Helping Students Make Inferences in Instructional Texts

Session Handout

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Types of Inferences

Inferences are conclusions reached by combining known facts, background knowledge, and experiences.

Inference	Description	Example	Resources
Word-Meaning Inferences Students infer the meaning of a word from the information in a text			
Lexical Inference	A lexical inference links phonological awareness, morphological awareness and vocabulary knowledge (semantics)	The key to understanding other people's points of view is to remain uncritical. When we look at the word 'uncritical' we can break it down into its root word, '*critic*', and its suffixes, '*un*', and '*al*'. Using what you know about morphology, what does '*uncritical*' mean?	Teaching Morphology to Improve Literacy Using Morphology to Teach Vocabulary - Keys to Literacy
Context Clues	Context clues require students to use the information surrounding an unknown word in a text to infer its meaning	Yesterday, the temperature in the office went up and down between 17 and 25 degrees. We had a memo warning us that the heating system was behaving erratically and to expect a range of temperatures throughout the day. What does the word *'erratically'* mean? a) Steady, reliably b) Irregularly, unevenly c) Unexplainably, strangely d) Normally, continuously	Context Clues - Reading Strategies & Misconceptions Using Context Clues to Understand Word Meanings | Reading Rockets Context Clues

Anaphora Resolution	Anaphora resolution requires readers to infer the link between a pronoun and its antecedent	The monkey ate the banana because it was hungry. What does the word *'it'* refer to?	Coreference Resolution Anaphora in Grammar

Coherence Inferences Students connect pieces of information to build meaning and form a coherent understanding of the text			
Bridging Inferences	Bridging inferences require readers to connect information across the text in order to gain meaning from the text. Also called 'text-based' inferences, all the information is in the text, but students need to connect the dots.	It was St. Patrick's Day. That morning, Jenny's teacher had read them a story about a four-leaf clover that brought good luck to the little boy who had found it. While Jenny was playing in the field at recess, she was delighted to find a four-leaf clover. "I'm sure to be lucky now", she thought. What made Jenny think the four-leaf clover would bring her luck?	Inferences Escape Room Comprehension: Incredible Inferences The Inference Collection - Once Upon a Picture
Causal Inference	Causal inferences require readers to identify causes of the events in a text or identify causal relationships. Also known as explanatory inference in which readers infer reasons why or behind actions/events and	Hatching from an egg is hard work! As a baby bird is hatching from its egg, it has to use a few tricks. A baby bird will move its wings and press its legs against the inside of the eggshell. The baby bird also uses its tooth to scrape a small groove in the shell.	ReadWorks Unearthing Pterosaurs - how scientists make inferences from fossil evidence

	consequences/results.	Why does a baby bird make a groove in the eggshell?	
Gap-Filling Inference	Gap-Filling requires the reader to use prior or background knowledge to fill in information not provided in the text, but needed for understanding.	The woman had diamonds dripping from her ears and throat. What can we infer about the woman?	The Learning Network - The New York Times Canada

Elaborative Inferences

Students deepen understanding by integrating information within and across texts and experiences

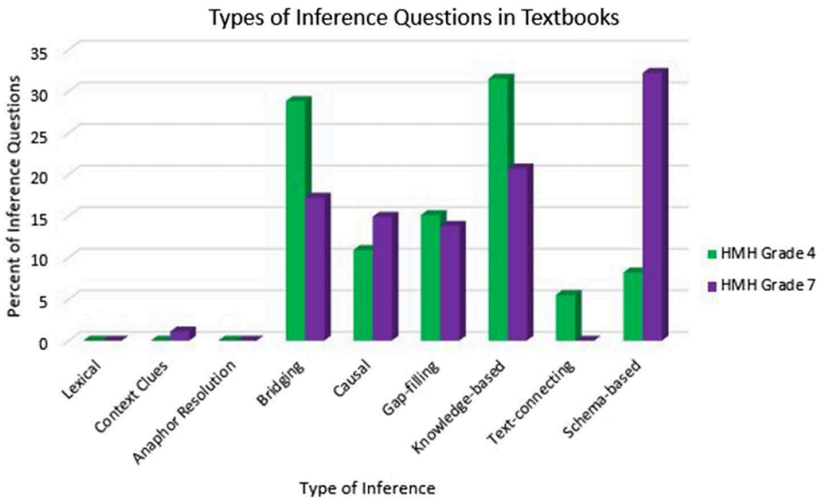
Knowledge-Based Inferences	Knowledge-based inferences require students to integrate information from the text with prior knowledge to draw conclusions or make predictions about the text. Knowledge-based inferences require higher-order thinking and questions. For example, students are asked to infer conclusions about character traits/feelings/motivations, compare-contrast character responses, predict what will happen next, determine theme/message, generate a summary	Example 1: Read the short story, "The Chaser" What can we infer about the ending? What will happen to Alan Austen? What will happen to Diana? Why is the short story called, "The Chaser"? Example 2: Watch the short film, "Late" What can we infer about the ending? What can we infer about their relationship? Why is the film called "Late"?	Using Animated Shorts to Teach Inference And So… Question It Says… I Say… And So… Teachers | Smithsonian Magazine Article of the Week — Kelly Gallagher ThoughtCo

