Effecting Change Through Exemplary Practices

2019 NELA SUMMER CONFERENCE
Building Teacher Efficacy: The Key to School Improvement

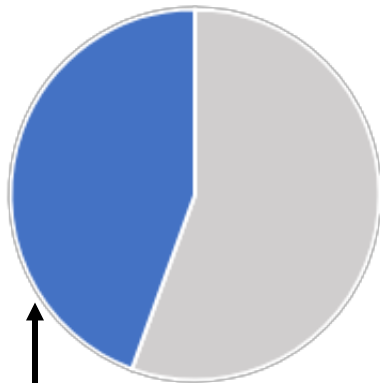DR. MAX THOMPSON

max@learningfocused.com

LEARNING-FOCUSED

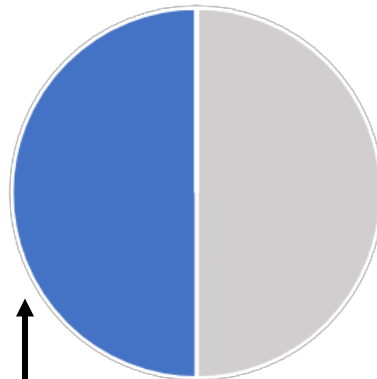# The Impact of Teacher and School Effectiveness on Achievement

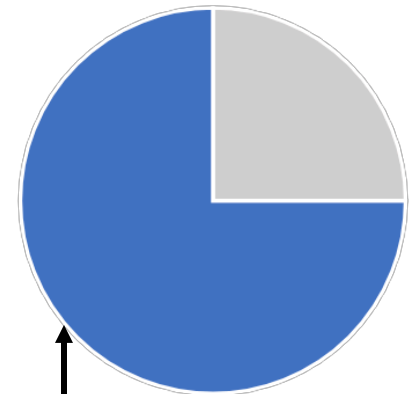## Use of Exemplary Practices in Lessons

Least Effective

Average

Most Effective

Less than 50% of the time

50% of the time

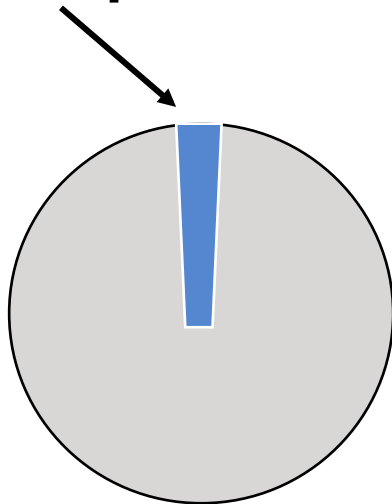**75+% of the time**

What happens when a student scoring at the 50th percentile spends 2 years in these schools?

Least Effective School
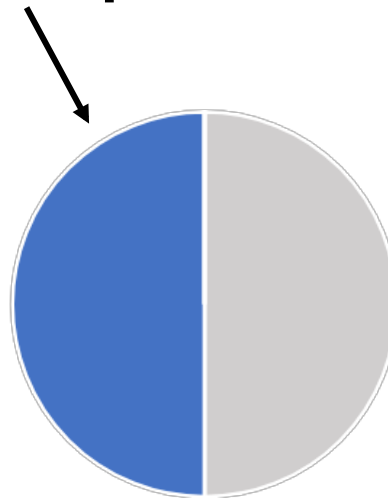
Average School

Most Effective School

80% likelihood of scoring at the 3rd percentile

87% likelihood of scoring at the 50th percentile

94% likelihood of scoring at the 96th percentile

Marzano, 2003
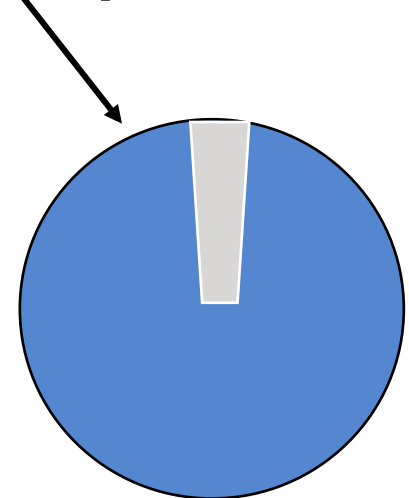
Research-Based Strategies

Strategies above . 50 effect size.

Compiled from research conducted between 1998 and 2001 by the Mid-continent Research for Education and Learning (McREL), the 90/90/90 school research by Douglas Reeves, the 2004-2005 Evaluation Consortium, Graham and Perin (2007), D.W. Rowe (1985), and John Hattie (2009).

