Introduction to Reading Strategies

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- Analyzing the Features of a Text
- Finding Organizational Patterns
- Anticipation Guide
- Finding Signal Words
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- Before Reading - Ask Questions
- During Reading - Ask Questions
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- During Reading - Make Inferences
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- During Reading - Make Connections
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- After Reading - Ask Questions
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Introduction to Reading Strategies

As students progress through school, they are asked to read increasingly complex informational and graphical texts in their courses. The ability to understand and use the information in these texts is key to a student’s success in learning. Successful students have a repertoire of strategies to draw upon, and know how to use them in different contexts. Struggling students need explicit teaching of these strategies to become better readers.

Struggling readers need:

- knowledge of different types of texts and the best strategies for reading them.
- multiple and meaningful opportunities to practise reading in subject-specific contexts.
- opportunities to practise reading with appropriate resources.
- opportunities to talk about their reading and thinking.
- background knowledge in subject areas.
- expanded sight vocabularies and word-solving strategies for reading subject-specific texts.
- strategies for previewing texts, monitoring their understanding, determining the most important ideas and the relationships among them, remembering what they read, and making connections and inferences.
- strategies for becoming independent readers in any context.

Common Understandings About Reading

Reading is the active process of understanding print and graphic texts. Reading is a thinking process. Effective readers know that when they read, what they read is supposed to make sense. They monitor their understanding, and when they lose the meaning of what they are reading, they often unconsciously select and use a reading strategy (such as rereading or asking questions) that will help them reconnect with the meaning of the text. Reading skills and strategies can be taught explicitly while students are learning subject-specific content through authentic reading tasks.

Effective readers use strategies to understand what they read before, during, and after reading. Before reading, they:

- use prior knowledge to think about the topic.
- make predictions about the probable meaning of the text.
- preview the text by skimming and scanning to get a sense of the overall meaning.

During reading, they:

- monitor understanding by questioning, thinking about, and reflecting on the ideas and information in the text.

After reading, they:

- reflect upon the ideas and information in the text.
- relate what they have read to their own experiences and knowledge.
- clarify their understanding of the text.
- extend their understanding in critical and creative ways.

Students can be taught to be strategic and effective readers. Struggling readers benefit from a variety of instructional approaches that demonstrate reading skills as subject content is taught. Direct teaching, thinking aloud, modelling, discussion, and small-group support are only a few of the approaches teachers use to help students become more strategic and effective readers in different contexts.
Getting Ready to Read: Previewing a Text

A well-designed textbook, website or other print resource has a variety of elements or features that are applied consistently to help the reader locate and use the material. Some texts have more of these features, and clearer cues, than others do. Previewing a course text can help students to identify the text features and use them efficiently.

Purpose
• Learn how to navigate subject-specific textbooks and resources.
• Examine the layout and features of a particular text, and how to use it.

Payoff
Students will:
• become familiar with different course texts and resources (print and electronic).
• use strategies for effectively previewing and locating information in different texts, using the table of contents, indices and/or navigation bar.

Tips and Resources
• Most informational texts use a variety of visual, graphic and text features to organize information, highlight important ideas, illustrate key concepts, and provide additional information. Features may include headings, subheadings, table of contents, index, glossary, preface, paragraphs separated by spacing, bulleted lists, sidebars, footnotes, illustrations, pictures, diagrams, charts, graphs, captions, italicized words or passages, boldface words or sections, colour, and symbols.
• For more ideas, see Teacher Resource, Suggested Prompts for a Text-Features Search.

Teaching Reading in Social Studies, Science, and Math, pp. 266-269
Beyond Monet, pp. 94, 105
Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills, Grades 6-8, pp. 28-29, 42-43.
Reaching Higher Video.

Further Support
• Provide students with a copy of a course-related text that has all of the visual and graphic features (e.g., diagrams, charts, illustrations, captions, maps, headings, titles, legends) removed or blanked out. Ask students to scan the text and suggest what the blanked-out sections might be. Have students read the body of the text and summarize the information. Ask students to identify the parts of the text that they had difficulty reading, and suggest what additional features would help them to navigate and understand the text better. Alternatively, provide students with a copy of a course-related text showing the text features only, without the body of the text. Discuss what information they can gather from the features and what predictions they can make about the content. Note the connections among the features of a text, the words, and how they help readers understand the content.
• Encourage students to preview the features of a text before they read the content. Have partners share their previewing strategies.
• Have students create text search prompts for other course-related materials.
## Getting Ready to Read: Previewing a Text

### What teachers do | What students do

**Before**
- Select a subject-related textbook, Website, or print or electronic resource.
- Create a text search handout. Use ten to twelve prompts to guide students to particular features of the text (e.g., “List the major topics in this textbook.” “Locate information about early trade unions.” “Where do you find a summary of each chapter?” “What symbol tells you to pause and think?” “What symbol tells you to complete a process or experiment?”) See Teacher Resource, *Suggested Prompts for a Text-Features Search*.
- Read the prompts out loud, if needed.

**During**
- Ask students to work in pairs to complete the search within a specific time frame.
- Have partners share their findings with another pair.

**After**
- Discuss which items were easy and which items were challenging to find.
- Ask students to suggest which features of text were very helpful and not very helpful, and which features should be added to the text.
- Ask students to use the text features to complete a relevant reading task.

**What students do**
- Ask clarifying questions about the prompts and the task.
- Read the task prompts and note the features of text that might be useful in completing the task.
- Read and respond to the prompts. Record findings.
- Share and compare findings. Use cooperative group skills to complete the task.
- Identify the easy and challenging prompts.
- Identify the features of text they used and explain how they helped or hindered their task.
- Use the text features appropriately to complete the reading task. Make connections between different texts, noting the features that are common to many texts and subject areas, and those that are unique to a particular text or subject area.
Suggested Prompts for a Text-Features Search

1. Using the Table of Contents, find the chapter number for the topic ____________ (e.g., Electricity, Integers, Energy Resources, City Life).

