TEXAS LITERACY INITIATIVE
COGNITIVE ROUTINES /STRATEGIES OVERVIEW

Focus: Grades 6 - 12

2014-2015

Presented by
Sonia Villalón, TLI Teacher Specialist

COGNITIVE STRATEGIES

Instructional Supports	Strategy Focus
✓ Reading With Purpose (K-12)	✓ Making Connections (K-12)
✓ Think-Turn-Talk (K-12)	✓ Creating Mental Images (K-5)
✓ Cognitive Strategy Routine (K-12)	✓ Making Inferences & Predictions (K-12) (Two Parts Grades 6-12 only)
	✓ Determining Importance & Summarizing (K-12) Parts 1 & 2 (Four Parts Grades 3-12)
✓ Listening Comprehension (PK-1)	Asking & Answering Questions (K-12)
	Monitoring & Clarifying (Multiple Strategy Use) (K-12)

Reading With Purpose

TEXAS LITERACY INITIATIVE

BIG IDEAS

Reading With Purpose

- [ ] Annotate thinking while reading
- [ ] CPQ for each reading
- [ ] Good to Great!

TEXAS LITERACY INITIATIVE

SETTING A CPQ

Step 1: Annotate Thinking While Reading (Think-Aloud)

Step 2: Brainstorm possible CPQs

Step 3: Integrate With Teacher Resources if Available

Step 4: Select Great CPQs

Steps for Setting a Great CPQ

1. Record/annotate your thinking while reading the text you will ask students to read.

2. After reading, brainstorm possible CPQs (What do you want students to understand?).

3. Integrate with teacher resources if availab.e

4. Select a "Great" CPQ.

Going From Good to Great!

A good CPQ:

- 1. Is answered in the text either explicitly or implicitly

- 3. Involves student thinking

- 5. Will focus on comprehension.

- 7. Relates to student learning.

A great CPQ:

- 2. Cannot be completely answered until students have read the entire text.

- 4. Involves higher order thinking, inferences, text evidence or synthesis of information.

- 6. Will deepen and extend comprehension. What you want students to understand.

- 8. Relates to the cognitive strategy(ies) currently being taught.

Think-Turn-Talk

BIG IDEAS

Think-Turn-Talk

☐ 3-5 seconds

☐ time to process

☐ thoughtful pairs

☐ well-planned questions
In 1-2 places in text

Think

Turn

Talk
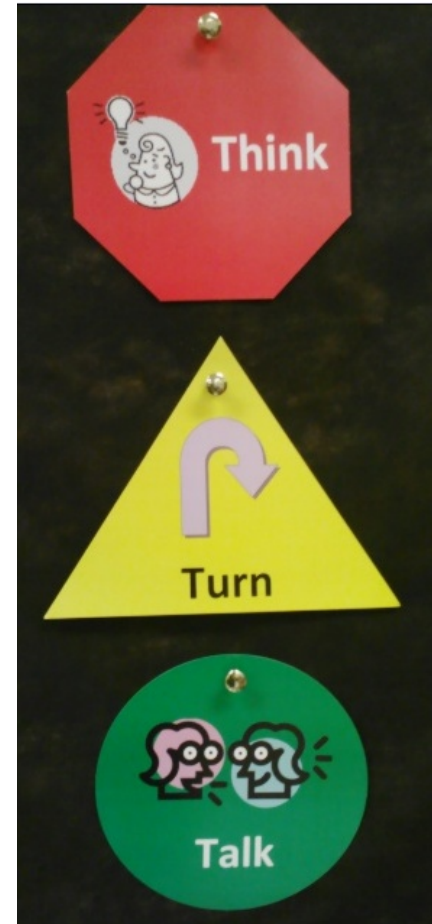
Tips and Tricks

➤ Ask questions that involve critical thinking, opinion, or an extended answer. DOK 3-4

- Specific: "Why does the character …?"

- General: "What are you thinking?"

➤ Ask questions that relate to the CPQ

➤ Ask questions that reinforce the cognitive strategy you are focusing on in the lesson

➤ Write prompts on sticky notes and place them in your T.E. as reminders

Texas Literacy Initiative

Vocabulary and Oral Language Development

Vocabulary Instruction: What It Is

- **Indirect:** Engagement in discussions and reading

- **Direct:** Explicit instruction of words through the following:
  - Teaching the use of context
  - Using models, demonstrations, illustrations, graphic organizers, and classroom discussions

(Cunningham, 2005; Nagy, 2005; Stahl & Nagy, 2006)

Why Should We Teach Vocabulary Explicitly and Systematically?

