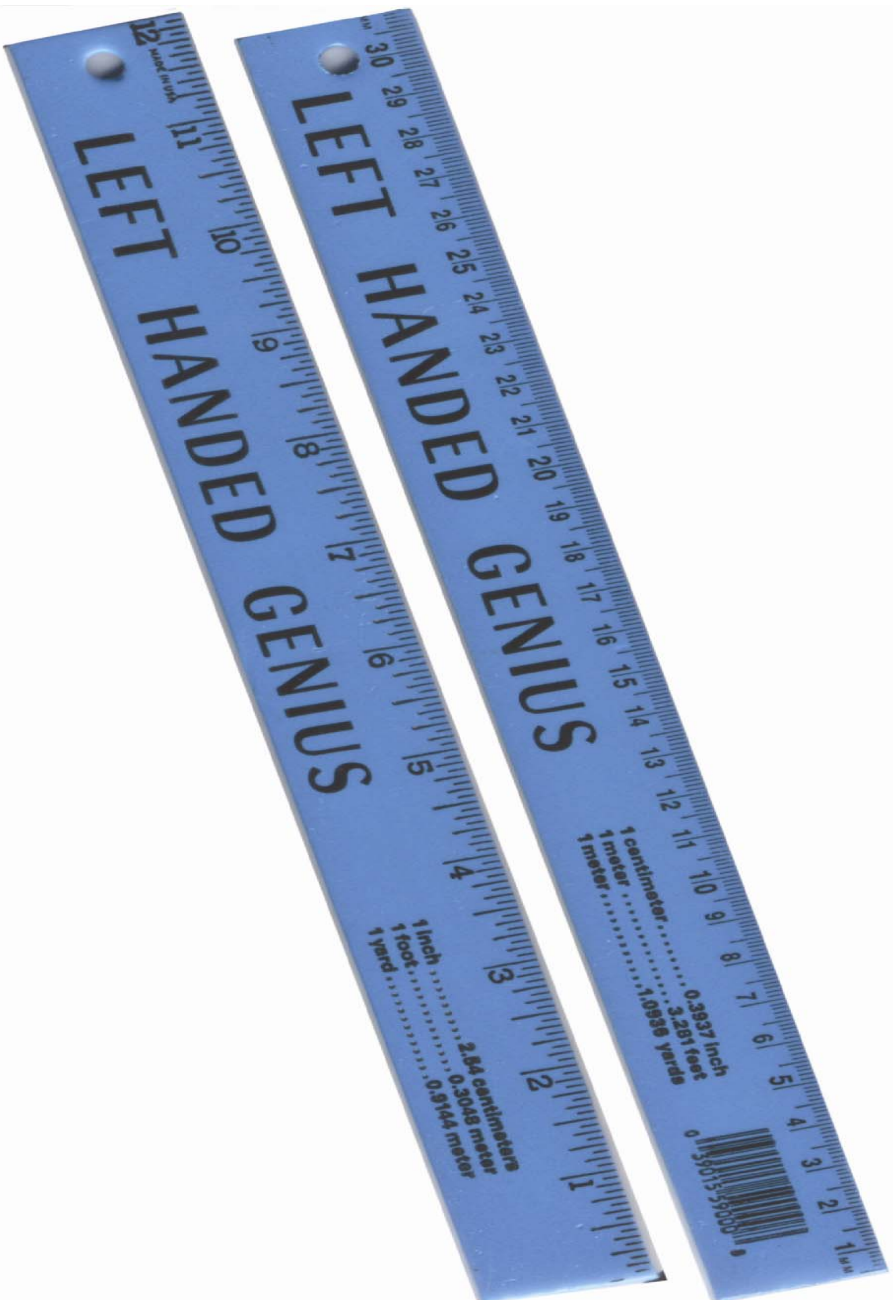
Teaching Tools and Materials

- 8. Phonics phone
- 9. Highlighting tape
- 10. Sticky notes
- 11. **Left-handed materials**
- 12. Wikki Stix
- 13. Other