2. In the Index at the back of the text, find and list all the pages that deal with ____________ (e.g., static electricity, compound interest, Boreal forest, Louis Riel).

3. On page _____, what is the purpose of the coloured box (e.g., highlights an added illustration of a concept, or provides a profile of someone in a subject-related business/industry)?

4. What diagram appears on page ______? What provides an explanation of that diagram? How is it connected to other information on that page?

5. In the Table of Contents, which topic is covered in Chapter Fourteen, Section 4?

6. On page _____, what special feature helps you to identify the definition of the concept "ecosystem"?

7. In the Index, how many page references are there for _________________? Which reference provides you with the most complete information on the topic?

8. In Chapter Six, how many subheadings appear throughout the chapter? Where is the sub-heading that identifies __________ (e.g., an investigation, summary, activity)?

9. Open the text to page ___. Why is this page important to the text and to the context of this subject (e.g., It may be a periodic table, map of the world or organizational diagram of the federal government, which provides a framework for understanding the chapter.)?

10. Where would you go in the textbook to (quickly) find information about ____________?

11. Turn to page ______. Read the first paragraph and find the words in italics. What is the purpose of this feature?

12. Open the text to pages _____ and _____. Scan the words in bold-face type. Why did the writers use this feature?

13. Open the text to page ___. Look at the graphic (e.g., map, photograph, graph). What is the purpose of this feature?
Getting Ready to Read: Analyzing the Features of a Text

There’s more to a good book or Website than the words. A well-designed textbook uses a variety of graphical and text features to organize the main ideas, illustrate key concepts, highlight important details, and point to supporting information. When features recur in predictable patterns, they help the reader to find information and make connections. Readers who understand how to use these features spend less time unlocking the text, and have more energy to concentrate on the content.

In this strategy, students go beyond previewing to examine and analyze a textbook and determine how the features will help them to find and use the information for learning. You can use the same strategy to deconstruct other types of text – in magazines, e-zines, newspapers, e-learning modules, and more.

**Purpose**
- Familiarize students with the main features of the texts they will be using in the classroom, so that they can find and use information more efficiently.
- Identify patterns in longer texts.
- Create a template that describes the main features of the texts, and post it in the classroom so that students can refer to it.

**Payoff**
Students will:
- develop strategies for effectively locating information in texts.
- become familiar with the main features of the texts they will be using.

**Tips and Resources**
- Text features may include headings, subheadings, table of contents, index, glossary, preface, paragraphs separated by spacing, bulleted lists, sidebars, footnotes, illustrations, pictures, diagrams, charts, graphs, captions, italicized or bolded words or passages, colour, and symbols.
- See Student/Teacher Resource, How to Read a History Textbook – Sample.

Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills, Grades 6-8, pp. 28-29, 40-41.
Teaching Reading in the Content Areas: If Not Me, Then Who?, pp.16-18.

* See also Previewing a Text to provide students with another opportunity to look at text features.

**Further Support**
- Provide students with an advance organizer to guide them as they read a particular text. This organizer might be a series of prompts that ask the students to preview particular features of text and note how they are related to the main body of the text.
- Teach students the SQ4R strategy (Survey, Question, Read, Recite, Review, Reflect). For example, survey the title, headings, subheadings, maps, pictures, sidebars, bold or italic print, etc. Turn the title, headings, and captions into questions. Read the passage to answer questions. Recite the answers to their questions to summarize the passage. Review the passage to remember the main idea and important information and details. Reflect on the passage and process to check that they understand the text, and to generate additional questions.
- Model for students how to use the features of computer software and Internet Websites to help them navigate and read the program or site (e.g., URLs, pop-up menus, text boxes, buttons, symbols, arrows, links, colour, navigation bar, home page, bookmarks, graphics, abbreviations, logos).
### Getting Ready to Read: Analyzing Features of a Text

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
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<tbody>
<tr>
<td><strong>Before</strong></td>
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<tr>
<td>• Ask students to recall a magazine or informational book they recently read, or a Website they recently viewed. Ask them to describe how the text looked and how they found information. Ask students what they remember about the content, and have them suggest possible reasons for how they were able to locate and/or remember information.</td>
<td>• Recall something recently read or viewed and identify some features of that particular text. • Note similarities and differences among the responses from other students. • Make connections between what they remember and the features of the text.</td>
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<tr>
<td>• Select and provide copies of a text, resource or textbook chapter. Ensure every student has a copy of the selected text.</td>
<td>• Quickly scan chapters, and note the different features of the text. • Contribute to the group discussion and chart-paper notes.</td>
</tr>
<tr>
<td>• Organize students into groups of 3 to 5. Assign two different sequential chapters or sections to each group.</td>
<td>• Share findings with other groups, noting such things as chapter previews, tables of contents, charts and graphs, typography (italics, bold), questions, chapter reviews/summaries, timelines, and headings.</td>
</tr>
<tr>
<td>• Ask groups to scan the assigned chapters and note features of the text that are similar between the chapters and those that are unique to a chapter. Groups record their findings on chart paper (e.g., point-form notes, Venn diagram, compare/contrast chart).</td>
<td>• Share the groups’ findings.</td>
</tr>
<tr>
<td>• Ask each group to send an “ambassador” to the other groups to share one thing the group discovered, trading it for one thing the other group discovered. The ambassadors return to their original group and report.</td>
<td>• Contribute to the template that the class develops.</td>
</tr>
<tr>
<td><strong>During</strong></td>
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<tr>
<td>• Remind students that textbooks have many different elements or features that are designed to help students learn the material being presented. Some textbooks have a greater variety of elements than others.</td>
<td>• Use the features of text to complete the assigned reading task. • Note the features that help the reader to locate, read, understand, and remember information. • Refer to the template for future reading tasks. • Recall how they have used features of electronic texts to help find and read information.</td>
</tr>
<tr>
<td>• Ask each group to report about the features of their text for example, some textbooks contain an annotated overview of the textbook layout.</td>
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<tr>
<td>• Create a textbook or chapter template on chart paper, indicating the common features and noting any unique features (see Student/Teacher Resource, How to Read a History Textbook – Sample.).</td>
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<tr>
<td><strong>After</strong></td>
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<tr>
<td>• Assign a relevant reading task to a small group so that students can practise using the features of the text to locate information and help them understand and remember what they read.</td>
<td>• Use the features of text to complete the assigned reading task.</td>
</tr>
<tr>
<td>• Encourage students to use the template to make predictions about where they might find particular information or use the features to complete a task.</td>
<td>• Note the features that help the reader to locate, read, understand, and remember information.</td>
</tr>
<tr>
<td>• Discuss how this strategy might help students navigate Web sites, e-zines, and online media.</td>
<td>• Refer to the template for future reading tasks. • Recall how they have used features of electronic texts to help find and read information.</td>
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How to Read a History Textbook - Sample