- Vocabulary knowledge is the key that unlocks the meaning of text: Vocabulary knowledge improves comprehension and fluency.

- Research has shown that direct and explicit vocabulary instruction is an effective way for students to acquire vocabulary knowledge.

(Hiebert & Kamil, 2005; McKeown & Beck, 2004; National Center for Education Statistics, 2012; Stahl & Nagy, 2006)

Effective Vocabulary Instruction: Things to Remember

- Teach vocabulary throughout the day and across content areas.

- Create opportunities for interactive classroom talk.

- Engage students in discussions of words, their meanings, and their uses, usually through read-alouds.

- Make connections to students' background knowledge.

- Teach word meanings directly.

- Use multiple strategies to involve students in active exploration of words.

(August et al., 2005; Hiebert & Kamil, 2005; McKeown & Beck, 2004; Stahl & Nagy, 2006)
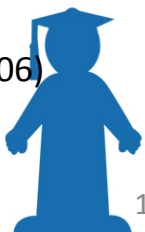
Effective Vocabulary Instruction: Things to Remember (cont.)

- Ensure that students encounter new words multiple times.

- Use dictionaries strategically.

- Use semantic maps and graphic organizers.

- Use examples and nonexamples.

- Explain synonyms and antonyms.

- Engage students in activities that require them to determine relationships among, between, and within words.

(August et al., 2005; Hiebert & Kamil, 2005; McKeown & Beck, 2004; Stahl & Nagy, 2006)
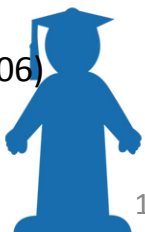
Cognitive Strategies

Making Connections
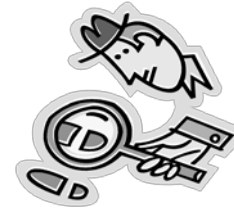
Making Inferences & Predictions

Asking & Answering Questions

Determining Importance & Summarizing

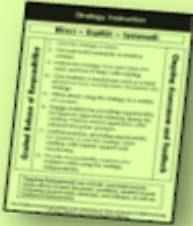Creating Mental Images

Monitoring & Clarifying

Cognitive Strategy Routine (6th-12th)

BIG IDEAS

Cognitive Strategy Routine

☐ **Consistent Routine**

what ↔
how ↑

☐ **8 Step Routine**

8

☐ **6 Cognitive Strategies**

6

Strategy Instruction

Direct – Explicit – Systematic

Gradual Release of Responsibility

1. Use a real-world example to create a context (anchor lesson).
2. Give the strategy a name.
3. Define the strategy, how and when it is used, and how it helps with reading.
4. Give students touchstones, such as a hand gesture or icon, to help them remember the strategy.
5. Think aloud, using the strategy in a variety of contexts.
6. Engage students by providing opportunities for them to share their thinking during the reading. Practice shared application with planned discussion prompts.
7. Scaffold practice, providing opportunities for students to use the strategy while reading, with teacher support and monitoring.
8. Provide accountability measures for students while using the strategy independently.

Ongoing Assessment and Feedback

Ongoing Assessment may include informal assessments such as anecdotal records, observations of class discussion, portfolios, projects, student records of thinking (post-it notes, drawings, and writings), as well as formal assessments.

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Making Connections

Grades 6-12

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UTHealth
The University of Texas
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Making Connections (6th -12th)

BIG IDEAS

Making Connections

☐ **Activate/build background knowledge**

☐ **Making Connections = foundational strategy**

☐ **Understand distracting connections**

Anchor Lesson

My Background Knowledge

Build? Or Activate?

Building Background Knowledge	Activating Background Knowledge
• Students know little or nothing about a topic	• Students have some knowledge of a topic
• May take place 1-2 weeks before reading	• Takes place directly prior to reading
• Takes 3-4 exposures, no more than 2 days apart	• Takes 2-10 minutes
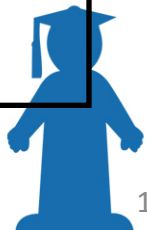
3 Types of Connections

Text-to-Self

Activate Background Knowledge and Make Connections between text and reader's experience and memories

Connections between two or more types of texts. Connecting the plots, content, structure, or style

Text-to-Text
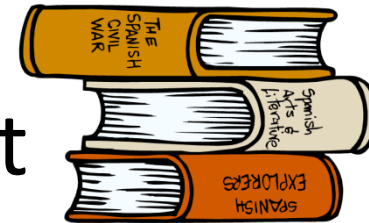
Text-to-World

Making Inferences and Predictions Connecting between the text and what he knows about the world.

