Beyond the Words: Making Inferences

Carol Westby, PhD
Bilingual and Multicultural Services
Albuquerque, NM
mocha@unm.edu
carol_westby@att.net

Disclosures

• Carol Westby is receiving an honorarium for this presentation.
• She has a chapter on theory of mind and literacy in children with hearing loss in a book, *Promoting Language and Literacy in Children who are Deaf or Hard of Hearing*, edited by Mary Pat Moeller

Outline

• What is an inference
• Types of inferences
• Difficulties inferring exhibited by students with language impairments
• Strategies to promote inferring
  – Activate and build prior knowledge
  – Develop Vocabulary, Morphology & Syntactic Structures
  – Theory of Mind & Syntactic Structures
  – Teaching question types
  – Bringing it together with think-aloud

What is an Inference?

Text/picture + prior knowledge = inference

An inference is the information gained from the picture and or text combined with our prior knowledge

SLI/PLI/DLI

ASD

ADHD

Hearing loss

Behavioral Disorders

Reading Comprehension

Language Impairment/Social Communication Disorders

NAEP Grade 4 Questions for Hungry Spider and Turtle

• When turtle remains quiet about his mistreatment by Spider, the author wants you to:
  – believe turtle is afraid
  – have sympathy for turtle
  – feel dislike for turtle
  – think turtle deserved no dinner

• Spider’s behavior during the first part of the story is most like that of:
  – mothers protecting their children
  – thieves robbing banks
  – runners losing races
  – people not sharing their wealth
Inferring is facilitated when...

Readers build a mental model or representation of the situation or world (real or imaginary) described in the text.

Dystopian Stories


REASONS FOR INFERRING DIFFICULTIES

- Lack of general knowledge
  - Have difficulty accessing background knowledge and integrating it with what is in the text

- Less skilled at synthesizing information from different parts of text & making inferences

- May not realize that inferences are necessary


Types of Inferences

- Coherence
- Logical
- Classes

Classification of Inferences: How they make text coherent

<table>
<thead>
<tr>
<th>Name</th>
<th>Example</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local inference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Coherence</td>
<td>An old man and an old woman lived in an old cottage. They lived there with their many animals. “It’s time for us to sow the vegetables,” said the old woman. They planted peas, carrots, beans, and turnips.</td>
<td>Realize that pronouns “they” and “their” refer to old man and old woman Recognize that “peas, carrots, beans, turnips” refer to “vegetables”</td>
</tr>
<tr>
<td>2. Antecedent causal inference</td>
<td>The old man pulled and heaved and tugged and yanked, but the turnip would not move.</td>
<td>Infer that the turnip must be really big, or really far down in the ground.</td>
</tr>
<tr>
<td>Global inference</td>
<td>Inferences about the theme, main point, or moral of a text. Work goes better when many help.</td>
<td>To create a representation of the whole text, the reader infers over-arching ideas by drawing on local pieces of information.</td>
</tr>
</tbody>
</table>

Mental Model of Text

Meaning of the situation described in the text.

Text Macrostructure
- Text organization
- Gist or theme

Text Microstructure
- Words
- Sentences
- Cohesive structures

Textbase Model

Logical Inferences

**Deductive**
All mammals are warm-blooded and have fur. A tapir is a mammal. Is a tapir warm-blooded? Does it have fur?

**Inductive**
This animal is warm-blooded. It has fur. It feeds its young milk. What kind of animal is it?

**Classes of Inferences**

- **Anaphoric references**: pronoun/noun-phrase that refers to previous text entity
  - Vasilisa kept it near her.

- **Bridging/relational**: semantically or conceptually relating sentence to previous content
  - First page says humans are Baba Yaga’s favorite food. Infer that the bones around Baba Yaga’s house are probably human bones

- **Explanation-based/causal**: explain what is read by a causal chain of previous events and states
  - Baba Yaga’s cat and dog help Tasha because Tasha fed them and Baba Yaga did not.

- **Predictive**: forecast what events will unfold
  - The doll Vasilisa’s mother gave her will keep her safe

- **Goal**: infer intentions of agent
  - The stepmother wants to get rid of Vasilisa by sending her to Baba Yaga

- **Elaborative**: properties and associations that cannot be explained by causal relationships
  - Characteristics of Baba Yaga: witch behaviors; uses magic; infer what she might do because she is a witch

- **Emotional states**
  - How does the girl feel? Why?

