



FLORIDA STATE UNIVERSITY
FLORIDA CENTER *for* READING RESEARCH

Integrating Evidence-Based Literacy Strategies Throughout the School Day

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Goals and Objectives for Today's Session

Goal:

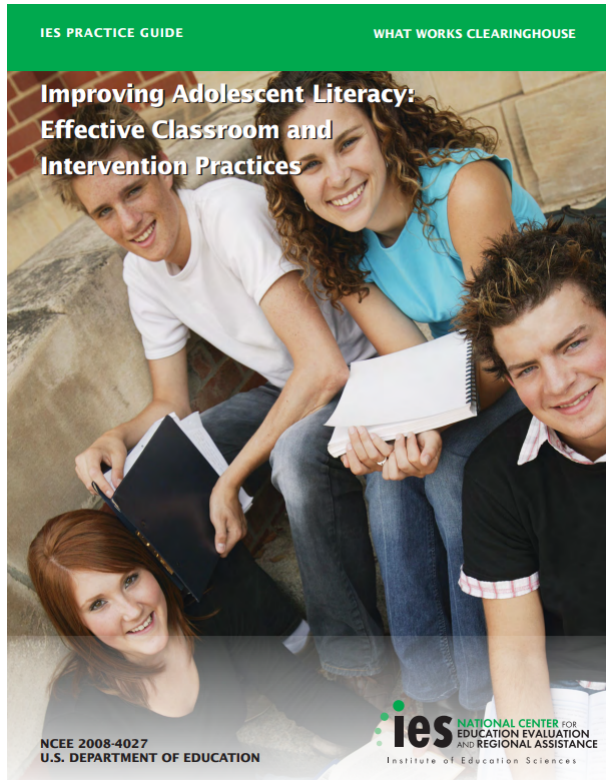
Participants will gain an understanding of how multiple literacy strategies may be incorporated into a content area lesson to help all students comprehend the text.

Objectives:

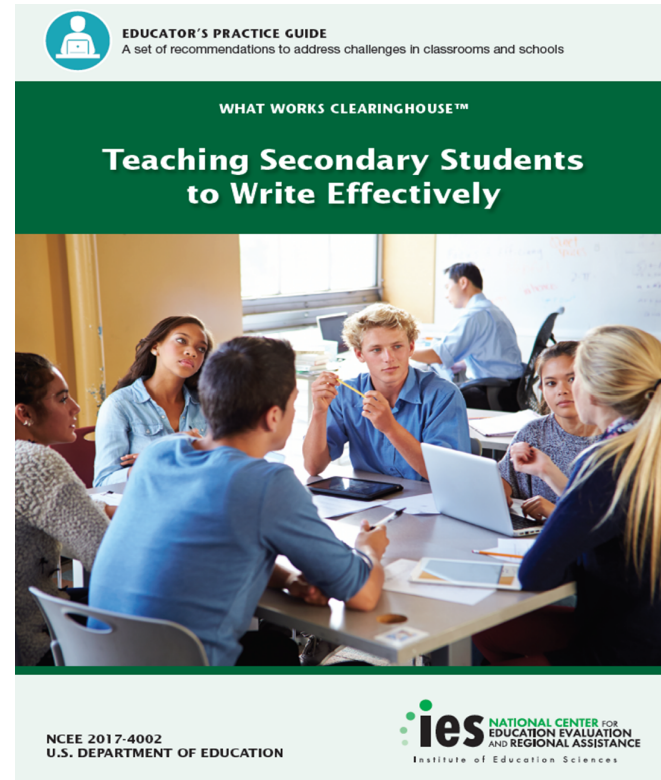
1. Participants will participate in a content area lesson which incorporates multiple strategies for enhancing comprehension.
2. Debrief following the lesson



Institute of Education Science Practice Guides



https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/adlit_pg_082608.pdf



https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/508_WWCPG_SecondaryWriting_122719.pdf



Levels of Evidence for the Recommendations in the *Improving Adolescent Literacy: Effective Classroom and Interventions* Practice Guide

Recommendation	Level of evidence
1. Provide explicit vocabulary instruction.	Strong
2. Provide direct and explicit comprehension strategy instruction.	Strong
3. Provide opportunities for extended discussion of text meaning and interpretation.	Moderate
4. Increase student motivation and engagement in literacy learning.	Moderate
5. Make available intensive and individualized interventions for struggling readers that can be provided by trained specialists.	Strong



Multi-Strategic Approach to Instruction

Multi-strategy Comprehension Approach

- Combined use of multiple comprehension strategies:
 - More effective than approaches using only a single strategy
 - Effective in improving comprehension results
- The greatest effects for improving comprehension may come from teaching multiple strategies across content areas.
- It is imperative that Tier I instruction for older students provide a focus on reading, vocabulary, academic language, background knowledge, making inferences, and comprehension strategy use as these practices best predict students' comprehension of text.
- Teacher modeling and explicit explanations during instruction in specific vocabulary and comprehension strategies has strong evidence.