Textbook Title: Patterns of Civilization (Subject Focus)

Unit Topics: This is a list of the historical time periods included.

Unit Introduction: This gives a brief overview of the historical time period to be discussed.

Chapters: These sections look at smaller time frames or the development of specific civilizations. The chapter headings are numbered in bold-face type (red) and identify the general topics to be covered.

Subtopic Sections: There are 4-5 subtopics in each chapter on a specific topic. The sections are in smaller bold-face type (blue).

Section Review: At the end of each subtopic section there are questions and a short summary that help you remember what you have read. This can help you to review for tests and quizzes.

Chapter Review: At the end of each chapter is a review or summary. The important concepts, terminology, events and people are identified. Review questions are included, organized into these categories: Recall (What happened?); Infer (What’s between the lines?); and Draw Connections and Conclusions (What’s beyond the lines?).

Italicized Words: These are important concept words that are defined in the boxes at the bottom of the page, and in the glossary. A pronunciation guide is included to help you sound out the word in syllables.

Visuals: There are maps, charts and timelines in every section. The maps help you find places and how they are related to a modern map. The charts give information about the time period. The timelines show the important events in the historical period in the section or chapter.

Web Links: These are addresses for Websites that offer more information or examples on a specific topic.

Index: This provides a quick way to look up specific information or concepts. The page references are given.
Information can be grouped and ordered in different ways – for example: sequentially (as in a procedure), by order of importance (as in a persuasive argument), or by classification (as in a periodic table). The way information is organized in a text is a cue to help the reader understand the ideas and make meaningful connections.

**Purpose**
- Preview the text structure and identify different organizational patterns.
- Become familiar with the organizational patterns of a text.

**Payoff**
Students will:
- make connections between reading and writing tasks.
- learn to read the text more independently.
- practise reading strategies, including skimming, scanning, rereading, making predictions, and making connections.

**Tips and Resources**
- For descriptions of different organizational patterns and how to spot them, see Teacher Resource, *Types of Organizational Patterns (and How to Find Them)*.
- Many texts combine several organizational patterns, depending upon the topic, content, purpose and audience.
- Graphic organizers (such as timelines, flow charts, and mind maps) can help readers to “see” the relationship(s) among ideas more clearly.

*Cross-Curricular Literacy: Strategies for Improving Secondary Students’ Reading and Writing Skills*, pp. 54-55.
*Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills, Grades 6-8*, pp. 28-29.

**Further Support**
- Provide struggling students with a graphic organizer to record the main ideas, relevant information, and/or significant concepts (e.g., flow chart, comparison chart, timeline).
- Help students to preview the text structure before they read by giving them questions to consider, or by guiding them to look for recurring information or signal words.
- Develop class reference charts for the different organizational patterns, showing the purpose, when/where the pattern might be used, characteristics, signal words, and related questions. Use these same concepts to create graphic organizers for students who need additional help.
# Getting Ready to Read: Finding Organizational Patterns

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
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<tbody>
<tr>
<td><strong>Before</strong></td>
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<tr>
<td>• Select a text on the topic being studied (e.g., a chapter in a textbook, article in a newspaper or magazine, excerpt from reference material, or Website). Choose something short that illustrates an organizational pattern that is common to the subject area (e.g., procedure, explanation, description, process).</td>
<td>• Recall what they already know about the organizational pattern. Identify when/where they have seen or used that particular pattern.</td>
</tr>
<tr>
<td>• Provide students with the selected reading material and ask students to explain how the text is an example of this particular organizational pattern.</td>
<td>• Identify how the reading passage is organized and the characteristics that indicate it belongs to that particular organizational pattern.</td>
</tr>
<tr>
<td>• Provide students with an appropriate graphic organizer for the pattern, or ask students to create a graphic organizer (e.g. flow chart, comparison chart, time line...).</td>
<td>• Examine or create a graphic organizer that follows the particular pattern.</td>
</tr>
<tr>
<td><strong>During</strong></td>
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<tr>
<td>• Introduce the organizational pattern, explaining its purpose and characteristics, when/where it might be used, why writers use it, signal words to look for, and possible questions it will answer.</td>
<td>• Read the passage and contribute to the graphic organizer.</td>
</tr>
<tr>
<td>• Read from the selected passage and demonstrate how to fill in the graphic organizer as you read.</td>
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<tr>
<td>• Note that using the organizer can help students understand and remember what they read. See Finding Signal Words in Text –Example.</td>
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<tr>
<td><strong>After</strong></td>
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</tr>
<tr>
<td>• Ask students to locate another example of this organizational pattern in their textbook or reference materials. <strong>Alternatively</strong>, provide students with a second example on the same topic.</td>
<td>• Find an example of the organizational pattern in a text or resource on a relevant topic.</td>
</tr>
<tr>
<td>• Ask students to read the example and use the graphic organizer to record the ideas and information.</td>
<td>• Read the example and record the ideas and information on the same graphic organizer.</td>
</tr>
<tr>
<td>• Have students use the organizational pattern to summarize the ideas and information from the readings.</td>
<td>• Reread the graphic organizer notes and use the organizational pattern to write a summary of the readings.</td>
</tr>
</tbody>
</table>
### Types of Organizational Patterns (and How to Find Them)