Strategy	Effect Size
Higher Order Thinking (HOT)	1.61
Distributed Summarizing (DS)	1.00
Numbered Heads Collaborative Pairs (CP)	.92
Vocabulary Instruction (VI)	.85
Reading Comprehension Instruction (RC)	.82
Writing to Raise Achievement (W)	.82
Acceleration Intervention Focus (Acc)	.80
Social Learning Focus (S)	.80
Activating Thinking (Act)	.75
Learning Goals (LG)	.75
Feedback (F)	.75
Advance Organizers/Previewing (AO/P)	.73
Distributed Learning (DL)	.71
Formative Assessments (FA)	.68
Graphic Organizers/Concept Maps (GO)	.65
Direct Instruction (DI)	.60
Scaffolding (Sca)	.50

LEARNING-FOCUSED Lesson Example

Plan for the concept, topic, or skill — Not for the class period

Learning Goals for this Lesson	Standards	(standard #'s listed here…)

Students Will Know
- Why organisms are transported to new locations
- Conditions that lead to an organism becoming invasive
- Effects on various groups when organisms are transported to new locations

Students Will Be Able to
- Evaluate effects of invasive species
- Determine patterns among invasive species

Lesson Essential Question How does understanding patterns among invasive species help us make wise decisions?

Activating Strategy AO — Introduce "kudzu" problem with photo. Pairs complete an anticipat[...] Quick Write on points of discussion. Preview graphic organizer. AO

Key vocabulary to preview and vocabulary strategy — Vocabulary Notebook Word Map entry for: non-native, invasive species, natural diversity V

Lesson Instruction

Learning Activity 1 S — Read aloud first two paragraphs a[...] onstrate/think aloud completing the cause/effect graphic organizer for the event an[...] use. Paired reading of third paragraph to locate causes. 1's read paragraph; 2's summarize causes and justify how he/she knows it's a cause.

Graphic Organizer

Cause/Effect Organizer

Assessment Prompt for LA 1 HOT S — Based on the kudzu story, infer why organisms are transported to new habitats? Write a headline that gives your explanation NVR

Learning Activity 2 — Check responses. Point out that in this case the organism was transported to provide benefits to humans—shade, control of erosion. Continue paired reading, paragraph by paragraph, to complete graphic organizer for causes and effects reversing roles of reader and summarizer for each paragraph. Record causes on class organizer with sticky notes from students.

Assessment Prompt for LA 2 HOT S — Write a sentence that justifies which condition you think was the primary cause of the spread of kudzu. HOT

Assignment V — Write about what you think this quote means: "Whatever man does to the web of life, he does to himself." Use your graphic organizer to help. Be sure to use the vocabulary words in your response and evidence from the text to support your ideas.

Learning Activity 3 — Remind students that exam[...] the effects will help answer the Essential Question. Have students examine the effects that were recorded on their graphic organizer and categorize the effects according to groups that are impacted by the relocation of organisms. Note that three different groups were impacted: the organism itself, other organisms and the environment, and humans. Introduce the R.A.F.T. as a way to synthesize information from different viewpoints. Pairs choose one of the R.A.F.T. prompts to complete. Form groups of 6 with different roles to share. Each group chooses one to share with the whole group.

Assessment Prompt for LA 3 HOT S — Work with a partner to create a PMI showing any positive effects, negative effects and intriguing effects.

Learning Activity 4 — After reading about another invasive species, students work in small groups to determine patterns that occur when organisms are out of place and create a visual display to communicate their findings. Students conduct a gallery walk to compare the patterns determined by each group and record any observations that may be different from your own OR add to your PMI. NVR

Assessment Prompt for LA 4 HOT S — Pass the solution: Based on your new learning about pa[...] cur when organisms are out of place, what suggestions might you make?

Summarizing Strategy S — 3 patterns when an organism is out of place / 2 important things we can learn from these patterns / 1 conclusion

Evidence-Based Examples of Convincing Patterns:

Lesson Planning: 94% of exemplary schools had multi-day lesson plans with 100% of their teachers using <u>backward planning</u> for lessons with the lesson's learning target being the standards-based assignment. (Typical: 18%)

Reading: 93% of exemplary elementary schools and 86% of exemplary secondary schools used <u>Text Structure</u> as their focus on ALL reading & writing assignments. (Typical K – 5: 8%) (Typical 6 – 12 Schools: 5%)

Writing to Raise Achievement: 91% of exemplary schools used writing to raise achievement as their continuing practice for 5+ years. The schools intentionally target 75% of non-fiction writing from Social Studies and Science content.   (Typical: 9%)

Evidence-Based Examples of Convincing Patterns:

Extended Reading Passages: 94% of exemplary elementary   schools and 89% of exemplary secondary schools used Extended Reading Passages with Comprehension Questions and Writing Summaries as year-long focus every year.   (Typical K-5: 16%) (Typical 6-8 and 9-12: 3%)

Error Analysis: 87% of exemplary schools included time and practice for students to do error analysis. (Typical: 14%)

Previewing and Scaffolding: 91% of exemplary schools used a systematic system for previewing & scaffolding grade-level curriculum for at-risk learners rather than remediation. (Typical: 18%)

School Organization: K – 5: 89% of exemplary elementary schools organize their school by K – 1, 2 – 3, 4 – 5 instead of K – 2 and 3 – 5. (Typical: 4%)

School Organization: 9 – 12: 91% of exemplary high schools organize their school by a 9 – 10 and 11 – 12 system for scheduling and providing learning support. (Typical: 8%)

Instructional Strategies & Poverty

The higher the percent of poverty, the fewer instructional options that can be successful!