- **Intentionality/Mental states**
  - What is this person thinking?

- **Physical causality**
  - Why is the snowman melting?


**Interpersonal**

- Recognize emotions of others
- Infer emotions of others
- Infer behavior based on emotions
- Empathize with others

**Cognitive**

- Understand that others can have thoughts, beliefs, desires different from my own
- Infer mental states of others
- Infer behavior based on thoughts

**Theory of Mind**

- Cognitive ToM: The goose doesn’t know the fox is there but we do. We know fox’s intention is to eat a goose and duck.
- Affective ToM: We realize that goose is nervous/worried.

**Difficulties inferring exhibited by students with language impairments**

- Early Studies of LI and Inferring
  
  Compared to typically developing children, on both verbal and visually presented stories, children with language impairments:
  
  - Make fewer total inferences
  - Make more inference errors

  
  

**Children with LI inferring emotions in situations**


- 5-year-old children with language impairment (LI) and typically developing children (TD) were 100% correct in pointing to pictures of happy, sad, mad, surprised
- TD and LI children were 100% correct in labeling happy, sad, mad; 4 of the 12 children with LI did not label surprised correctly
- Children with LI made significantly more errors inferring emotional reactions
- Children with LI made more errors of a different valence, e.g., mad for happy

Children with LI had more difficulty with emotional inferences than TD children.

Children with LI made more errors of valence than TD children, e.g.,
- TD same valence errors, e.g., sad for angry
- LI different valence errors, e.g., happy for sad or angry


Can a verbal inference task differentiate between:

- Children with language impairment (CwLI) and matched peers with typical language development (TLD) (6-11 years)
- Children with specific language impairment (CwSLI) and children with pragmatic language impairment (CwPLI)


### Sentence Comprehension (SC) Task

- Child pointed to a picture (from a set of four choices) or written word on the test booklet (again from a set of four words read by the evaluator).
  - direct and indirect objects ("She gave the baby the book.")
  - passive comprehension ("The dog was splashed by the girl.")
  - embedded clauses ("The crocodile that bit the lion was small.")
  - complex continuous past ("Which one have I already eaten?")


### Inferential Comprehension (IC) task

- Picture of kitchen in aftermath of a burglary.
  - Householder and policewoman picture with clues
    - Torn piece of cloth
    - Footprint
    - Broken window
  - Examiner read short text about picture
  - Students asked 11 questions designed to tap inferring


### Some Inferential Comprehension (IC) Questions

**Easiest**
- Why was the dog barking?
- Why is the policewoman there?
- What happened when the burglar got into the house?
- What clues will the police find about who broke in?
- Why did the burglar break into the back of the house?
- How does the family feel now?
- How do we know it was the burglar who broke the window?
- What will the family do now because of the burglary?

**Hardest**
- Made significantly more literal comprehension errors (didn’t understand the question).
- CwLI had lower raw scores on the IC task than CA-matched CwTLD, but similar scores to SC-matched CwTLD
- The CwSLI had significantly higher IC scores than CwPLI
- No significant differences between the types of inferences that CwSLI and CwPLI made

Comprehension in children with PLI

CwPLI

- CwPLI performed more poorly on developmentally more complex inference items.
- Had significantly lower inferential scores than their CA and SC matched groups.

Skills needed to make inferences

Comprehension of linguistic input:
  - Vocabulary
  - Syntax

General world knowledge:
  - Including theory of mind (ToM)

Working memory:
  - Search for information in memory
  - Search in text
  - Check that the inference explains the premises held in working memory


The King's Ducks

Once upon a time, there was a king who lived in a gorgeous castle on the edge of a beautiful lake. This king had two special ducks that he was very fond of. He told his young son that if he could determine which duck was the male duck, he would give the son all his riches. The son thought that surely the bigger duck was the male duck, but he figured he had better do some more investigating before making a decision.

The son traveled out to the countryside and requested help from a man he saw walking on the country road. The farmer was amazed to see the king's son outside of the castle grounds. "Would you be so kind as to help me, sir?" said the boy. "I need to know how to tell male ducks from female ducks. I would appreciate any information you can give me, since my future depends on it." The farmer told the son to take the ducks out of the water and set them on the shore. Then, he told him to watch carefully to see which duck would enter the water first.

The farmer said that the first to enter the water was always the male duck. The boy returned to the castle to try out the farmer's advice. He was glad he had listened to the farmer, because he was surprised to discover which duck was the male.