(Kamil, et al., 2008; Foorman & Wanzek, 2016; Dole, Brown, & Trathen, 1996)



Sample Lesson Materials

- Text – Genetic Evidence Clears Ben Franklin, National Science Foundation
- Handout for writing
- Directed Notetaking Handout for documenting notes from the text
- Question Generation Handout for recording “wonderings” or questions about the text



Sample Lesson – Topic Question

- Before reading (discuss in small groups and then in whole group):
- What are the benefits and risks of genetic testing?



Sample Lesson – Predictive Writing

Before reading the text, use the Text-Based Question Handout to record your answer to respond to this statement:

Predict: Predictive response before reading and extended text discussion:

What are important genetic traits to consider when bringing plants into the United States?



Research Base: Topic Question and Predictive Writing

- Research studies indicate reading achievement is increased at all grade and ability levels when students are taught to activate and build background knowledge, preview, predict, and confirm predictions.

(Foorman & Wanzek, 2016)



Sample Lesson – Vocabulary Front Loading

- Words introduced in this section:
 - Tallow – context
 - Muddled – context (punctuation)
 - Evolutionary – word parts and context



Research Base: Vocabulary Instruction – Context and Affixes

- Researchers suggest teaching a multi-part vocabulary strategy that includes the following:
 - Contextual analysis (to infer word meaning)
 - Morphemic analysis (to derive word meaning)



Research Base: Vocabulary Instruction – Context and Affixes

Students need to be explicitly taught academic vocabulary central to the meaning of text. Locating the words in text, providing definitions, and then extending the words' meaning through extension activities is a successful instructional strategy.

(Foorman & Wanzek, 2016)



Sample Lesson – Text Coding

- Consider this question: What genetic traits should be considered when importing plants into the United States?
- Keep this question in mind and listen as the facilitator reads the text *Genetic Evidence Clears Ben Franklin*, National Science Foundation



Sample Lesson – Text Coding

Text Codes C = Cause E = Effect N = Neutral

(1) Invasive tree afflicting Gulf Coast was not brought to US by Ben Franklin.

(2) The DNA evidence is in, and Ben Franklin didn't do it.

(3) Genetic tests on more than 1,000 Chinese tallow trees from the United States and China show the famed U.S. statesman did not import the tallow trees that are overrunning thousands of acres of U.S. coastal prairie from Florida to East Texas

(4) "It's widely known that Franklin introduced tallow trees to the U.S. in the late 1700s," said Rice University biologist Evan Siemann, co-author the new study in this month's American Journal of Botany. "Franklin was living in London, and he had tallow seeds shipped to associates in Georgia."



Sample Lesson – Text Coding

- Mark the following paragraphs using these codes: Mark the text with the following codes: **C = Cause** **E = Effect** **N = Neutral**

(5) What Franklin couldn't have known at the time was that tallow trees would overachieve in the New World. Today, the trees are classified as an invasive species. Like Asian carp in the Great Lakes and kudzu vines in the eastern U.S., the trees are spreading so fast that they're destroying native habitats and causing economic damage.

(6) Each tallow tree can produce up to a half million seeds per year. That fertility is one reason Franklin and others were interested in them; each seed is covered by a waxy, white tallow that can be processed to make soap, candles and edible oil.



Sample Lesson – Text Coding Discussion

- After text coding:
 - In small groups, compare and discuss differences in coding
 - Support your coding with statements from the text



Research Base for Text Coding and Discussion

- Similar text coding strategies have been found to increase reading comprehension
- Kamil et al (2008) noted moderate levels of evidence for providing opportunities for extended discussion of text as well as increasing student motivation and engagement in literacy learning.

(Marcell, 2007; Vaughan & Estes, 1986; Kamil et al., 2008)



Sample Lesson – First Written Response to Reading

First draft after reading the selection:

According to the text, *why* are genetic traits important to consider when bringing plants into the United States?