75%+

55% - 75%

25% - 55%

0 – 25%

←— # of Instructional Options that Work —→
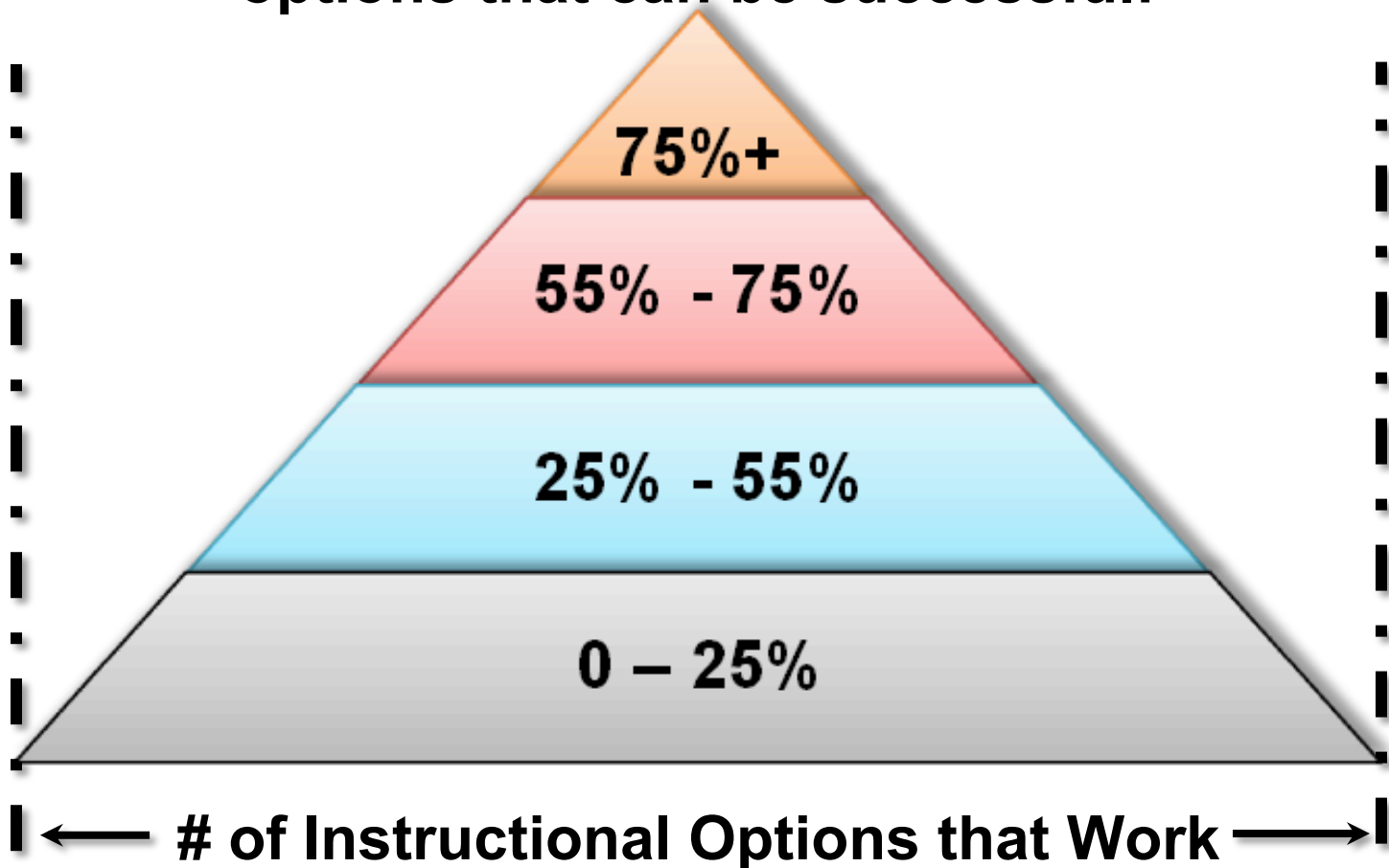
Instructional – Assignment Gap

Of all the gaps we hear about, the <u>instructional-assignment gap</u> is the least discussed, is rarely addressed, and is <u>consistently one of the major causes of low student achievement.</u>

The artifacts of our expectations are the assignments
 we make to students"

Assignments must be driven by grade-level standards!