Text-Connecting Inferences	Text connecting inferences require students to integrate information across different texts to create new understandings. Requires two (or more) separate texts. Linked Text Sets.	Consider the two stories "Do What You Can" and "How Six Sons Rescued Anansi." Which sentence best describes a similarity between them? a) The two stories both portray a protagonist who is greedy. b) The two stories are both informational texts. c) The two stories are fables about working together to achieve a goal.	CommonLit | Login Inference Graphic Organizers Turner's Graph of the Week
Schema-Based Inferences	Schema-based inferences require students to use their experience/prior knowledge to connect or relate the ideas in the text. Schema-based inferences may also require students to consider why the author wrote the text. Questions are set outside of the knowledge in the text. For example, a reader's response to an element or the author's purpose or writing style.	Read the short story, "Ordeal by Cheque" by Wuther Crue. (list view, non-cursive) What is the story? What is the evidence? Why did the author present the story this way? Why are there multiple interpretations?	Civic Online Reasoning

Textbook Analysis

Table 2 Descriptive statistics for textbooks

	Into Reading – Grade 4	Into Literature – Grade 7
Passages total	36	34
Expository passages	13 (36.1%)	13 (38.2%)
Narrative passages	23 (63.9%)	21 (61.8%)
Total questions coded	108	102
Inference questions	73 (67.6%)	87 (85.3%)
Inference questions for expository passages	20 (27.4%)	31 (35.6%)
Inference questions for narrative passages	53 (72.6%)	56 (64.4%)

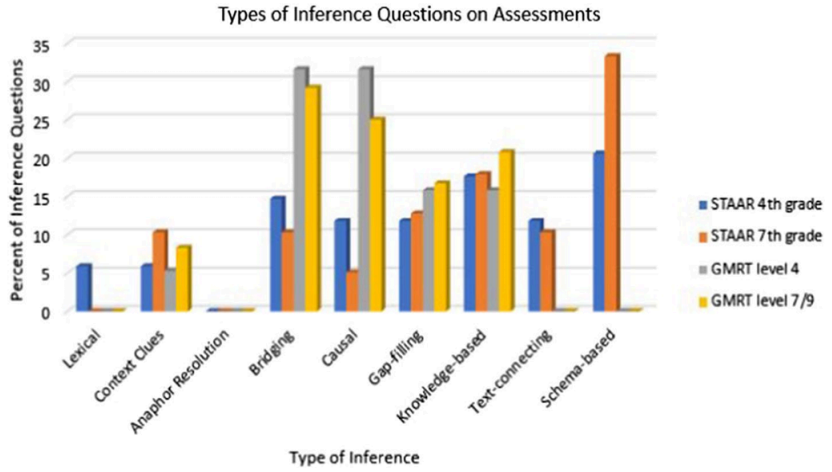


Assessment Analysis

Table 3 Descriptive statistics for assessments

	STAAR reading 2022—Grade 4	STAAR reading 2022—Grade 7	GMRT form S- level 4	GMRT form S- level 7/9
Passages total	6	6	11	11
Expository passages	2 (33.3%)	2 (33.3%)	4 (36.4%)	5 (45.5%)
Narrative passages	4 (66.7%)	4 (66.7%)	7 (63.6%)	6 (54.5%)
Multiple-choice questions	36	42	48	48
Inference questions	34 (94.4%)	39 (92.9%)	19 (39.6%)	24 (50.0%)
Inference questions for expository passages	11 (32.4%)	15 (38.5%)	4 (21.1%)	12 (50.0%)
Inference questions for narrative passages	23 (67.6%)	24 (61.5%)	15 (78.9%)	12 (50.0%)