Inferential processing in ASD

Physical Causality

Intentionality/Mental states

Emotional States

Best performance

Errors may be related to difficulty integrating world knowledge with context/situation

More errors

Andy was only 2 years old. He was sitting on his mother’s lap when a big dog ran up and licked him on the cheek. Andy’s eyes got really big, and he started to cry.

Why did Andy do that?


Inferring in 4 Groups of 8th Grade Students

Normal language group (NL)

- Normal vocab/syntax, world knowledge, working memory

Specific language impairment group (SLI)

- Normal world knowledge
- Deficits in vocab/syntax and working memory

Nonspecific language impairment group (NLI)

- Deficits in vocab/syntax, world knowledge, and working memory

Low cognition group

- Normal vocab/syntax
- Deficits in world knowledge and working memory


Literal and Inferential Questions

- Adjacent Premise Questions
  - Which duck did the farmer say would enter the water first?
  - Where did the young son find someone to help him?

- Distant Premise Questions
  - What would the king give his son if he could figure out which duck was the male duck?
  - Before he talked to the farmer, which duck did the son think was the male?

- Adjacent Inference Questions
  - Who was the man that was walking on the country road?
  - How did the young son determine which of the King’s ducks was male?

- Distant Inference Questions
  - How do you know the son got the king’s riches?
  - Why was the son surprised when he figured out which duck was the male duck?
Inferring in 4 groups of 8th grade students

- Working memory: All measures correlated highly with inference scores
- **Adjacent inference questions:**
  - No difference between NL and LC groups
  - NL group better than SLI and NLI groups
- **Distance inference questions:**
  - All groups of students had more difficulty with distant inference questions than adjacent inference questions


Central Coherence

- Ability to derive overall meaning from a mass of details
- A person with strong central coherence, looking at an endless expanse of trees, would see “the forest.”
- A person with weak central coherence would see only a whole lot of individual trees.


Inferring by 4-7 year olds (TD & ASD) in narrative comprehension

- If it’s Susie’s birthday party tomorrow. Susie and her Mum go to the supermarket to buy food for the party. Susie really hopes Mum buy her a chocolate cake. They get a cake, some candy, and some chips. Then they pay the cashier. Susie leaves the store smiling and feeling happy. And they take the food home.

<table>
<thead>
<tr>
<th>Question type</th>
<th>Inference type</th>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factual</strong></td>
<td></td>
<td>Where do they first go in the story?</td>
<td>To the supermarket</td>
</tr>
<tr>
<td><strong>Propositional</strong></td>
<td>Deductive</td>
<td>Why was Susie happy when they left the store?</td>
<td>Her Mum bought a chocolate cake.</td>
</tr>
<tr>
<td><strong>Script</strong></td>
<td>Inductive</td>
<td>Why did they give money to the cashier?</td>
<td>To buy the food</td>
</tr>
</tbody>
</table>


Inferring by 4-7 year olds in narrative comprehension

- Children with ASD and typical children performed **similarly** on factual and propositional/deductive questions
- Propositional/deductive inferences require integrating information within the text
- Children with ASD performed **less well** on script/inductive inferences than typically developing children
  - Supports weak central coherence theory, i.e., problems integrating information to make script inferences


Central Coherence:

Important for inductive inferences

Specific Difficulty in Inferencing

- 12.5% of TD children
- 33% of children with ALN
- 58% of children with LI
- 50+% of ALI children


Working Memory, ASD, and Inferences (Adolescents 11-18 years)

- Fatima is going to work as a waitress this weekend. Her sister is sick and she is going to replace her. When Fatima was a child she sat all her dolls and pretended to be a waitress bringing glasses of water. Also, when asked what she wanted to be when she grew up, she always replied, “a waitress.” On top of it, she is going to earn some money in a proper job.

  Fatima was feeling excited
  Fatima was feeling disappointed


Neutral sentences before inference

- Isabel’s boss has told her that she has to go to England for 4 months. She can’t sleep since she received the news. She doesn’t know how she will live there. She won’t have her family nearby and, most important, she won’t be able to talk to anyone because she doesn’t speak English.