The assignment <u>IS</u> the learning target.

Students can do no better than the assignments they are given.

The Top 8 Research-Based Strategies: High Yield for <u>Literacy</u> Practices

Rank	Strategy	Effect Size
1	**Higher Order Thinking**	**1.61**
2	**Distributed Summarizing**	**1.00**
3	**Numbered Heads – Collaborative Pairs**	**.92**
4	**Vocabulary In Context**	**.85**
5	**Writing to Raise Achievement**	**.82**
6	**Reading Comprehension with Text Structure Framework**	**.82**
7	**Advance Organizers**	**.73**
8	**Graphic Organizers/Concept Maps**	**.65**

The new generation of standards focus on the following 8 Higher Order Thinking strategies:

1. Compare and Contrast

2. Evaluate

3. Construct Arguments

4. Deduce

5. Infer

6. Analyze Viewpoints

7. Analyze Relationships

8. Determine Patterns

More than 60% of the from these 5

LEARNING-FOCUSED Lesson Example

Plan for the concept, topic, or skill – Not for the class period

Learning Goals for this Lesson	Standards	(standard #'s listed here...)

11

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- Conditions that lead to an organism becoming invasive
- Effects on various groups when organisms are transported to new locations

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- Determine patterns among invasive species

Lesson Essential Question | How does understanding patterns among invasive species help us make wise decisions?

Activating Strategy **AO** | Introduce "kudzu" problem with photo. Pairs complete an anticipat... Quick Write on points of discussion. Preview graphic organizer. **AO**

Key vocabulary to preview and vocabulary strategy | Vocabulary Notebook Word Map entry for: non-native, invasive species, natural diversity **V**

Lesson Instruction

Learning Activity 1 **S**
Read aloud first two paragraphs a... onstrate/think aloud completing the cause/effect graphic organizer for the event ar... use. Paired reading of third paragraph to locate causes. 1's read paragraph; 2's summarize causes a... justify how he/she knows it's a cause.

Assessment Prompt for LA 1
Based on the kudzu story, infer why organisms are transported to new habitats? Write a headline that gives your explanation **HOT** **S**

Learning Activity 2
Check responses. Point out that in this case the organism was transported to provide benefits to humans—shade, control of erosion. Continue paired reading, paragraph by paragraph, to complete graphic organizer for causes and effects reversing roles of reader and summarizer for each paragraph. Record causes on class organizer with sticky notes from students.

Assessment Prompt for LA 2
Write a sentence that justifies which condition you think was the primary cause of the spread of kudzu. **HOT** **S**

Learning Activity 3
Remind students that examining the effects will help answer the Essential Question. Have students examine the effects that were recorded on their graphic organizer and categorize the effects according to groups that are impacted by the relocation of organisms. Note that three different groups were impacted: the organism itself, other organisms and the environment, and humans. Introduce the R.A.F.T. as a way to synthesize information from different viewpoints. Pairs choose one of the R.A.F.T. prompts to complete. Form groups of 6 with different roles to share. Each group chooses one to share with the whole group.

Assessment Prompt for LA 3
Work with a partner to create a PMI showing any positive effects, negative effects and intriguing effects. **HOT** **S**

Learning Activity 4
After reading about another invasive species, students work in small groups to determine patterns that occur when organisms are out of place and create a visual display to communicate their findings. Students conduct a gallery walk to compare the patterns determined by each group and record any observations that may be different from your own OR add to your PMI. **NVR**

Assessment Prompt for LA 4
Pass the solution: Based on your new learning about pa... ...ccur when organisms are out of place, what suggestions might you make? **HOT** **S**

Summarizing Strategy
3 patterns when an organism is out of place
2 important things we can learn from these patterns
1 conclusion **S**

Graphic Organizer

Cause/Effect Organizer **NVR**

HOT

Assignment **V**
Write about what you think this quote means: "Whatever man does to the web of life, he does to himself." Use your graphic organizer to help. Be sure to use the vocabulary words in your response and evidence from the text to support your ideas.

High Yield Practice: Vocabulary

"Vocabulary instruction on <u>specific words that are important to what students have to learn</u> can increase student achievement by 33 percentile points."
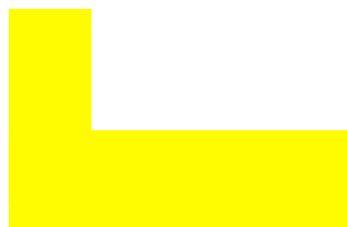
Marzano, 2001

Word Walls in K – 1 Classrooms

- **Words Categorized by Alphabet (A – Z Word Walls)**

- **"Content Words We Have Learned"**
  + "Frequency in Print Words"

- **<u>Not Just</u> Frequency in Print Words**
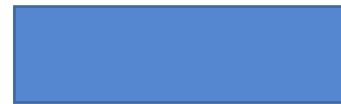
Color Coding Words Options:

1. Content Words and FIP Words

2. School-wide by Subject

3. In Kindergarten By Parts of a Sentence

FIP   **Noun**   **Verb**   **Description**   **Period**

Word Walls in 2 – 12 Classrooms

- Graphically – Visually Organized, Typically in a Concept Map or a Graphic Organizer

- Key to Quality: The Word Wall Always Provides the Learners with an Organized Pre-Writing Tool

- Is <u>NOT</u> Just a List of Words

Math

Topic:

Fractions

Unit Essential Question:

How are numbers that represent fractional parts modeled, compared and ordered in order to solve real world problems?