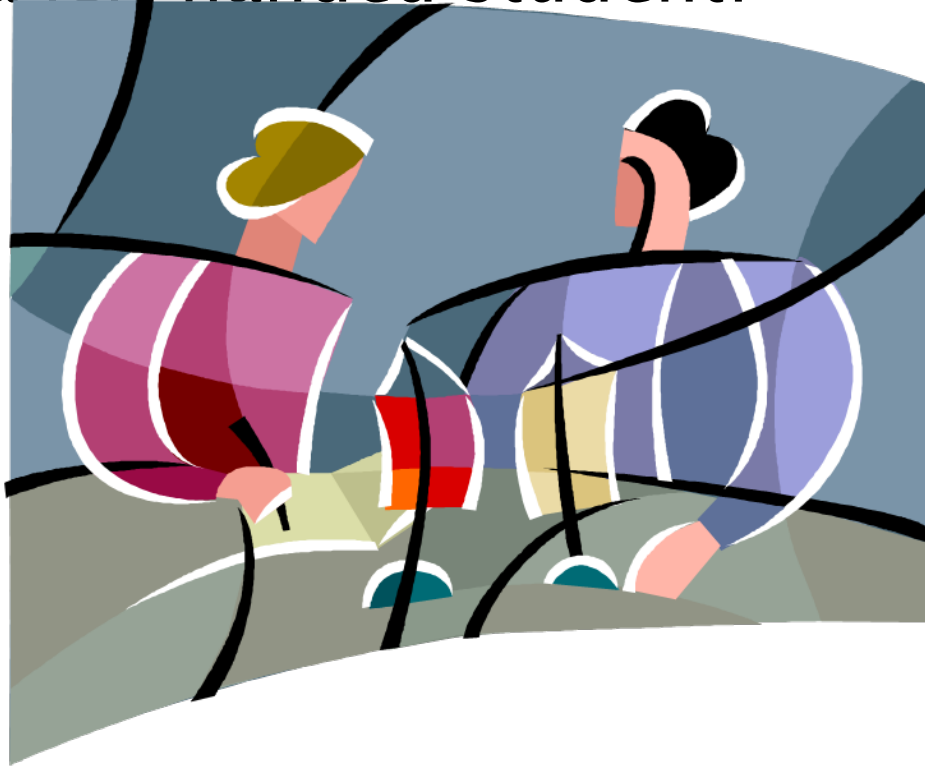
Left-Hander Factoids

- ❖ There are twice as many left-handed boys as girls.
- ❖ Left-handers are twice as likely to qualify for membership in Mensa, the high-IQ society.
- ❖ One person in ten is left-handed.
- ❖ One-third of all presidents since 1945 have been left-handed.
- ❖ President Ronald Reagan was born left-handed, then switched.
- ❖ Left-handed people tend to have more industrial accidents.
- ❖ The French horn is valved for the left hand.
- ❖ Left-handed comics include: W.C. Fields, Harpo Marx, Carol Burnett, David Letterman, Charlie Chaplin, Richard Pryor, Jay Leno, and Dick Van Dyke.
- ❖ Almost one-half of major league batting and pitching stars are left-handed.
- ❖ Toll booths favor left-handers.
- ❖ Benjamin Franklin was left-handed.
- ❖ Hand preference is evident by age five.
- ❖ Billy the Kid was left-handed.



Share With a Peer

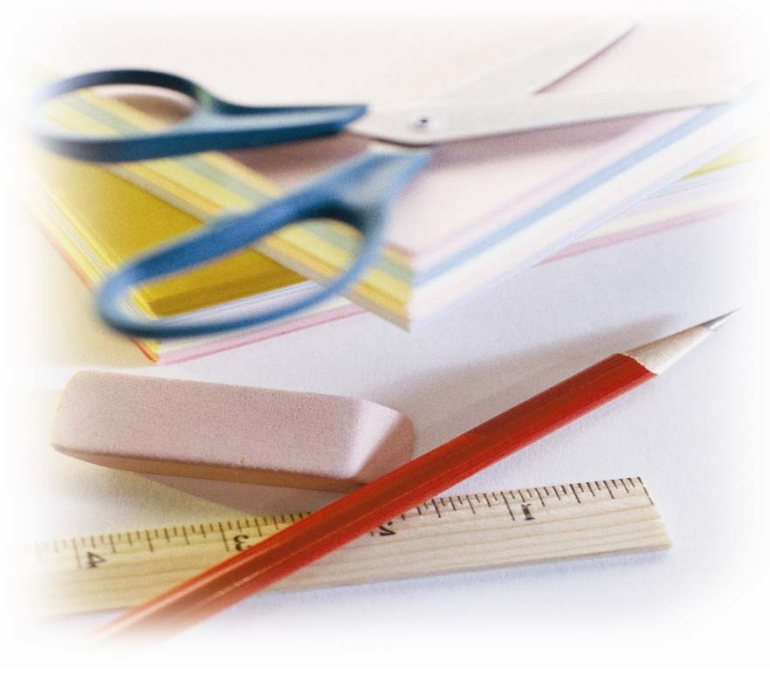
- ▶ Have you ever done anything special to meet the needs of a left handed student?
- ▶ Share an idea to assist a left handed student.