Making Inferences and Predictions (6th-12th)

BIG IDEAS

Making Inferences & Predictions

- [ ] **Explicit Instruction**
- [ ] **Scaffold for Success**
- [ ] **Across Content Areas**

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Anchor Lesson

"Inferences are really important and great readers make them all the time.

An inference is something a reader knows from reading, **but** the author doesn't include it in the book.

It helps you understand the story more deeply and helps make books mean something very personal to you."

(Keene & Zimmermann, 2007, p. 148)

Think Alouds

Greek astronomers invented magnitude because they thought that the brightest stars were the biggest.

On the Greek scale, the brightest stars were rated 1.

Modern astronomers use the apparent magnitude scale.

They give the number 6 to the faintest stars. The scale continues to zero and on into the negative numbers.

Negative numbers are used for the very brightest stars that can be seen with the naked-eye.

In the Text — Its says it right here. I can see those words. The AUTHOR says it DIRECTLY.

In My Head — I have to to use clues from the text and my background knowledge... I have to make an INFERENCE.

- Use scaffolds to support student learning

Making Inferences Graphic Organizer

Title: Pedigree Charts, Chapter 14, p. 342

CPQ: What are the genotypes of both parents on the left in the second row? How do you know?

P. #	My Answers to the CPQ	Direct (Explicit) or Inference (Implicit)?	Evidence (Text Clues)	Background Knowledge (Connections to What I Know)
Text	At the top of the chart is a grandfather. Grandfather has the heterozygous trait.	direct	• At the top of the chart is a grandfather … • The grandfather must be heterozygous for the trait.	
Figure 14-3	Square represents a male; circle a female. Shaded shape indicates the trait. Horizontal line = marriage. Vertical line = children.	direct	• Square represents male; circle female. • Shaded…expresses the trait; not shaded does not express trait. • Horizontal line reps marriage. • Vertical line reps children.	
Figure 14-3	Both parents have the heterozygous genotype for the white forelock.	inference	• Circle (mom) and square (dad) are shaded. • The grandfather of the male has the trait. • They are linked to two circles (children). • Only one circle is shaded.	Dad must be heterozygous, because only one of his parents has the trait and he has the trait. We don't' know about mom's parents, but since only one of their kids has the trait, mom has to be heterozygous. If she was homozygous, then both kids would have the trait.

Annotating the Text

- "Annotating text is one of the most common comprehension-enhancing strategies used by proficient readers (Daniels & Steineke, 2011, p. 41).

- "When students capture their thinking while reading, they are more likely to return to texts, participate in discussion and have an easier time starting writing assignments. They also use their marked text to review and study" (Tovani, 2004, p. 68).

Example of Annotating the Text

Text Excerpt

The Gettysburg Address, 1863
Abraham Lincoln

CPQ: What is Lincoln saying in this speech?

87 years ago (1776 when ation of was signed) ginning of our nation.

Fourscore and seven years ago our fathers brought forth, upon this continent, a new nation, conceived in liberty and proposition that "all men are created equal."

The country was founded on the idea that all men are created equally. At the time of this speech, Lincoln was looking to abolish slavery.

Now, he's wondering if our nation will survive because of the war.

Consecrate: To dedicate, honor.
Hallow: To honor as holy.
Dedicate, consecrate, and hallow all have similar meanings. So, he's stressing the importance of this idea.

He's come to dedicate a portion of the battlefield as a memorial to those who have died in the war.

It isn't necessary to have a president declare this battleground an honored place, because the brave who have died have already made it an honored place.

whether that nation, ng endure. We are met to dedicate a portion of e for those who died here, that the nation might may, in all propriety do. But in a larger sense, we cannot dedicate, we cannot consecrate, we canno this ground. The brave men, living and dead, who struggle far above our poor power to add or detract. nor long remember what we say here; while they did here.