<table>
<thead>
<tr>
<th>Spatial Order</th>
<th>Spatial Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>- What specific person, place, thing or event is described?</td>
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<tr>
<td>- What details are given?</td>
<td></td>
</tr>
<tr>
<td>- How do the details relate to the subject?</td>
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<tr>
<td>- Does the description help you to visualize the subject?</td>
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</tr>
<tr>
<td>- Why is the description important?</td>
<td></td>
</tr>
<tr>
<td>- Why did the author choose this organizational pattern?</td>
<td></td>
</tr>
<tr>
<td>Information and ideas are arranged in an order related to the geographic or spatial location (e.g., left to right, top to bottom, foreground to background). This pattern is often used in descriptions, maps, diagrams and drawings to help to record spatial details.</td>
<td></td>
</tr>
<tr>
<td>Signal Words: above, across from, among, behind, beside, below, down, in front of, between, left, to the right/left, near, on top of, over, up, in the middle of, underneath.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Order of Importance</th>
<th>Order of Importance</th>
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<tbody>
<tr>
<td>- What is the main idea?</td>
<td></td>
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<tr>
<td>- What are the important details?</td>
<td></td>
</tr>
<tr>
<td>- Are there examples, facts, or statistics to support the main idea?</td>
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<tr>
<td>- What is the most important detail?</td>
<td></td>
</tr>
<tr>
<td>- What is the least important detail?</td>
<td></td>
</tr>
<tr>
<td>- How are the details organized?</td>
<td></td>
</tr>
<tr>
<td>- Why did the author choose this organizational pattern?</td>
<td></td>
</tr>
<tr>
<td>Information and ideas are arranged in order of importance (e.g., least important to most important; or the 2-3-1 order of second most important, least important and most important). This pattern can be used in persuasive writing, reports, explanations, news reports and descriptions. Pyramid, sequence and flow charts are examples of visual organizers.</td>
<td></td>
</tr>
<tr>
<td>Signal Words: always, beginning, first, finally, following, in addition, most important, most convincing, next.</td>
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<table>
<thead>
<tr>
<th>Cause/Effect</th>
<th>Cause/Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>- What process, event or subject is being explained?</td>
<td></td>
</tr>
<tr>
<td>- What is/are the cause(s)?</td>
<td></td>
</tr>
<tr>
<td>- What is/are the effect(s)?</td>
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</tr>
<tr>
<td>- What are the specific steps in the process?</td>
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<tr>
<td>- What is the outcome, product or end result?</td>
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<tr>
<td>- How does it work or what does it do?</td>
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<tr>
<td>- How are the causes and effects related? Is the relationship logical?</td>
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</tr>
<tr>
<td>- Why did the author choose this organizational pattern?</td>
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</tr>
<tr>
<td>Details are arranged to link a result with a series of events, showing a logical relationship between a cause and one or more effects (e.g., describe the cause first and then explain the effects, or describe the effect first and then explain the possible causes). It is sometimes called a problem/solution order or process order, and may be used in explanations, descriptions, procedures, process reports, and opinion writing. Cause-and-effect charts and fishbone diagrams can be used to illustrate the relationships.</td>
<td></td>
</tr>
<tr>
<td>Signal Words: as a result of, because, begins with, causes, consequently, due to, effects of, how, if…then, in order to, leads to, next, since, so, so that, therefore, when…then.</td>
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<table>
<thead>
<tr>
<th>Generalization</th>
<th>Generalization</th>
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<tbody>
<tr>
<td>- What generalization is the author making?</td>
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<tr>
<td>- What facts, examples, statistics or reasons are used to support the generalization?</td>
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</tr>
<tr>
<td>- Do the details appear in a logical order?</td>
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</tr>
<tr>
<td>- Do the details support or explain the generalization?</td>
<td></td>
</tr>
<tr>
<td>- Why did the author choose this organizational pattern?</td>
<td></td>
</tr>
<tr>
<td>Information is arranged into general statements with supporting examples. The pattern may be general-to-specific or specific-to-general. Generalizations may appear at the beginning or the end of a report, essay, summary, or article. Webs, process charts, and pyramid charts help to record the causal sequence that leads to a specific outcome.</td>
<td></td>
</tr>
<tr>
<td>Signal Words: additionally, always, because of, clearly, for example, furthermore, generally, however, in conclusion, in fact, never, represents, seldom, therefore, typically.</td>
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</table>
# Types of Organizational Patterns (and How to Find Them)

## Time Order
- What sequence of events is being described?
- What are the major incidents or events?
- How are the incidents or events related?
- What happened first, second, third, etc.?
- How is the pattern revealed in the text?
- Why did the author choose this organizational pattern?

Details are arranged in the order in which they happen. This is also called chronological order, and is often used in incident reports, biographies, news articles, procedure, instructions, or steps in a process. Visual organizers include timelines, flowcharts, and sequence charts.

Signal Words: after, before, during, first, finally, following, immediately, initially, next, now, preceding, second, soon, then, third, today, until, when.

## Compare/Contrast
- What is being compared?
- What is the basis for the comparison?
- What characteristics do they have in common?
- In what ways are the items different?
- Did the author make a conclusion about the comparison?
- How is the comparison organized?
- Why did the author choose this organizational pattern?

Details are arranged to show the similarities and differences between and among two or more things (e.g., ideas, issues, concepts, topics, events, places). This pattern is used in almost all types of writing. Venn diagrams, graphs and cause/effect charts illustrate the comparison.

Signal Words: although, as well as, but, common to, compared with, either, different from, however, instead of, like, opposed to, same, similarly, similar to, unlike, yet.