STAAR State of Texas Assessment of Academic Readiness, *GMRT* Gates-MacGinitie Reading Test



Reading Strategies to Support Making Inferences

Pre-Reading Strategies

Pre-reading strategies focus on providing learners with appropriate background knowledge necessary to make meaning of the text

Strategy #1: Activate learners' background knowledge of topic, text, and/or vocabulary

Teachers could use:

• videos	• photographs	• political cartoons
• comic strips	• diagrams	• objects
• podcasts	• maps	• images
• infographics	• text messages	• social media post
• news clips	• an excerpt from a previous text	• wordless picture books

Teachers and students could:

• do a gallery walk	• brainstorm	• do an oral strategy/ routine
• begin a graphic organizer	• have collaborative conversations (written or oral)	• complete an anchor chart together

Strategy #2: Enable learners to draw global inferences from the structures and conventions of narrative and expository texts

Teachers could:

- model thinking about texts, i.e., model how a Table of Contents functions as part of the entire text.
- show how the diagrams and callouts relate to the main body of the text and contribute to understanding
- model their thinking about the internal structure of narrative texts by pointing out patterns of plot, characterization, and theme that are typical of the genre

Strategy #3: Use questions to prompt predictions

Teachers could:

- model how to predict the theme or central message of a text by asking strategic questions. For example, "I wonder what this article says about how tectonic forces cause earthquakes."
- model how to emphasize the author's purpose with strategic questions. Eg., "I wonder why the author chose this particular topic?"

During-Reading Strategies

During-reading strategies focus on predicting, making inferences, and deepening ongoing comprehension of text

Strategy #1: Encourage readers to infer meaning while reading.

Teachers could:

- model for students how to use sticky notes to keep track of their questions or connections they are making as they read.
- show students how to find and underline key words and facts that support the main idea of the text.
- model how to infer the meaning of unknown words by using contextual clues
- model how to infer the meaning of unknown words by using lexical inferencing

Strategy #2: Encourage readers to ask comprehension-monitoring questions while reading

Teachers could:

- model think-aloud questions that clarify understanding
- encourage students to ask 'wh' questions about the text. (Who, What, Where, When, Why, How)

Strategy #3: Make space for planned conversations

Teachers could:

- ask quality questions relating to the underlying meaning of the text
- provide think time
- repeat and expand on ideas expressed in the text
- explicitly point out connections to other texts or experiences

Post-Reading Strategies

Post-reading strategies encourage readers to synthesize ideas across texts and experiences

Strategy #1: Encourage readers to verify and add clarity to their predictions

Teachers could:

- direct readers to refer back to their predictions and find supporting or contradictory evidence in the text

Strategy #2: Encourage readers to make inferences

Teachers could :

- model how to make text-to-text connections
- model how to use a graphic organizer to support inferences
- show grammatical and lexical inferences within sentences
- model how to make logical conclusions about meaning by examining the way words, phrases, sentences, and paragraphs work together

Students could:

- complete a graphic organizer to illustrate how pieces of information make sense and contribute to the overall meaning of a text
- summarize a text

Strategy #3: Model and practice making inferences

Teachers could:

- model how to use a graphic organizer to support inferences
- explicitly make inferences between and within text
- explicitly make inferences between and within text and experience

Teachers and students could **INFER**:

- **I**: Interact with passages and questions
  - Review text
  - Read questions
  - Identify type of inference necessary to build understanding
- **N**: Note what is known
  - Relate background knowledge or experiences to text

		• **F**: Find the clues
		  ○ Underline key words, note connections
		  ○ Form tentative responses or answers to questions
		• **E**: Explore and expand details
		  ○ Look for additional clues that support reasoning
		  ○ Expand thinking across text and experiences, draw upon what is already known
		• **R**: Return to the question
		  ○ Refer back to the question and ensure response aligns