**Making the Invisible Visible**  
**Lesson 3**

### Critical Learning

- How metacognition is involved in reading and in classroom activities
- That metacognition requires making decisions about what is appropriate to specific situations

### Curriculum Expectations

**Reflecting on Skills and Strategies:** Reflect on and identify their strengths as readers, areas for improvement, and the strategies they found most helpful before, during, and after reading

1. describe a few different strategies they used before, during, and after reading; explain which ones they found most helpful; and identify steps they can take to improve as readers
2. identify several of their skills in listening, speaking, writing, viewing and representing and explain how the skills help them read more effectively

**Learning Goals**  
(Unpacked Expectations)

Students are able to:
- practise strategies before, during, and after reading short, self-selected text
- make decisions about which strategies are appropriate for specific situations
- select strategies according to goals

### Planning with the End in Mind

**Criteria for Level 3 Performance**  
(Achievement Chart Category)

This lesson is preparing students to successfully meet the following criteria from the summative evaluation that follows this series of lessons. The lessons and rubric are intended to indicate the instructional trajectory. Thorough preparation requires additional lessons.

- Demonstrates considerable depth in understanding the role of metacognition to a variety of learning situations (Knowledge and Understanding)
- Demonstrates considerably effective use of metacognitive strategies (Thinking)
- Explains with considerable clarity how metacognitive strategies work together to help learners succeed (Communication)

### Instructional Components and Context

**Readiness**
- Anchor chart
- Think aloud
- Fix-up strategies
- Rapid writing
- What metacognition is

**Literacy Strategies**
- Fix-up strategies
- Reading comprehension strategies
- How to support a partner, i.e. coaching strategies

**Assessment Tools and Strategies**
- Self-assessment

**Terminology**
- Self-knowledge
- Coaching statements

**Collaborative Skills**
- Face-to-face interaction
- Interdependence
- Task accountability

**Next Steps**
- Mark metacognitive strategies and questions on reading texts and writing drafts using sticky notes
Guiding Questions
• Why does metacognition matter?
• Why do we need to consider context?

Minds On...

Approximate time: 20 minutes

Small Groups ➔ Exploring the concepts
Using a photograph of yourself as a prop, model rapid writing in a think-aloud. Students view the photograph of themselves and do a rapid writing:
• what other people see when they look at the photograph
• what they themselves “see” that other observers would not, e.g., what they were thinking and feeling while the photograph was taken.

In a Round Robin, students share the two “views” of the photograph, based on their rapid writing. Prompt students to infer the purpose of the task and make connections to the previous lesson. Each group organizes a deck of cards into groups of 4, a group for each number or face, and stacks each group so it is ordered from bottom to top: clubs, diamonds, spades, hearts. Identify one person from each group to observe and note the many different strategies used by the groups to accomplish the same task.

Whole Class ➔ Debrief
Debrief the photograph activity, making connections to how we know ourselves; how we can’t always see what people are thinking when we watch them; how we can make invisible thinking visible; and the role of self-knowledge in learning.

Debrief the card activity, noting how many different ways there are of achieving the same goal and how learners have to select strategies based on situations.

Share the learning goals.

Action!

Approximate time: 45 minutes

Whole Class ➔ Modelling
Referring to the reading comprehension fix-up strategy anchor charts, select a strategy to model. Using a think-aloud, model how to:
• read a short text, applying the strategy and working the text
• reflect on the effectiveness of the reading comprehension strategy and/or fix-up strategy, including why it might not have been needed, e.g., there were no comprehension challenges; the strategy wasn’t the right one for this particular text and its challenges; how an opportunity to use the strategy might have been missed; how effective readers select purposefully from a repertoire of strategies.

Pairs ➔ Applying a Fix-up Strategy
Return 3-2-1 Exit Cards with feedback comments on them. Students place these on their desks as a reminder of the strategy they committed to practise. Cue students to use before, during, and after strategies as they practise supporting partners with coaching statements and questions.

In pairs, students exchange and read aloud the short texts they brought to class, monitoring their own comprehension. In a think-aloud incorporated into the reading aloud, they assess whether they need to use the strategy they selected to practise, use it if they need to, and consider alternative strategies if that one isn’t appropriate.

Students switch roles. They discuss why they selected the text and which strategies they expected classmates might use.

Consolidation

Approximate time: 10 minutes

Whole Class ➔ Debrief
• Acknowledge that strategies need to be selected and practised in specific situations for specific purposes. Facilitate a discussion, using question prompts.
• Distribute two dot stickers to each student, one colour for the fix-up strategy they selected to use and another colour for an alternative strategy they considered.
• Students place their dots beside the appropriate fix-up strategy on the anchor chart. Provide a blank piece of chart paper on which students can add strategies, if necessary.
• Debrief the dot activity, noting which strategies were identified most and why, and which strategies were not identified and why.
## Consolidation

**Individual → Goal-setting**
- Students complete the **metacognitive self-assessment**.
- Describe the summative evaluation: a teacher-student conference will follow a reading activity in which they read a short text for meaning and do a think-aloud. Clarify components and criteria on the **rubric**.