Isabel was feeling unhappy
Isabel was feeling happy


Category Induction in ASD

<table>
<thead>
<tr>
<th>% of Group</th>
<th>TD</th>
<th>Optimal</th>
<th>HFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfect 6/6</td>
<td>17.3</td>
<td>16.7</td>
<td>15.4</td>
</tr>
<tr>
<td>Almost perfect 5/6</td>
<td>52.2</td>
<td>27.8</td>
<td>23.1</td>
</tr>
<tr>
<td>Consistent 4/6</td>
<td>26.1</td>
<td>38.9</td>
<td>38.4</td>
</tr>
<tr>
<td>Moderate 3/6</td>
<td>4.3</td>
<td>16.7</td>
<td>15.4</td>
</tr>
<tr>
<td>Nonextender</td>
<td>0</td>
<td>0</td>
<td>7.7</td>
</tr>
</tbody>
</table>


Concept Questions

- Who was Martin Luther King?
- What is racism?
- What is Washington, DC?
- What does “equal rights” mean to you?

Martin Luther King, Jr. – 5th Grade

- Explicit questions
  - In some cities, what did blacks have to do on a city bus? (give up their seat)
  - Why was Rosa Parks arrested? (she didn't want to give up her seat)
  - What did many people do to protest Rosa Park’s arrest? (don't know)
  - Name one way in which Martin Luther King was honored for his work. (a medal)

Implicit Questions
- What was Martin Luther King’s main goal? (change the law)
- Why had people made laws separating blacks and whites? (don’t know)
- What happened when people refused to ride the buses? (lost money)
- Why was Washington, D.C. an important place to protest unjust laws? (the president lives there)

Strategies to Promote Inferring
- Activate prior knowledge/build knowledge
- Develop vocabulary/syntactic structures
- Develop theory of mind
- Teach types of questions
- Use Think-Alouds, questioning the author

Urrea's book, a Pulitzer Prize finalist, chronicles the attempt of 26 men to cross the Mexican border into the United States in the spring of 2001, which resulted in the deaths of 14.

The book received critical acclaim with The Atlantic describing it as "the single most compelling, lucid and lyrical contemporary account of the absurdity of U.S. border policy."
Background Knowledge

- Desert environment
- Reasons people migrate
- Attitudes about migrants
- Border patrol functions
- Myth/Biblical allusions (Moses in the wilderness)

Develop Vocabulary, Morphology & Syntactic Structures

Vocabulary Breadth & Depth

Depth of vocabulary affects inferences at global level even more than at local levels

Teaching Vocabulary

<table>
<thead>
<tr>
<th>Word</th>
<th>Dictionary Definition</th>
<th>Friendly Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protrude</td>
<td>extended out or project in space</td>
<td>If something protrudes from somewhere, it sticks out.</td>
</tr>
<tr>
<td>Writhe</td>
<td>move in a twisting or contorted motion</td>
<td>If you writhe, your body twists and turns violently backwards and forwards, usually because you are in great pain or discomfort.</td>
</tr>
<tr>
<td>Predatory</td>
<td>living by preying on other animals</td>
<td>Predatory animals live by killing other animals for food.</td>
</tr>
<tr>
<td>Grimace</td>
<td>comfort the face to indicate a certain mental state</td>
<td>If you grimace, you twist your face in an ugly way because you are annoyed, disgusted, or in pain.</td>
</tr>
</tbody>
</table>

Vocabulary Instruction

- Contextualize word for its role in the story
- Have children repeat word so they create a phonological representation
- Explain the meaning of the word
- Give examples in contexts other than the story.
- Children provide their own examples
- Children say word again to reinforce its phonological representation


Teach Vocabulary in Thematic groups

- The black widow spider
  - widow, prey, poisonous, scamper, fluid
- The American colonies
  - colony, independence, migrate, settlers, trade
- Whales
  - adapt, agile, depths, docile, frolic, glide, tragic, treacherous, vicious

SERP Word Generation Program

- Program to teach academic vocabulary language, discussion, argumentation, and thinking skills to students in 4th-8th grades
- Words are taught in multiple contexts over 5-10 lessons
- Available free: [http://wordgen.serpmedia.org](http://wordgen.serpmedia.org)


Should Schools Protect Kids from Cyberbullying?

- The internet offers new ways for people to engage in bullying and harassment. People who are usually kind may discover an underlying capacity for meanness when they are online, where they feel anonymous. Some people suggest rules to help others to remember to be kind. For example, “Don’t say something online that you wouldn’t say in person.” Is this rule adequate? What are some other good rules for online interactions?