Equivalent Fractions

Compare and Order Fractions

Compare and Order Mixed Numbers

Numerator   Equivalent   Compare   Order   Improper Fraction

Denominator   Factor   Unlike   Mixed Number

Simplest Form

How do I know if I have equivalent fractions?

What strategy can I use to compare and order fractions?

How can using a model help me compare mixed numbers?

10th Grade ELA
Shakespeare's Tragedies

Unit Essential Questions: How does an understanding of Shakespearean tragedy help the audience discern Shakespeare's commentary on a range of human conditions?

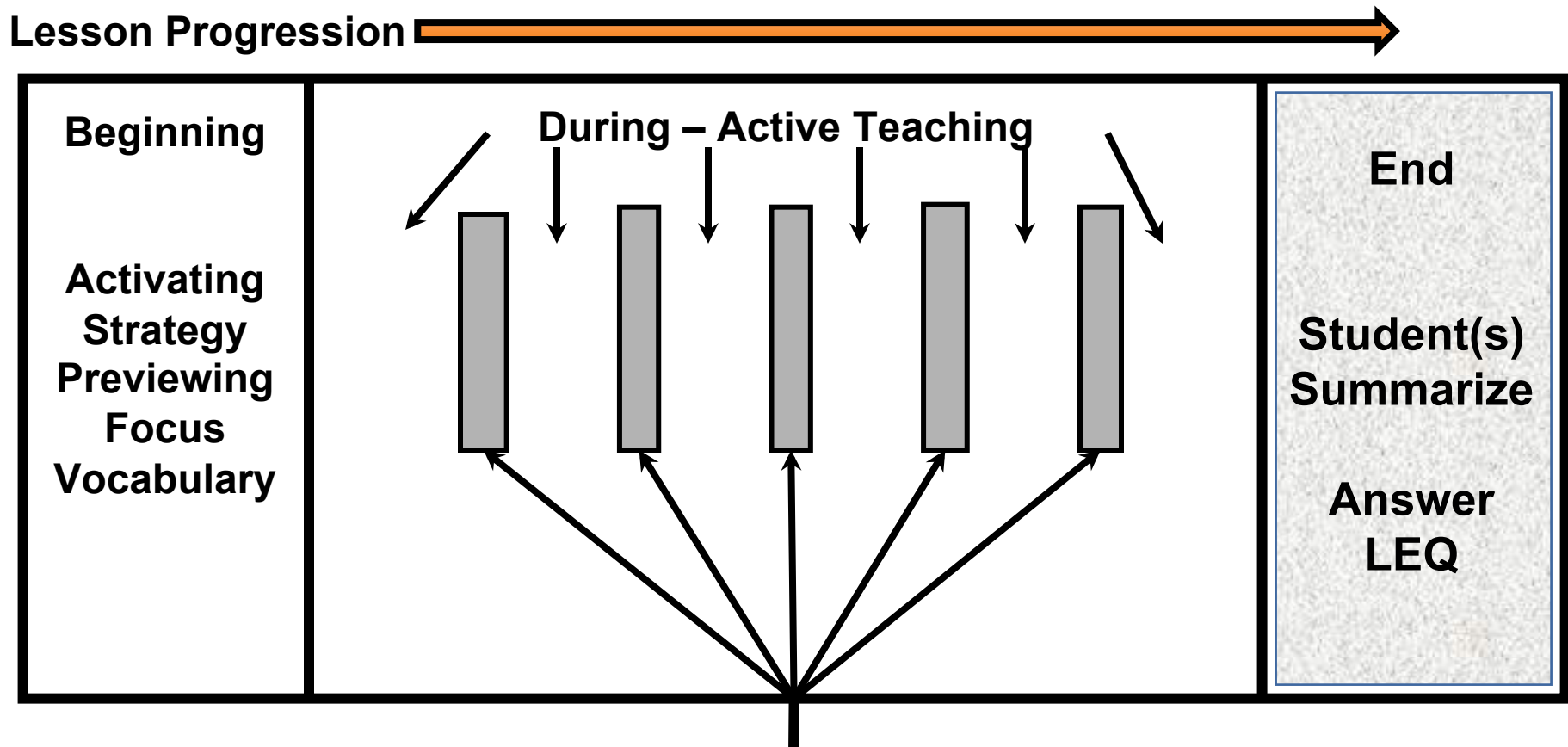| Concept: Character Analysis	Concept: Literary Analysis	Concept: Drama Characteristics
Vocabulary: Protagonist Intellectual Virtuous Avenging Flawed Antagonist	**Vocabulary:** Setting Characterization Theme Plot/Conflict Imagery Dramatic Irony	**Vocabulary:** Monologue Soliloquy Aside Foil Catastrophe Staging