## Classification
- What is being classified?
- What is the concept being defined?
- How are items being grouped?
- What are the common characteristics?
- What are the categories?
- What examples are given for each of the item’s characteristics?
- Is the grouping logical?
- Why did the author choose this organizational pattern?

Details are grouped in categories to illustrate or explain a term or concept. This pattern is often used in descriptions, definitions and explanations (e.g., a writer describes each category, its characteristics, and why particular information belongs in each category). Classification notes, column charts, T-charts, tables and webs can be used to group ideas and information.

Signal Words: all, an example of, characterized by, cluster, for instance, group, is often called, looks like, many, mixed in, most, one, part of, the other group, resembles, similarly, sort, typically, unlike, usually.

## Combined/Multiple Orders
- What is the topic or subject?
- What is the main idea?
- What are the relevant details?
- How are the ideas and information organized?
- What organizational patterns are used?
- Why did the author choose these organizational patterns?

Many textbooks and reference materials use many organizational patterns to present information and ideas. Sometimes a single paragraph is organized in more than one way, mixing comparison/contrast, cause/effect and order of importance. Tables and webs can be used to illustrate the links among different organizational patterns.

Look for the patterns and trends in the signal words.
Getting Ready to Read: Anticipation Guide

What we already know determines to a great extent what we will pay attention to, perceive, learn, remember, and forget. (Woolfolk, 1998)

An Anticipation Guide is a series of questions or statements (usually 8 to 10) related to the topic or point of view of a particular text. Students work silently to read and then agree or disagree with each statement.

Purpose
- Help students to activate their prior knowledge and experience and think about the ideas they will be reading.
- Encourage students to make a personal connection with a topic or unit of work so that they can integrate new knowledge with their background experience and prior knowledge.

Payoff
Students will:
- connect their personal knowledge and experience with a curriculum topic or issue.
- engage with topics, themes and issues at their current level of understanding.
- have a purpose for reading subject-area text.
- become familiar and comfortable with a topic before reading unfamiliar text.

Tips and Resources
- An anticipation guide works best when students are required to read something that contains unfamiliar information. The idea of the guide is to raise students’ awareness of related issues and help them make connections with what is familiar and unfamiliar about that text.
- In creating your anticipation guide, write open-ended statements that challenge students’ beliefs. Avoid using statements that are “right” or “wrong” or that ask simply for a “yes” or “no” response. You don’t want statements such as, “School cafeterias should not sell so much junk food.” Instead, write “Teenagers consume more junk food than is good for them.”
- For ideas to help you craft the statements, see Teacher Resource, Anticipation Guide – Sample Statements based on Chapter 5 of Canada: The Story of a Developing Nation.
- For a blank anticipation guide you can use for this activity, see Student Resource, Anticipation Guide Template.

When Kids Can’t Read, What Teachers Can Do, pp. 74-80.

Further Support
- Put students in pairs to complete the anticipation guide if they are having trouble making connections with the theme or topic, or if they are having trouble with the language (for example, ESL students).
- To provide an opportunity for struggling students to contribute in a more supportive situation, divide the class into small groups of four or five and ask them to tally and chart their responses before participating in a whole-class discussion.
- Reads statements aloud to support struggling readers.
### Getting Ready to Read: Anticipation Guide

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Preview the text to find themes or big ideas.</td>
<td>• Working individually, read each statement on the anticipation guide and check off responses.</td>
</tr>
<tr>
<td>• Using Student Resource, <em>Anticipation Guide Template</em>, create a one-page anticipation guide with eight or ten general statements about these themes, each requiring the reader to agree or disagree; e.g., “You should always tell other people exactly what you think about them.”</td>
<td>• Contribute responses in the class discussion and explain them.</td>
</tr>
<tr>
<td>• Distribute copies of the anticipation guide to the students. Explain that this is not a test, but an opportunity for them to explore their own thoughts and opinions. They complete the guide first individually and then share their thoughts in a whole-class discussion.</td>
<td></td>
</tr>
<tr>
<td>• To engage students in a whole-class discussion, start with a simple hand-count of the numbers of students who agreed or disagreed with a particular statement. Then ask the students who disagreed to share their thinking, followed by those students who agreed with the statement.</td>
<td></td>
</tr>
<tr>
<td>• Record (or ask a student to record) some of the key points made during the discussion, using a “T-chart” (agree/disagree) on the board or an overhead.</td>
<td></td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Explain the topic of the reading assignment and how it connects with anticipation guide statements and discussion.</td>
<td>• Read the assigned text (certain pages, a chapter, or alternative resource such as a magazine article) and jot down page numbers beside each agree/disagree statement (for information that relates to the issue).</td>
</tr>
<tr>
<td>• Ask students to keep the guide beside the text as they read it, so that they can jot down page numbers that correspond to the issues.</td>
<td></td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Ask students to return to the statements and to make notes from what they have discovered in their textbook that may confirm or change their opinions.</td>
<td>• Make notes that confirm or change their opinions about the statements.</td>
</tr>
</tbody>
</table>
## Anticipation Guide - Sample Statements

- Circle “Agree” or “Disagree” beside each statement below before you read your history textbook, *Canada: The Story of A Developing Nation*.
- Following our class discussion of these statements, you will read Chapter 5 in the textbook, noting page numbers that relate to each statement.
- When you have finished reading, consider the statements again based on any new information you may have read. Circle “Agree” or “Disagree” beside each statement and check to see whether your opinion has changed based on new evidence.