Referring to their metacognitive self-assessment, their journal, and/or their 3-2-1 Exit Card, students highlight:
- the component on the rubric about which they feel most confident
- two strategies on the self-assessment handout that they commit to practising in the next few classes.

## Home or Next Lesson Connection

Keep copies of reading texts and writing drafts in your writing portfolio, along with sticky notes capturing metacognitive statements or questions.
Making the Invisible Visible  Lesson 3

Connections Menu
Rubric
Connecting Practice and Research: Metacognition Guide
Connecting Practice and Research: Strategy Implementation Continuum
Guiding Questions

Minds On ...
Round Robin
Sample Self-Knowledge Quotations

Action!
Reading Comprehension Fix-up Strategies
Coaching Statements and Questions

Consolidation
Question Prompts
Metacognitive Self-Assessment
# METACOGNITION RUBRIC

<table>
<thead>
<tr>
<th>Knowledge and Understanding</th>
<th>Level 4 Advanced</th>
<th>Level 3 Proficient</th>
<th>Level 2 Developing</th>
<th>Level 1 Beginning</th>
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</thead>
<tbody>
<tr>
<td>Knowledge of the components of metacognition (e.g., think about their thinking, plan and set learning goals, monitor and reflect on their progress, purposefully select learning strategies)</td>
<td>• identifies all or almost all the components of metacognition</td>
<td>• identifies most of the components of metacognition</td>
<td>• identifies some of the components of metacognition</td>
<td>• identifies a few of the components of metacognition</td>
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<tr>
<td>Understanding the importance of metacognition to learning</td>
<td>• demonstrates significant depth in understanding the role of metacognition to a variety of learning situations</td>
<td>• demonstrates considerable depth in understanding the role of metacognition to a variety of learning situations</td>
<td>• demonstrates adequate depth in understanding the role of metacognition to learning situations</td>
<td>• demonstrates limited depth in understanding the role of metacognition to learning situations</td>
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<tr>
<td>Thinking</td>
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<tr>
<td>Use of metacognitive strategies:</td>
<td>• demonstrates highly effective use of metacognitive strategies</td>
<td>• demonstrates considerably effective use of metacognitive strategies</td>
<td>• demonstrates somewhat effective use of metacognitive strategies</td>
<td>• demonstrates limited effectiveness in using metacognitive strategies</td>
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<tr>
<td>• to plan and prepare for learning</td>
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<td>• to select, monitor and adapt strategies for task-specific purposes</td>
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<td>• to assess and reflect on progress, identify goals, and make a plan of action</td>
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<tr>
<td>Communication</td>
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<tr>
<td>Explains how metacognitive strategies work together to help learners succeed</td>
<td>• explains with a high degree of clarity how metacognitive strategies work together to help learners to succeed</td>
<td>• explains with considerable clarity how metacognitive strategies work together to help learners to succeed</td>
<td>• explains with some clarity how metacognitive strategies work together to help learners to succeed</td>
<td>• explains with limited clarity how metacognitive strategies work together to help learners to succeed</td>
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<tr>
<td>Application</td>
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<tr>
<td>Makes connections within and between various contexts:</td>
<td>• demonstrates ability to make insightful explanations of how metacognitive processes apply both to in-school and to out-of-school experiences and work together with language and learning processes</td>
<td>• demonstrates considerable ability to explain how metacognitive processes apply both to in-school and to out-of-school experiences and work together with language and learning processes</td>
<td>• demonstrates adequate ability to explain how metacognitive processes apply both to in-school and to out-of-school experiences and work together with language and learning processes</td>
<td>• demonstrates limited ability to explain how metacognitive processes apply both to in-school and to out-of-school experiences and work together with language and learning processes</td>
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</tbody>
</table>
Findings in a study by Lenz, Adams, Bulgren, Pouliot and Laraux (2002) indicate that guiding questions and curriculum maps, two explicit instructional strategies, enhance the learning of learning disabled students more than simple review or repetition. A guiding question is a “fundamental query that directs the search for understanding” (Traver, 1998).

As such, guiding questions:

- focus on critical learning, fundamental concepts, and curriculum expectations
- embody a teacher’s instructional intentions with respect to a learning trajectory
- provide coherence and focus
- are generative and open-ended
- evoke high level and creative thinking
- are succinct but demanding and nuanced

Guiding questions are not content questions, though learners apply content to thinking about and responding to guiding questions. Guiding questions may be articulated at various levels:

- a course
- a unit
- a lesson cluster
- a lesson

Because effective guiding questions warrant revisiting, the same questions could be used as touchstones across subjects and grades. Displaying guiding questions in the classroom facilitates making connections to important ideas and previous learning. Guiding questions can also be used to anticipate future learning. Guiding questions can be used with students for the purposes of:

- assessment as learning (What do I need to find out in order to respond to this question?)
- assessment for learning (What do I think at this point in the unit?)
- assessment of learning (How can I bring everything I’ve learned in this unit to bear on this question?)
Minds On...