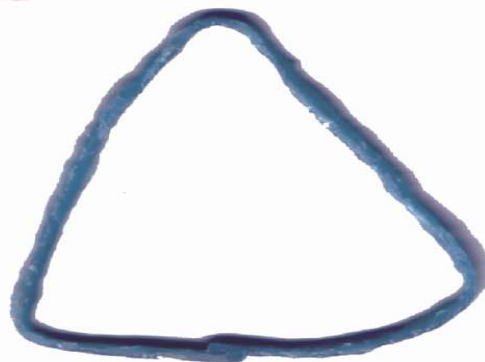
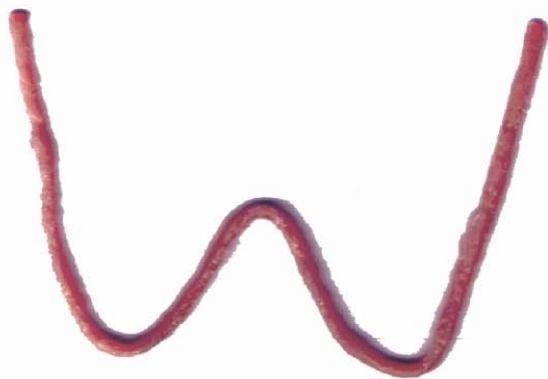


LOW-PREP, HIGH-IMPACT Strategies, Materials, & Activities

Teaching Tools and Materials

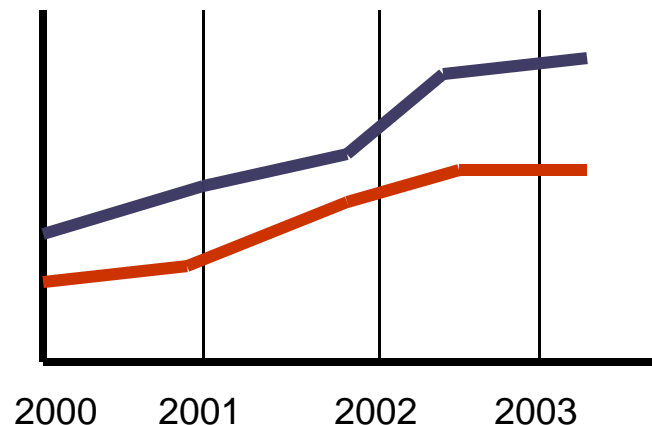
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Wikki Stix to Underline, Graph, ...

The morning after the news segment, Maggie Scott arrived at her office at the Star Reporter to find several messages stuck to her desk.



Case Studies – Diagnosing for Differentiation

Let's consider David...

Read through the anecdotal notes for David.

APPLICATION:

Thinking of the strategies that we have reviewed this morning, how might we differentiate for David.



Case Studies – Diagnosing for Differentiation

- ▶ Each group will have 6 minutes to discuss the one student assigned to their group from the Case Studies.
 - Read over the anecdotal notes for your student
 - Discuss appropriate differentiation strategies for that student
 - Write your differentiation strategies in the last column.
 - Designate a reporter for your group.

Case Studies – Diagnosing for Differentiation

- ▶ Find a group with a student other than yours.
 - The reporter from one group will share the student's name and profile and the differentiation strategies that the group chose to implement for that student. – 2 minutes
 - Time for questions and discussion – 3 minutes
 - The reporter from the other group will share the student's name and profile and the differentiation strategies that the group chose to implement for that student. – 2 minutes
 - Time for questions and discussion – 3 minutes