Distributed Summarizing

- **Summarizing is most effective when <u>distributed throughout each lesson</u>**

- **Students should be organized <u>into numbered heads/ pairs</u> for most summarizing activities**

- **Students should summarize at the <u>end of each lesson</u>, preferably using grade-level literacy standards and higher order thinking strategies.**

- **<u>Answering the Lesson Essential Question</u> should be part of the summarizing activity at the end of the lesson.**

High Yield Practice: Distributed Summarizing

Effective Lessons with Distributed Summarizing

Lesson Progression

Beginning

Activating Strategy Previewing Focus Vocabulary

During – Active Teaching

End

Student(s) Summarize

Answer LEQ

Distributed Summarizing (also can be Assessment Prompts and/or Formative Assessments)

The "Tested" 7 Comprehension Strategies

| Comprehension Strategy	Used in Reading to:
Main Idea and Details	• Determine big ideas • Differentiate key ideas from details • Evaluate importance of information • Summarize information • Support ideas
Text Features	• Make predictions • Determine text structure • Locate key facts efficiently
Sequencing	• Follow a chronological progression of events • Plot lives of important people • Follow steps in a process or technical procedures • Perform experiments
Cause and Effect	• Analyze relationships among events • Analyze the influence of people and ideas • Determine short and long term effects • Identify implications
Inference	• Draw conclusions • Interpret documents • Formulate predictions • Hypothesize • Infer themes • Analyze viewpoints • Speculate on alternative outcomes
Compare and Contrast	• Compare & contrast sources, events, ideas, individuals, approaches, perspectives, text structures
Fact and Opinion	• Investigate controversial issues • Determine bias • Evaluate validity • Support conjectures

Most Common Expository Text Structures

Text Structure	Explanation	Example
Description	Describes the key attributes or details of a person, place or thing.	A text describes the groups of people impacted by Westward Expansion.
Sequence	Describes key points, details or events in a chronological order.	A text describes the events leading up to Westward Expansion.
Problem Solution	Describes how the problem was created and then gives possible solutions to solve it.	A text describes the problems people were facing in the East and how Westward Expansion provided solutions.
Cause and Effect	Describes the causes that create a particular outcome or effect. It shows why something happens as a result of something else.	A text describes the causes and effects of Westward Expansion.
Compare and Contrast	Describes how two or more ideas are alike and different.	A text compares the viewpoints of Native Americans and settlers on Westward Expansion.
Argument	Presents a claim with supporting reasons and evidence.	A text supports the idea that Manifest Destiny changed the history of America.

Text Structures Help Students to…

- **Recognize how text is organized**

- **Follow ideas**

- **Anticipate content**

- **Align their thinking to the organizational pattern**

- **Select and use graphic organizers to visually represent the information**

- **Help summarize effectively**

When Text Structures Drive Thinking During Reading =

Comprehension
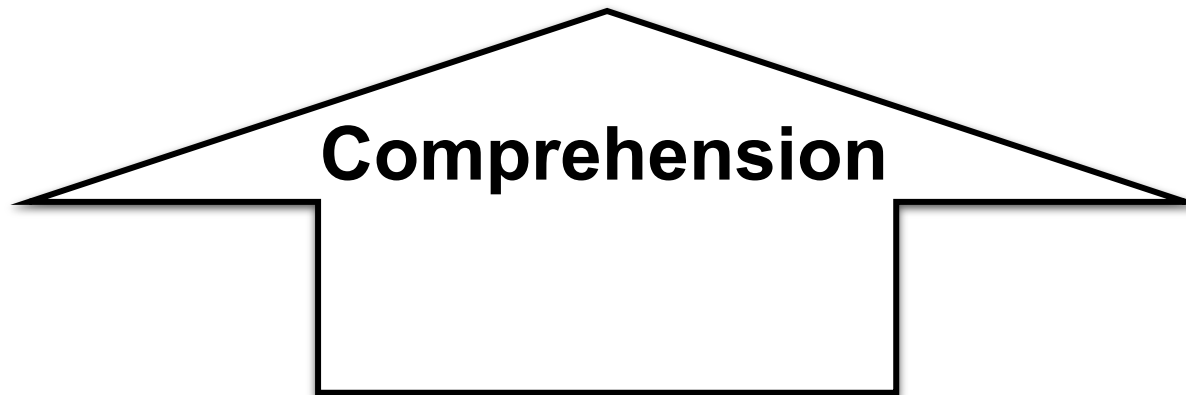
Determining Text Structure

1. Some text structures are easy to identify based on the type of text. For example, directions such as "How to develop a web page" are typically written in the sequence text structure while editorials are written as arguments.