Annotating the Text

- After we model multiple times for students, we can annotate text together (Step 6).

- Gradually, we release responsibly so students are able to successfully annotate complex chunks of texts independently (Step 8), increasing their ability to make inferences and predictions while reading.

Teaching Making Inferences

- Graphic Organizers – highly supportive.

- Annotating Text – less supportive.

Making Inferences

Inferring includes:

- Creating interpretations and synthesizing information.
- Making predictions.
- Determining meanings of unknown words.
- Creating mental images.
- Inferring answers to our own questions.

(Harvey & Goudvis, 2007; Miller, 2002)

CREATING MENTAL IMAGES

Why Should We Teach Creating Mental Images?

- Increase motivation and engagement

- Improve literal comprehension

- Improve integration of new information with background knowledge

- Aid in making inferences, identifying main ideas, and determining importance

- Help students to uncover text structures

- Makes texts memorable and increases retention

(Kelley, & Clausen-Grace, 2013, Zwiers, 2010, Wilhelm, 2004)

Determining Importance & Summarizing Informational Text

Grade 6 – Grade 12

Why Should We Teach Determining Importance & Summarizing?

It helps readers to…

- Improve overall comprehension.
- Manage excessive amounts of information.
- Focus attention.
- Extract relevant information.
- Build relationships among concepts contained in text.

(CIERA 2003; Coyne, Chard, Zipoli, & Ruby, 2007; Duke & Pearson, 2002; Keene & Zimmermann, 2007 Silver, Strong, & Perini, 2000; Thiede & Anderson, 2003))
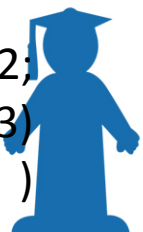
How Should We Teach

Determining Importance & Summarizing?

Cognitive Strategy Routine

Cognitive Strategy Lesson Planning

Title of Text _____

Step 1 Use a real-world example to create a context.	Anchor lesson:
Step 2 Give the strategy a name.	"Today, we are going to learn a strategy called _____."
Step 3 Define the strategy, how and when it is used, and how it helps with reading.	Strategy definition: How it helps us comprehend:
Step 4 Give students touchstones.	Model hand gesture, explain strategy poster, and refer to anchor lesson.

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Strategy Instruction

DIRECT • EXPLICIT • SYSTEMATIC

Gradual Release of Responsibility

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Topic, Main Idea, or Summary?

Term	Definition	Example
Topic	Who or what the text is about; can often be expressed in one or two words.	Sharks
Main Idea	What the text says about the topic; can often be expressed in one sentence or less.	Sharks do many things.
Summary	A synthesis of the important ideas in a text; may be of varying length, expressed in the reader's own words and should reflect the structure of the text.	Sharks swim through the oceans hunting for prey, such as fish and seals. Sometimes, they work together to attack prey and may even engage in playful activities.

(Silver, Strong, & Perini, 2000; CIERA, 2003)

Identify Topic

"**Usually the topic will be apparent by looking at the title, pictures, or subheadings** …

Higher level text may confuse students by dancing around the topic instead of stating it directly.

 In these cases, teach students to look for repeated references to help them find a topic."

(Kissner, 2006, p. 34)

Considerations for Teaching Students to

DETERMINE IMPORTANCE AND IDENTIFY MAIN IDEA

Main Idea

The main idea can usually be stated in one sentence or less. A main idea sentence:

- Includes the topic.

- Includes the important information that is said about the topic.

- Might include a statement about the purpose of the text (Why was the text written?).

Determining Importance Toolbox

BEFORE READING

- Scan the text, notice text features & structure
- Use background knowledge
- Make predictions
- Set a purpose for reading

DURING READING

- Look for a main idea statement
- Look for repeated words or phrases

- Use text features:
  - Table of Contents
  - Titles, headings and subheadings
  - Font (colored, *italics*, **bold**)
  - Graphics (e.g. photos, diagrams, maps, etc.)
  - Captions and labels
  - Definitions and pronunciation guide
- Chunk the text
- Use text structure

AFTER READING

- Reread, discuss and identify main ideas

DURING READING

Look for Repeated Words or Phrases

Important information is often repeated. Good readers look for repeated words or phrases that carry similar meaning. If authors are repeating ideas or concepts in various ways, then likely that information is important.