### Before Reading  | Statements*  | Page #  | After Reading
---|---|---|---
1. Agree/ Disagree | A good citizen always does what the government tells him/her. | Agree/ Disagree |
2. Agree/ Disagree | People who don’t own land have no right to be on it. | Agree/ Disagree |
3. Agree/ Disagree | True leaders are always recognized for the rightness of their causes. | Agree/ Disagree |
4. Agree/ Disagree | Might is always right. | Agree/ Disagree |
5. Agree/ Disagree | People who are native to a country should be given priority in making any decisions about it. | Agree/ Disagree |
6. Agree/ Disagree | Mean people eventually get what they deserve. | Agree/ Disagree |
7. Agree/ Disagree | Whenever there is a disagreement, majority opinion should rule. | Agree/ Disagree |
8. Agree/ Disagree | If followers commit a wrongful act, the leader should pay the price. | Agree/ Disagree |

Anticipation Guide - Template

- Circle “Agree” or “Disagree” beside each statement below before you read your textbook.
- Following our class discussion of these statements, you will read Chapter ___ in the textbook, noting page numbers that relate to each statement.
- When you have finished reading, consider the statements again based on any new information you may have read. Circle “Agree” or “Disagree” beside each statement and check to see whether your opinion has changed based on new evidence.

<table>
<thead>
<tr>
<th>Before Reading</th>
<th>Statements*</th>
<th>Page #</th>
<th>After Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agree/ Disagree</td>
<td></td>
<td>Agree/ Disagree</td>
<td></td>
</tr>
<tr>
<td>2. Agree/ Disagree</td>
<td></td>
<td>Agree/ Disagree</td>
<td></td>
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<tr>
<td>3. Agree/ Disagree</td>
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<td>Agree/ Disagree</td>
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<tr>
<td>4. Agree/ Disagree</td>
<td></td>
<td>Agree/ Disagree</td>
<td></td>
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<tr>
<td>5. Agree/ Disagree</td>
<td></td>
<td>Agree/ Disagree</td>
<td></td>
</tr>
<tr>
<td>6. Agree/ Disagree</td>
<td></td>
<td>Agree/ Disagree</td>
<td></td>
</tr>
<tr>
<td>7. Agree/ Disagree</td>
<td></td>
<td>Agree/ Disagree</td>
<td></td>
</tr>
<tr>
<td>8. Agree/ Disagree</td>
<td></td>
<td>Agree/ Disagree</td>
<td></td>
</tr>
</tbody>
</table>
Getting Ready to Read: Finding Signal Words

Writers use signal words and phrases (also called *transition words* or *connectors*) to link ideas and help the reader follow the flow of the information.

**Purpose**

- Preview the text structure.
- Identify signal words and phrases, and their purposes.
- Familiarize students with the organizational pattern of a text.

**Payoff**

Students will:
- make connections between reading and writing tasks in related subject-specific texts.
- read and reread subject-specific reading material.
- practise their reading strategies of skimming, scanning and rereading; make predictions about the topic and content as they read and reread; learn signal words; and use the signal words when summarizing.

**Tips and Resources**

- **Signal words** are words or phrases that cue the reader about an organizational pattern in the text, or show a link or transition between ideas. For an example, see Teacher Resource, *Finding Signal Words in Text – Example*. For a list of signal words, see Teacher Resource, *Types of Organizational Patterns (and How to Find Them)*.
- **Organizational patterns** include sequence, comparison, problem/solution, pro/con, chronological, general to specific, cause/effect, and more. For more information, see *Finding Organizational Patterns*.
- A **graphic organizer** provides a visual way to organize information and show the relationships among ideas (e.g., a timeline, flow chart, or mind map). For an example, see Teacher Resource, *Sample Flow Chart with Signal Words to Organize Thinking*.

**Cross-Curricular Literacy: Strategies for Improving Secondary Students’ Reading and Writing Skills**, pp., 24-25, 54-55.
**Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills, Grades 6-8**, pp. 30-31.

**Further Support**

- Before students read an unfamiliar or challenging selection, provide them with the signal words and the related organizational pattern (e.g., *first, second, next, then, following*, and *finally* indicate a sequence of first to last).
- Encourage students to scan reading passages to identify signal words and preview the text structure before they read.
- Have students reread an excerpt from a familiar subject-specific resource. (Students may read independently, with a partner, or listen as another person reads aloud.) Small groups identify the signal words that cue a text structure, link ideas or indicate transitions between ideas. Small groups share and compare their findings.
### Getting Ready to Read: Finding Signal Words

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Show a familiar text passage that has signal words highlighted (e.g., <em>before</em>, <em>after</em>, <em>during</em>, <em>next</em>, <em>on top of</em>, <em>next to</em>, <em>in addition</em>).</td>
<td>• Scan the familiar passage to identify highlighted words and phrases.</td>
</tr>
<tr>
<td>• Tell students that authors use particular words to link ideas together and organize their writing, and to help readers understand the flow of ideas.</td>
<td>• Group and sort words.</td>
</tr>
<tr>
<td>• Have students determine the pattern (sequential, compare and contrast) of these words and suggest possible purposes for them in this reading passage.</td>
<td>• Categorize words and identify possible headings for the categories.</td>
</tr>
<tr>
<td>• Identify the contextual information that these words give to the meaning of the text (e.g., time, location, sequence, importance, summary, comparison, contrast).</td>
<td>• Use the signal words to predict the text structure and organizational pattern.</td>
</tr>
<tr>
<td>• Model for students how to use these words to provide hints for reading the passage.</td>
<td>• Identify and record signal words.</td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Ask partners to scan the selected text and identify the words the writer has used to help guide their reading.</td>
<td>• Identify and compare signal words.</td>
</tr>
<tr>
<td>• Ask students to identify some of the signal words and note how they relate to the meaning of the passage (e.g., “These signal words indicate a sequence. This will help me track the ideas and information in order. A sequence pattern sometimes means I will be reading a procedure or a set of instructions.”).</td>
<td>• Compare their words with the findings from other partners.</td>
</tr>
<tr>
<td>• Ask students to use the signal words to help them read to understand the ideas and information in the passage.</td>
<td>• Use the signal words as clues to find the meaning of the text.</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Model how to summarize the main ideas using the signal words and phrases to organize the summary.</td>
<td>• Read the passage and identify the main idea.</td>
</tr>
<tr>
<td>• Create a class chart of the signal/transition words and how they might be used to help the reader understand the text.</td>
<td>• Orally share main idea with a partner.</td>
</tr>
<tr>
<td>• Model for students how to create a personal dictionary of signal words and their meanings.</td>
<td>• Write a brief summary of the passage, using the signal words to organize the summary.</td>
</tr>
<tr>
<td>• Ask students to describe how using the signal words helped them to understand and summarize the content. Students might record their responses in a learning log or share orally with a partner.</td>
<td>• Contribute to the class reference chart.</td>
</tr>
<tr>
<td>• Add words to personal dictionaries.</td>
<td>• Describe how they used the signal words to help understand what they read.</td>
</tr>
</tbody>
</table>
Sample Flow Chart with Signal Words to Organize Thinking