2. Articles such as "<u>Why</u> do I get goosebumps?" are typically written in the cause and effect structure.

3. On the other hand, many topics can be approached in a variety of ways. For example, an article on energy sources could be written as description, problem/solution, cause and effect, compare and contrast, or as an argument.

4. The text structure may not be evident with just a glance. In that case there are two ways to identify the text structure:

    a. It must be read to identify the text structure, or

    b. If there are comprehension questions connected to the text, signal words in questions and/or text will alert the reader to the text structure.

Model System for Extended Reading Passages

Every student gets 2 extended reading passages per week

Monday

- **Students read extended passage:**
  Goal for all students: Answer questions with 80% accuracy.
- **Focusing on comprehension**
- **Time should be based on time per passage on state assessment (20-30 Min.)**
- **Utilize additional State Test Stem Questions to check for understanding**

Tuesday

- **Students re-read extended passage**
- **Focusing on fluency & summarizing**
- **Write a summary of the passage using graphic organizer**
- **Students need to know the difference between summarizing and retelling.**

Wednesday: Repeat Monday

Thursday: Repeat Tuesday

Friday: Review the passages, correct answers, stem questions, signal words, test strategies

Extended Reading Passages 6-12

- Collect readings for each grade level with accompanying comprehension questions for each reading

- Set schedule for passages: Rotate through Science, Social Studies, and ELA courses on a monthly basis

- Designate 30 minutes per day in Reading Support classes for additional passages

- Follow schedule closely

" There are no silver bullets in education but writing – particularly nonfiction writing – is about as close as you can get to a single strategy that has significant and positive effects in nearly every other area of the curriculum. Non-fiction writing is the backbone of a successful literacy and student achievement strategy."

Marzano, 2008

The Importance of Writing and Why It Is So Powerful?

- Supports and extends comprehension
- Requires students to:
    - Analyze and interpret the text
    - Make connections
    - Organizes the information
    - Convey what they learned using their own words

- Writing and reading are intimately connected
- A student's Reading Level typically is also that student's Writing Level
- Writing to Inform and Writing to Learn have been proven to be one of the <u>strongest influences on increasing students' reading levels</u>

- In other words, Writing Pulls Up Reading

"Writing takes thinking to the next level".

Content Area Writing

Writing to Learn

What? Informal writing during the learning process. The purpose is to think about the content being learned.

How/When?
• Activating Strategy
• Summary Point Writing
• Assessment Prompts
• Summarizing Strategy

Writing to Inform

What? Writing to communicate what has been learned; often more formal types of writing using text structures and the writing process.

How/When?
• Lesson Assignments
• Major Unit Assignments

Practices for
Increasing Achievement with Writing

1. **Writing to Learn (also known as Summary Point Writing or also as a Quick Write)**

   At various some points in every lesson, teacher asks students to summarize, clarify, explain, list, give example, etc., IN WRITING

Strongest connection for linking a classroom activity to learning!

Practices for
Increasing Achievement with Writing

2. Writing to Inform

Teachers link specific Writing Standards to <u>THE ASSIGNMENT</u> or an important learning activity in almost every lesson.

- Each discipline has a required number of writing assignments per month (1-3)
- All lesson assignments include a writing component

These two practices are the strongest support for increasing reading levels.

i.e. Writing Pulls Up Reading

HIGHLY RECOMMENDED For Schools With 40%+ Free/Reduced Meals

<u>Every assignment</u> that has any kind of arts/crafts process, <u>must</u> also include a grade-level, standards-based writing assignment

An Effective Research-Based, Literacy-Focused Assignment:

1. Focus strategy based on how to THINK while they read based on <u>text structure</u>, reasoning, etc.

2. Explicitly discuss/teach the comprehension strategy showing connected graphic organizer.

3. Students read text filling out the graphic organizer while they read.

4. After reading, students answer comprehension questions using graphic organizer & text review.

5. As a last step, students write a summary of the passage using their graphic organizer.

What Are Advance Organizers?

Organizational frameworks presented <u>prior to instruction</u> that introduce students to the "big picture" of what they will be learning.

Examples of Advance Organizers:

- **Lesson Essential Questions**

- **Concept Maps**

- **Anchor Charts**

- **Introduction of lesson's graphic organizer or text structure organizers**

- **Introduction of key vocabulary of lesson with research-based vocabulary strategies**

Just completing the organizer does little to support learning or achievement.

Students must <u>USE</u> the organizer for a purpose.