Use Text Features

- Table of Contents

- Titles, headings and subheadings

- Font (colored, *italics*, **bold**)

- Graphics (e.g., photos, diagrams, maps, timelines, etc.)

- Captions and labels

- Definitions and pronunciation guide

Chunk the Text

DURING READING

"Students aware of text structure on the other hand, tend to "chunk" or organize the text as they read."

…readers who are unaware of text structure, tend to retrieve information from the text in a seemingly random way.

(Snow, 2002, p.40)

DURING READING

Five Main Text Structures

- Descriptive
- Sequential/Chronological
- Cause and Effect
- Compare and Contrast
- Problem and Solution
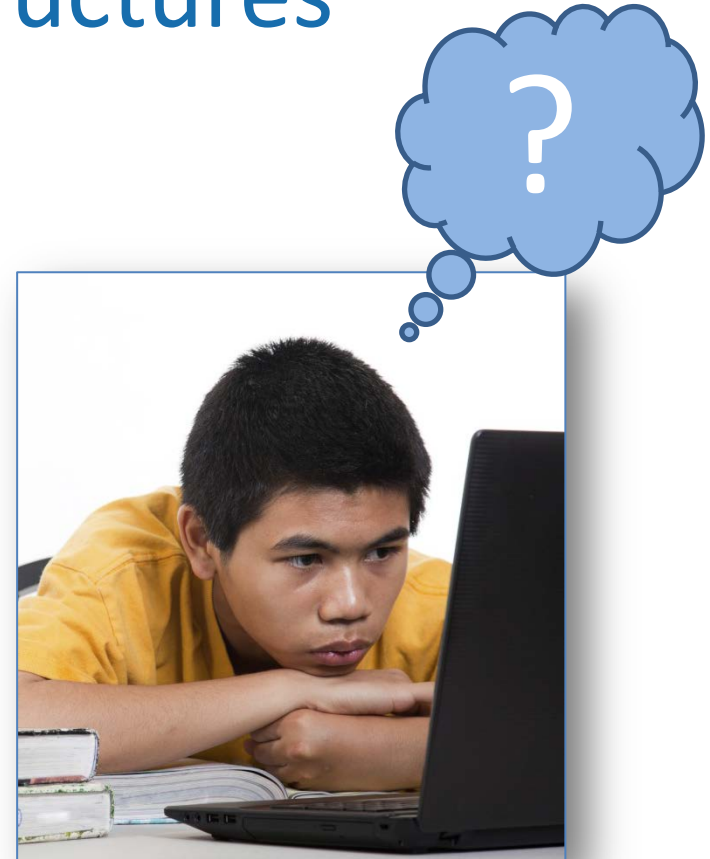
Descriptive Text Structure Guiding Questions

DURING READING

- **Topic:** What specific topic, person, idea, or thing is being described or explained? (One-two words.)

- **Important Details:** How is the topic being described or explained? (What is it, what does it look like, what does it do, what happens, etc.)

- **Main Idea:** What features or characteristics are important to remember or understand about the topic being described? (One sentence of less).

- **Summary:** What are the main ideas and important details that are necessary to include? How will you state them in your own words following the structure of the text? (As concisely as possible.)

Adapted from:

Orcutt, K. (n.d.).

Descriptive Text Structure Using a Graphic Organizer

Descriptive Text Organizer

Topic

Important Details	Important Details	Important Details	Important Details

Main Idea	Main Idea	Main Idea	Main Idea

Summary

Descriptive Texts

Descriptive texts are written to describe an object, person, place, event or idea.

Signs of Descriptive Text

- Specific characteristics or features are described or explained (size, shape, location, color, etc.).

- Descriptive adjectives are used throughout the text.

- Details are provided to help the reader visualize the topic.

- Examples are often provided (for instance, such as, an example, to illustrate, to demonstrate).

- The topic word or a synonym for the topic is often repeated.

Guiding Questions

- **Topic**: What specific topic, person, idea, or thing is being described or explained? (One-two words.)

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AFTER READING

Reread and Discuss to Clarify and Identify Main Ideas in the Text

- Reread to clarify and confirm the main idea.

- Discuss to consolidate understanding and remember the text better.

Considerations for Teaching Students to

SUMMARIZE INFORMATIONAL TEXT

Summarizing

A summary should:

- Reflect the structure of the text.

- Include a topic sentence.

- Include the main ideas.

- Include important details.

- Be paraphrased and shorter than the original text.