Use the focus words

- anonymous (adjective) not named or identified
  - Sample Sentence: Since many of the harmful comments come from anonymous sources, teachers and principals are unable to determine who the cyberbullies are.
  - Turn and Talk: Describe a situation when you would want to write an anonymous note.
- underlying (adjective) fundamental but not revealed or expressed
  - Sample Sentence: When a child is having problems in school, cyberbullying can be an underlying cause.
  - Turn and Talk: What could be some underlying reasons that a student refuses to participate in P.E.?
When Stanley stole the truck, he felt excited but because he was finally getting away.

Theory of Mind & Syntactic Structures

Non-social Emotion Words

Non-social emotions require only the awareness of one's own physical state.

Universal non-social emotions:
- Happy
- Sad
- Mad/angry
- Surprised
- Disgusted
- Afraid

Emotional Thermometers

- Ecstatic/euphoric
- Blissful
- Elated
- Joyful
- Happy
- Glad
- Pleased
- Contented
- Comfortable
- Enraged
- Incensed
- Livid/furious
- Angry
- Aggravated
- Provoked
- Irritated
- Annoyed
- Bothered

Teach Tier 2 words for emotions/moods

https://www.vocabulary.com/articles/wl/get-into-the-mood-with-100-feeling-words/

Other Emotion Categories

- Social emotions - depend upon the thoughts, feelings or actions of other people
  - Embarrassment
  - Guilt
  - Shame
  - Jealousy
  - Envy
  - Pride

- Children with ASD can cite examples of pride, guilt, embarrassment, but stereotyped, less personal, e.g.,
  - Pride: finish homework, win game
  - Guilt: stealing cookies, running away
  - Embarrassment: being teased

My father cabled his superiors a third time, and I knew the answer by the look in his eye. That night he said to my mother, "I have to do something. I may have to disobey my government."

The crowd stood frozen for a second. Then the refugees burst into cheers. Grown-ups embraced each other, and some reached to the sky. Thrilled, relieved.

Concerned about self, compassionate, worried about Jews' safety

Sugihara decides to go against government and write visas

Evidence: My father cabled his superiors a third time, and I knew the answer by the look in his eye. ...That night he said to my mother, "I have to do something. I may have to disobey my government."

What Sugihara is thinking or feeling

What the Jews are thinking or feeling

Evidence: The crowd stood frozen for a second. Then the refugees burst into cheers. Grown-ups embraced each other, and some reached to the sky.

Sugihara: Wrote visas until forced to leave Lithuania.

What happens next? Wrote visas till forced to leave Lithuania.

The art of comprehension: Exploring visual texts to foster comprehension, conversation, and confidence. Portsmouth, NH: Stenhouse.

**Access Lenses:** Mood: despondent, then joyful

<table>
<thead>
<tr>
<th>Color</th>
<th>Mood/Action</th>
<th>Facial expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>brown</td>
<td>Walking slowly</td>
<td>Stanley's face blank</td>
</tr>
<tr>
<td>grey</td>
<td>Lying still, not moving</td>
<td>Eyes squinting</td>
</tr>
<tr>
<td>Very bright</td>
<td></td>
<td>Increasing smile</td>
</tr>
</tbody>
</table>

Close together or apart: Stanley & Zero hugging

Alone: Stanley all alone
Zero all alone

Sounds/no sounds: Repetitive “music”; no other sounds

Connections: Hiking at Monument Valley

The Desert is Theirs

Like the Sahara Desert

---

**Access Lenses: Wilbur in Charlotte’s Web**

<table>
<thead>
<tr>
<th>Test</th>
<th>Relevant Access Lens</th>
<th>Inference/Mood/Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The next day was rainy and dark</td>
<td>Color</td>
<td>It’s a gloomy sort of day</td>
</tr>
<tr>
<td>Templeton was nowhere to be seen</td>
<td>Far apart</td>
<td>Wilbur is feeling lonely</td>
</tr>
<tr>
<td>“Are you there, Templeton?” called Wilbur. There was no answer</td>
<td>Silence</td>
<td>This heightens the sense of loneliness</td>
</tr>
<tr>
<td>...Fern won’t come in such bad weather</td>
<td>Far apart</td>
<td>Wilbur wants a visitor</td>
</tr>
<tr>
<td>And Wilbur was crying again...</td>
<td>Action</td>
<td>Wilbur feels sad that nobody was around</td>
</tr>
<tr>
<td>Wilbur did not budge.</td>
<td>Inaction</td>
<td>Depressed</td>
</tr>
<tr>
<td>Darkness settled over everything</td>
<td>Color, symbol, big</td>
<td>There was no hope anywhere</td>
</tr>
</tbody>
</table>