Round Robin
Each student takes a turn, by going clockwise around a group. The term is often applied to scheduling of athletic tournaments. In classroom, it is used to ensure that everyone has equal voice in a discussion.

Sample Self-Knowledge Quotations
Teachers may find the following quotations useful for either or thinking and planning or for use with students.

- “Knowing others is intelligence; knowing yourself is true wisdom. Mastering others is strength; mastering yourself is true power.”
- “Man, know thyself! All wisdom centers there” (Edward Young)
- “There are three things extremely hard: steel, a diamond, and to know yourself.” (Benjamin Franklin)
- “Explore thyself. Herein are demanded the eye and the nerve.” (Henry David Thoreau)
- “It is as hard to see one’s self as to look backwards without turning around.” (Henry David Thoreau).
Reading Comprehension Fix-up Strategies
- Re-read
- Read ahead for clues
- Use context or surrounding words to determine the meaning of unfamiliar words
- Check pictures for ideas about meaning
- Research unknown concepts using a glossary, index, etc.
- Ask new questions
- Use my own knowledge and experience to draw inferences
- Make and adjust predictions
- Seek help from an outside source, e.g., friend, teacher, parent
- Pause to think, summarize, or reflect
- Connect reading to background knowledge
- Create sensory or emotional images
- Look at sentence structure
- Read features, e.g., headings, bold-faced words
- Read an introduction or author’s notes
- Identify and write about misunderstandings
- Think about the most important information
- Ask myself whether or not the text suits my purpose for reading


Coaching Statements and Questions
Community and collaborative learning can be enhanced by helping students develop the knowledge and skills to serve as supports and resources for one another.

Coaching conversations are not intended to evaluate, or provide criticism or praise. Coaching conversations, or dialogues, are intended to keep the conversation going, to encourage:
- articulation and clarity of thinking
- reflection
- probing
- goal setting and decision making

To accomplish these goals, participants need to use active listening skills and ensure that verbal responses and questions are:
- clear and accurate
- constructive
- courteous

Examples of prompts and questions include:
- Please tell me more…
- Please describe in more detail…
- Please tell me what you mean…
- You must have felt…
- What are you hoping to accomplish?
- What have you done so far?
- Why did you do that?
- What else could you do next?
- What are you ready to do?

Teachers can model coaching, both the active listening and question skills that support students’ thinking, in classroom discussions and teacher-student conferences.
Question Prompts
- Why does metacognition matter?
- How well did you support the use of metacognitive strategies by the other students?
- What strategies can we put in place as a community of learners to help us become more metacognitive?
- Is Edmund Burke right when he writes: “To read without reflecting is like eating without digesting?”

<table>
<thead>
<tr>
<th>Metacognitive Self-Assessment: Thinking About My Reading Process</th>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
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<tr>
<td>Setting a Purpose</td>
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<tr>
<td>Before reading I think about the task, the topic, my own knowledge and experience, and my knowledge of the kind of text I would be reading.</td>
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<tr>
<td>Generating Questions</td>
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<tr>
<td>I created questions in my head and/or on paper before, during, and after reading, e.g., What should I do first? What should I do if I don’t understand?</td>
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<td><strong>During</strong></td>
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<tr>
<td>Monitoring for Meaning</td>
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<td>During reading I know when I understand the text and when I am confused.</td>
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<tr>
<td>Inferring and Making Connections</td>
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<tr>
<td>Before, during, and after reading I make and adjust predictions, connect the text to something I already know and use the clues in the text and my own ideas to make interpretations.</td>
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<tr>
<td>Adapting Comprehension Strategies</td>
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<tr>
<td>During reading I use fix-up strategies and re-read parts of the text to clear up confusion.</td>
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<tr>
<td>Determining Importance</td>
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<tr>
<td>During reading I make mental or margin notes about what seem to be the most important ideas, e.g., Am I recording the right information for my purposes?</td>
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<tr>
<td>Using Sensory and Emotional Images</td>
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<tr>
<td>During reading I picture various incidents, make sketches or notes to help me visualize and summarize the ideas.</td>
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<tr>
<td><strong>After</strong></td>
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<tr>
<td>Synthesizing</td>
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<tr>
<td>During and after reading I think about how all of the ideas in the text connect to each other and to what I already know.</td>
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<tr>
<td>Reflecting and Goal-Setting</td>
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<tr>
<td>After reading I think about whether or not I have achieved my purpose, I write in my journal and set new goals.</td>
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