Cognitive Strategies Coming Attractions

Making Connections
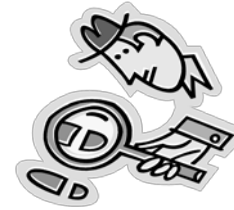
Making Inferences & Predictions

Asking & Answering Questions

Determining Importance & Summarizing

Creating Mental Images

Monitoring & Clarifying

Every Kid Needs A Champion

- [Video](#)

My Background Knowledge

I know a lot about …

1
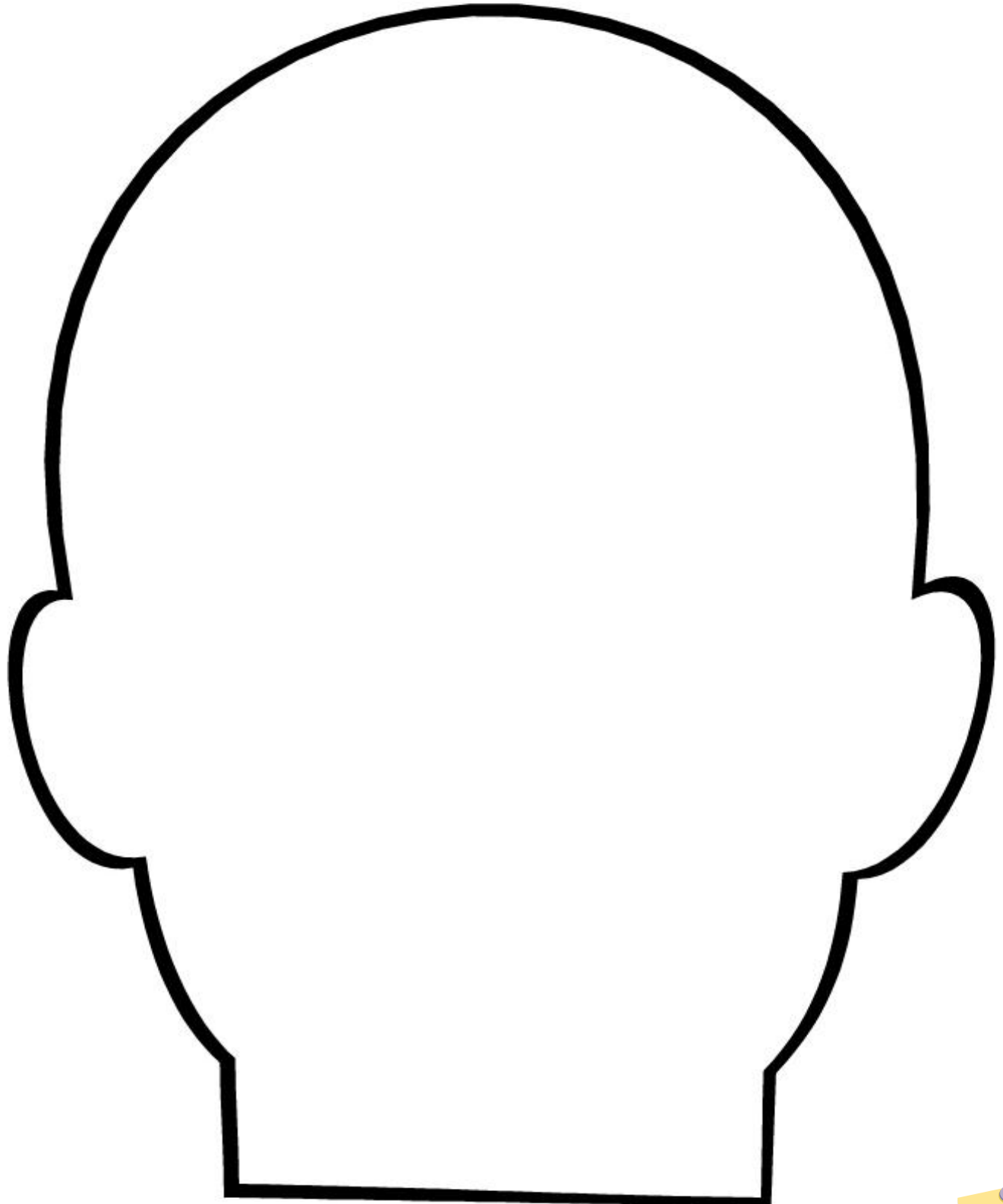
Making Connections

Name:_____

Title:_____

What I read Page #	Connections This reminds me … I remember …	My connection helps me understand the text because …

Making Inferences Graphic Organizer

Title: _____

CPQ: _____

P. #	My Answers to the CPQ	Direct (Explicit) or Inference (Implicit)?	Evidence (Text Clues)	Background Knowledge (Connections to What I Know)

In My Head

I have to use **clues** from the text **and** my **background knowledge**…

I have to make an INFERENCE.