Research Base – First Written Response After Reading

- Having students in grades 2-12 write about material they read enhances comprehension. This was true for students in general and students who were weaker readers or writers in particular. It also applied across expository and narrative texts as well as subject areas (language arts, science, social studies).

(Graham & Hebert, 2011)



Sample Lesson – Directed Note Taking

Directed Note-Taking

Directions: Record notes containing the most important information relevant to the guiding question.

"Genetic Evidence Clears Ben Franklin"					
	Guiding Question: According to the text, why are genetic traits important to consider when bringing plants into the United States?				
Para- graph #	NOTES	Check relevant categories below			
		Fertility	Insect Resistance	Growth Rate	Origin
4	Franklin was living in London and he had tallow trees shipped to associates in Georgia				X
5the trees are spreading so fast they're destroying native habitats and causing economic damage	X		X	



Sample Lesson – Directed Note Taking

- Are there other notes that you would include from the text?

Directed Note-Taking

Directions: Record notes containing the most important information relevant to the guiding question.

"Genetic Evidence Clears Ben Franklin"					
	Guiding Question: According to the text, why are genetic traits important to consider when bringing plants into the United States?				
Para- graph #	NOTES	Check relevant categories below			
		Fertility	Insect Resistance	Growth Rate	Origin



Research Base: Directed Note Taking

- Research studies indicate reading achievement is increased at all grade and ability levels when students are taught to use graphic organizers to arrange, categorize, and/or relate key information in text.

(Foorman & Wanzek, 2016; Kim, Vaughn, Wanzek, & Wei, 2004)



Facilitating Extended Text Discussion – Remember....

- Conduct the discussion in a whole group after students prepare
- Take a poll to see how many groups agree with each position
- Facilitate, don't dominate
- Ask students to elaborate – extend the conversation
- Do not validate any position, but require groups to justify their thoughts using the text
- At the end of the discussion, take another poll to see if groups or individuals have changed their positions based on the evidence presented by others



Sample Lesson – Facilitating Extended Text Discussion

- In your small groups, discuss how tallow trees came to the U.S. Use your directed note taking sheet and your text coding to help you come to a consensus on which genetic trait – **fertility, insect resistance, growth rate, origin** – was the most important to consider when bringing plants to the U.S.
- Gather evidence from the text to support your decision.



Research for Extended Text Discussion

- Discussions that require students to agree, disagree, and justify their responses:
 - Help students filter text information
 - Serve as a means for teachers to assess student understandings

(Kosanovich, Reed, & Miller, 2010)



Research for Extended Text Discussion

- A meta-analysis indicates dramatic improvement in reading comprehension when students engage in lively and meaningful conversation around text. These engaging text based discussions increase student talk and comprehension more than other types.

(Kamil, 2008; Murphy, et al., 2009)



Sample Lesson – Question Generation

- Ask students to develop questions that are true “wonderings”

Page 2 Question Generation

Directions: Record questions that you have based on your notes and text-reading.

“Genetic Evidence Clears Ben Franklin”					
<u>STUDENT-GENERATED QUESTIONS</u>					
Para-graph #	Question	Check relevant categories below			
		Fertility	Insect Resistance	Growth Rate	Origin
5	What other plants in the US are classified as invasive species?				
6	How many trees actually grow from the half million seeds that are produced?	X			



Sample Lesson – Question Generation

- What are your wonderings related to the text?

Page 2 Question Generation

Directions: Record questions that you have based on your notes and text-reading.

"Genetic Evidence Clears Ben Franklin"				
<u>STUDENT-GENERATED QUESTIONS</u>				
Para- graph #	Question	Check relevant categories below		
		Fertility	Insect Resistance	Growth Rate



Research Base: Student Question Generation

- Effective comprehension strategies include:
 - Question generation
 - Use of graphic organizers

(National Reading Panel, 2000)



Research Base: Student Question Generation

- “Question generation is different from question answering in that the emphasis is on students producing questions they need (or want) to answer from reading a passage. To teach this strategy, “good” question generation needs to be modeled for students and students need to be actively involved in the process of activating prior knowledge, comparing it to what might be expected from the passage, and generating questions to fill the gaps. **Question generation is an extremely potent technique, showing larger effects than other comprehension strategy instruction techniques.”**

(Kamil, 2008)



Sample Lesson – Final Written Response

- Following reading, initial writing, and discussion, answer the following question:

Final response after rereading the text and extended text discussion:

According to the text and your discussion, what is the most important genetic trait to consider when bringing plants into the United States?



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References

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