After reading a process description of the stages involved in mixing concrete, students might complete a flow chart to help them remember the sequence of steps

**Mixing Concrete**

**First...**
- Choose a mixing site with a clean, smooth, flat surface, such as a wheelbarrow or mortar box.

**Next...**
- Measure the ingredients.
- Layer sand, gravel, then cement.
- Mix dry ingredients with a concrete hoe.

**Then...**
- Measure the amount of water needed.
- Make a depression in dry mix and pour in water, a little at a time.
- Mix thoroughly.
- Add more water and keep mixing thoroughly.

**Finally...**
- Test the concrete using a settling test. (Smack the concrete with the back of the shovel, then jab it with a hoe to make ridges. If the ridges slump or disappear, there is too much water; if you can't create ridges, there is too little water.)

**In conclusion...**
- Make sure you mix properly and thoroughly by scraping the bottom and sides of the wheelbarrow.
- The mix should be an even colour.
Flow Chart with Signal Words to Organize Thinking

Sequence Flow Chart

First....

Next...

Then...

Finally...

In conclusion...
The heading asks: “How does light enter your eye?” I will look for the answer to this question as I read. I can use signal words and the organizational pattern to help me understand how light enters your eye.

As I scan the section, I notice the words “If you compare, both, in the same way, and like”. This tells me that the writer probably uses comparison to explain how light enters the eye.

As I read more closely, I notice the words “If you compare the eye to the camera.” Now I know what the eye is being compared to. The hole in the eye is called the pupil and the camera hole that lets light in is called the aperture.

One way of comparing two things is to describe one item fully, then describe the other item. I notice that the next paragraph describes the eye and that the third paragraph describes the camera.

How Does Light Enter Your Eye?

The Hole to the World
You have learned that light either travels from a source to your eyes or reflects off an object to your eyes. But how exactly does light enter your eye? If you compare the eye to the camera, you will see that both have a hole that lets in light.

In the eye, this hole is called the pupil. In the camera, it is the aperture.

The pupil of your eye is surrounded by a band of muscle, called the iris. This band controls the size of the pupil, and so controls the amount of light that can enter your eye. In dim light, the iris opens and pupil dilates, or becomes wider, so you can gather more light. In bright light, such as outside, your iris closes down so the eye receives just the right amount of light. This happens automatically, without your conscious control.

In the same way, the diaphragm changes the size of the aperture of a camera lens to allow in the proper amount of light. The shutter of a camera acts like a door. If the shutter is open for a long time, more light enters the camera. Which part of your eye is like a camera’s shutter?

Getting Ready to Read: Extending Vocabulary (Creating a Word Wall)

Students are required to learn, on average, over 2,000 words each year in various subject areas. Those who have trouble learning new words will struggle with the increasingly complex texts that they encounter in the middle and senior school years. A word wall is a wall, chalkboard or bulletin board listing key words that will appear often in a new unit of study, printed on card stock and taped or pinned to the wall/board. The word wall is usually organized alphabetically.

**Purpose**
- Identify unfamiliar vocabulary and create a visible reference in the classroom for words that will appear often in a topic or unit of study.

**Payoff**
Students will:
- practise skimming and scanning an assigned reading before dealing with the content in an intensive way. Students will then have some familiarity with the location of information and with various elements of the text.
- develop some sense of the meaning of key words before actually reading the words in context.
- improve comprehension and spelling because key words remain posted in the classroom.

**Tips and Resources**
- **Skimming** means to read quickly – horizontally – through the text to get a general understanding of the content and its usefulness.
- **Scanning** means to read quickly – vertically or diagonally – to find single words, facts, dates, names, or details.
- For directions, see Student Resource, *Skimming and Scanning to Preview Text*.
- Before building the word wall, consider using **Analysing the Features of Text** to help students become familiar with the text.
- Consider posting certain words for longer periods (for example: words that occur frequently in the unit, words that are difficult to spell, and words that students should learn to recognize on sight).
- Have students refer to the word wall to support their understanding and spelling of the words.
- For a sample word wall, see Teacher Resource, *Word Wall Sample for Grade 9 Science*.

*Words, Words, Words* pp. 70-71.

**Further Support**
- Add a picture to the word cards (preferably a photograph from a magazine) as a support for ESL students and struggling readers.
- Provide each student with a recording sheet so that they can make their own record of the key words for further review.
- If it appears that students will need additional support, review the terminology on the word wall in the two classes following this activity, using Take Five or Think/Pair/Share, which are described in the Oral Communication section.
## Getting Ready to Read: Extending Vocabulary (Creating a Word Wall)