In the Text

It says it **right here**. I can see those words.

The AUTHOR says it DIRECTLY.

Foreshadowing and Predicting

Text: _____

| Foreshadowing: Small details or clues in text that will have significant meaning as the story progresses. |

Summary of Foreshadowing Clues in the Text (text evidence)	Prediction	Validation or Revision of Prediction

Extended Anticipation Guide (Making Inferences & Predictions)

Name: _____

Title: _____

Date: _____

Before Reading: Briefly scan the assigned text. Then read the statements and select either agree or disagree. Write a prediction about what you expect to learn from reading the text.

After Reading: Reflect on the choices you made prior to reading. Provide an explanation using text evidence to support whether the choice you made prior to reading was correct or incorrect. Write a brief summary/reflection about what you learned after reading the text including the misconceptions you had prior to reading.

BEFORE READING			AFTER READING	
Agree	Disagree	Statement	Why was my choice correct?	Why was my choice incorrect?

Extended Anticipation Guide (Making Inferences & Predictions)

Name: _____

Date: _____

Title: _____

BEFORE READING PREDICTION:

_____

_____

_____

_____

_____

_____

_____

AFTER READING REFLECTION:

_____

_____

_____

_____

_____

_____

_____

Adapted from: Kelley, M.J., & Clausen-Grace, N. (2007). Laying the Foundation for the Metacognitive Teaching Framework. In *Comprehension Shouldn't Be Silent* (pp. 22-41). Newark, DE: International Reading Association. Duffelmeyer, F. A.& Baum, D. B. (1992, May). The extended anticipation guide revisited. *Journal of Reading, 35*(8), 645-656. http://www.jstor.org/stable/40032158

Descriptive Text Organizer

Title: **Topic:**

Important Details:	Important Details:	Important Details:	Important Details:

Main Idea:	Main Idea:	Main Idea:	Main Idea:

Summary:

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Descriptive texts are written to describe an object, person, place, event or idea.

Signs of Descriptive Text

- Specific characteristics or features are described or explained (size, shape, location, color, etc.).

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Guiding Questions

- **Topic:** What specific topic, person, idea, or thing is being described or explained? (One-two words.)

- **Important Details:** How is the topic being described or explained? (What is it, what does it look like, what does it do, what happens, etc.)

- **Main Idea:** What features or characteristics are important to remember or understand about the topic being described? (One sentence.)

- **Summary:** What are the main ideas and important details that are necessary to include? How will you state them in your own words following the structure of the text? (As concisely as possible.)

Descriptive Text Organizer

Title: Topic:

Important Details:	Important Details:	Important Details:	Important Details:

Main Idea:	Main Idea:	Main Idea:	Main Idea:

Summary:

Determining Importance Toolbox

BEFORE READING

- Scan the text, notice text features & structure

- Use background knowledge

- Make predictions

- Set a purpose for reading

DURING READING

- Look for a main idea statement

- Look for repeated words or phrases

- Use text features:
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    - Captions and labels
    - Definitions and pronunciation guide

- Chunk the text

- Use text structure

AFTER READING

- Reread, discuss and identify main ideas

Steps for Setting a Great CPQ

1. Record/annotate your thinking while reading the text you will ask students to read.

2. Use sticky notes to record your thinking.

3. Think about what you would want students to understand after reading the article.

4. Create a "Great" CPQ.

Going From Good to Great!

A good CPQ:

- Is answered in the text either explicitly or implicitly.

- Involves student thinking.

- Will focus on comprehension.

- Relates to student learning.

A great CPQ:

- Cannot be completely answered until students have read the <u>entire</u> text.

- Involves higher order thinking, inferences, text evidence or synthesis of information.

- Will deepen and extend comprehension. Gets at the heart of what you want students to understand.

- Relates to the cognitive strategy(ies) currently being taught.