The most effective use of graphic organizers is having students use them for…

1. **Structured Note Taking**

2. **Guided Reading**
   * Students complete organizer as they read – guides reading
   * Students answer comprehension questions from organizer

3. **Guided Writing**
   * Use organizers for pre-writing
   * As guide to writing
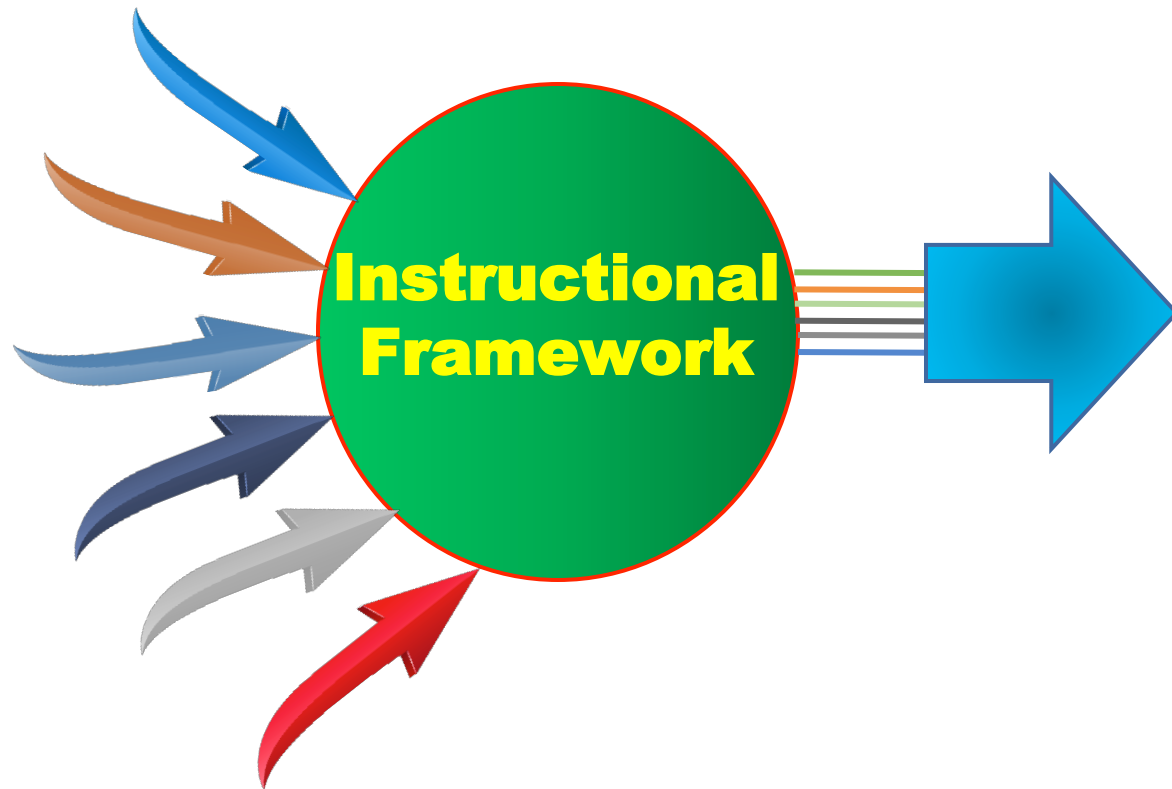
4. **Study and Summarizing Tool**
   * Organizer serves as a summary of learning
   * Include graphic organizers on tests/quizzes
   * Convert 2-3 organizers and notes to a matrix
   * Use graphic organizer in a project or oral presentation

5. **Visual Model of a Skill or Performance by illustrates sequence**

A Common Instructional Framework…
Brings Things Together

Lesson Plans

Typical Schools	Two or more variations of plans	Planning typically takes place night before or on weekends	Almost all plans are daily lesson plans	Planning is a template or form
Exemplary Schools	<u>All</u> teachers use the <u>same</u> plan	Planning takes place 1-3 weeks prior to teaching lesson	All plans are 2-5 days plans	Planning is a process

Code Lesson Plans for High Yield Strategies

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Learning Activity 1 [S] — Read aloud first two paragraphs a[nd] [dem]onstrate/think aloud completing the cause/effect graphic organizer for the event a[nd ...] cause. Paired reading of third paragraph to locate causes. 1's read paragraph; 2's summarize causes and justify how he/she knows it's a cause.

Graphic Organizer

Cause/Effect Organizer [NVR]

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Learning Activity 4 — After reading about another invasive species, students work in small groups to determine patterns that occur when organisms are out of place and create a visual display to communicate their findings. Students conduct a gallery walk to compare the patterns determined by each group and record any observations that may be different from your own OR add to your PMI. [NVR]

Assessment Prompt for LA 4 [HOT] [S] — Pass the solution: Based on your new learning about pa[tterns that oc]cur when organisms are out of place, what suggestions might you make?

Summarizing Strategy [S] —
3 patterns when an organism is out of place
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