---

**Sentence Frames for Expressing Emotional Relationships**

<table>
<thead>
<tr>
<th>Character</th>
<th>When</th>
<th>Feeling</th>
<th>Why (because)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loki</td>
<td>He hears Thor say he can’t trust Loki</td>
<td>Ashamed</td>
<td>He broke the relationship between him and Thor</td>
</tr>
</tbody>
</table>

---

**Internal States Inference Chart**

<table>
<thead>
<tr>
<th>Characters</th>
<th>When</th>
<th>Feeling</th>
<th>Why (because)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanley</td>
<td>Zero was looking over his shoulder when Stanley was writing to his mother</td>
<td>Annoyed</td>
<td>He didn’t want Zero to see what he was writing</td>
</tr>
<tr>
<td>Stanley</td>
<td>X-ray takes the lipstick tube and turns it in</td>
<td>Frustrated</td>
<td>Stanley found the tube so he should get a day off</td>
</tr>
<tr>
<td>Zero</td>
<td>He finds his mother</td>
<td>Relieved, thrilled, happy</td>
<td>He thought she might have died or that she didn’t want him</td>
</tr>
<tr>
<td>The Warden</td>
<td>Stanley &amp; Zero find the boys in the hole</td>
<td>Worried</td>
<td>Because the authorities will learn how she has been using the boys and she could go to jail</td>
</tr>
</tbody>
</table>
Promoting Questioning

• Model how to formulate different types of questions
• Model higher level questions that require using textual cues and prior knowledge
• Ask students to reflect: How does this question help us understand the text
• Provide question starters, e.g., ‘Why do you think…?’


Question-Answer-Relationships

• Where is the answer?
  – Right there!
  Words are right there in the text
• Where is the answer?
  – Think and search!
  Words are in the text, but not spelled out for you. Think about what the author is saying.
• Where is the answer?
  – You and the author!
  Think about what you have learned and what is in the text.
• Where is the answer?
  – On your own!
  – Answer is in you head.


QAR (Question-Answer-Relationship)

Passage to Freedom: The Sugihara Story

• Right there
  – Why were the Sugihara family living in Lithuania?
• Think and search
  – In what ways did Hiroki’s life change after the Polish Jews came to his house?
• Author and you
  – What is a visa?
  – Why didn’t Mrs. Sugihara help write the visas?
• On your own
  – Can you think of someone else who has risked his or her own life to save other persons?
Bringing it all together with think-alouds

Promoting Inferring

- Model inferring/predicting using think-alouds and text cues
- Ask students to preview illustrations and headings and think about what they will learn from text
- Use what you know about text structure to infer/predict
- Periodically summarize what has happened so far and add, "Now I think… because….


Strategies to Build Inferential Comprehension

Think Aloud

Make predictions:
Students read silently as teacher reads aloud.

Teacher thinks through tricky spots and

"From the title I think this will be about..."

Think Aloud

Outside the storm grew worse. Still shaking, Ben picked up the receiver and held it to his good ear. He hesitated then dialled the number. He slid the bookmark between the pages of the book.

Think Aloud

Make connections explicit:
Show how to link prior information stated in the text to new information in text. "I remember about... and now..."

Think Aloud

The description on the wolf exhibit at the museum says the scene is at the margin of Gunflint Lake, MN. I remember at the beginning of this book that Ben is from there. Had the person who created this exhibit been at Gunflint Lake? Maybe it was the Daniel that Ben is looking for.

Think Aloud

Demonstrate fix-up strategies:
Show how to make sense of the passage. "I’d better reread." or "I’ll read ahead and see if I can get some more information."
Questioning the Author

Goal: Initiating queries

What is the author trying to say here?
What do you think the author wants us to know?
What is the author talking about?


Questioning the author: Follow-up queries

So what does the author mean right here? That's what the author said, but what did the author mean?
How does this connect to what the author told us earlier?
Does this make sense with what the author told us before?
Why do you think the author tells us about this now?

Questioning the author
Inferring Thoughts and Feelings

Making Connections: Inductive Inferences
If children are to make inferences, they must be taught HOW TO THINK, not what to think.