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Before class, preview the text for key vocabulary.</td>
<td>• With their group find an appropriate space where they can talk face-to-face and write down the words.</td>
</tr>
<tr>
<td>• Prepare strips of card stock (approximately 4” x 10”) for words.</td>
<td>• Find the chapter or get a copy of the assigned text.</td>
</tr>
<tr>
<td>• Divide students into groups of 3.</td>
<td>• Follow along on the handout as the teacher reviews skimming and scanning.</td>
</tr>
<tr>
<td>• Provide stick-on notes, markers, and masking tape or pins for each groups of students.</td>
<td></td>
</tr>
<tr>
<td>• Explain to students that together the class will find key vocabulary in the assigned text, and will help each other to understand and spell the key vocabulary by creating a “word wall” in the classroom that they can refer to for the duration of that particular topic.</td>
<td></td>
</tr>
<tr>
<td>• Distribute Student Resource, <em>Skimming and Scanning to Preview Text</em>, and read and clarify the techniques with students.</td>
<td></td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Ask students to skim the text to get a general sense of what’s in it and where things are.</td>
<td>• Skim the text, looking at illustrations and subtitles to get a general idea of the topic of the text.</td>
</tr>
<tr>
<td>• Engage students in some general discussion of the topic, making a few brief notes on the board about big ideas.</td>
<td>• Scan the text for words they do not know, marking them with stick-on notes (optional) and then making a personal list of the words.</td>
</tr>
<tr>
<td>• Direct students to independently scan the text for unfamiliar words.</td>
<td>• Compare personal lists. Choose the words for a group master list.</td>
</tr>
<tr>
<td>• Ask students to create a personal list of 10 unfamiliar words.</td>
<td>• In each group, print the key vocabulary words in large letters on card stock and tape or pin them to the blackboard or bulletin board, preferably alphabetically.</td>
</tr>
<tr>
<td>• Direct students to small groups and ask the groups to compare personal lists and create a group master list.</td>
<td></td>
</tr>
<tr>
<td>• Distribute eight pieces of card stock (approx. 4” x 10”), markers and pieces of masking tape to each group.</td>
<td></td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Lead some discussion of the words and ask students to speculate on their meaning. If appropriate, describe prefixes and suffixes that are unique or common to the subject area.</td>
<td>• Use the glossary in the textbook dictionary(ies) to find the meaning of the words.</td>
</tr>
<tr>
<td>• Ask each group to look up the meaning of its words and then to explain the meaning to the rest of the class.</td>
<td>• Present their words to the rest of the class.</td>
</tr>
<tr>
<td></td>
<td>• Add the meaning to the words on the cards in smaller letters.</td>
</tr>
</tbody>
</table>
# Skimming and Scanning to Preview Text

## Skimming

<table>
<thead>
<tr>
<th>What is it?</th>
<th>When you SKIM, you read quickly to get the main idea of a paragraph, page, chapter, or article, and a few (but not all) of the details.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why do I skim?</td>
<td>Skimming allows you to read quickly to get a general sense of a text so that you can decide whether it has useful information for you. You may also skim to get a key idea. After skimming a piece, you might decide that you want or need to read it in greater depth.</td>
</tr>
</tbody>
</table>
| How do I skim? | 1. Read the first few paragraphs, two or three middle paragraphs, and the final two or three paragraphs of a piece, trying to get a basic understanding of the information.  
2. Some people prefer to skim by reading the first and last sentence of each paragraph, that is, the topic sentences and concluding sentences.  
3. If there are pictures, diagrams, or charts, a quick glance at them and their captions may help you to understand the main idea or point of view in the text.  
4. Remember: You do not have to read every word when you skim.  
5. Generally, move your eyes horizontally (and quickly) when you skim. |

## Scanning

<table>
<thead>
<tr>
<th>What is it?</th>
<th>When you SCAN, you move your eyes quickly down a page or list to find one specific detail.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why do I scan?</td>
<td>Scanning allows you to locate quickly a single fact, date, name, or word in a text without trying to read or understand the rest of the piece. You may need that fact or word later to respond to a question or to add a specific detail to something you are writing.</td>
</tr>
</tbody>
</table>
| How do I scan? | 1. Knowing your text well is important. Make a prediction about where in a chapter you might find the word, name, fact, term, or date.  
2. Note how the information is arranged on a page. Will headings, diagrams, or boxed or highlighted items guide you? Is information arranged alphabetically or numerically as it might be in a telephone book or glossary?  
3. Move your eyes vertically or diagonally down the page, letting them dart quickly from side to side and keeping in mind the exact type of information that you want. Look for other closely associated words that might steer you towards the detail for which you are looking.  
4. Aim for 100% accuracy! |
Word Wall Sample for Grade 9 Science

**Word Wall**

- amoeba
- cell
- genetic
- nucleus
- abiotic
- ecology
- hybrid
- propagation
- biosphere
- ecosystem
- mitosis
- species

**Word Cards with Definitions**

**biosphere**
The portion of planet Earth that supports life and the living organisms within it.

**hybrid**
An organism resulting from crossing individuals of two different but closely related species.
Writers use a variety of ways to convey the meaning of unfamiliar words and concepts. These include definitions, examples, descriptions, illustrations, clarifications, parenthetical notes, comparisons, elaborations, and typographical cues.

**Purpose**
- Help students to infer the meaning of unfamiliar words and concepts, using clues from the text.

**Payoff**
Students will:
- be able to read subject area texts more independently.
- discuss important concepts related to the subject.
- understand how to find context clues and make good use of them.
- monitor their understanding while reading different texts.

**Tips and Resources**
- **Context** refers to the text surrounding a word or passage, or the conditions that surround something.
- Effective readers use their knowledge about words and text structures, and their prior knowledge about a subject, to help figure out unfamiliar words and concepts in new contexts.
- For tips, see Student Resource, *Clues for Using Context to Find Meaning*.
- For subject-specific examples, see the following:
  - Teacher Resource: *Using Context to Find Meaning – Electricity Example*.
  - Teacher Resource: *Using Context to Find Meaning – Geography Examples*.

**Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills**, pp. 38-39.
**When Kids Can’t Read, What Teachers Can Do**, Chapter 9.

**Further Support**
- At the beginning of a unit, pre-teach important concepts and unfamiliar vocabulary. For example, for a history lesson on the Great Depression, describe terms such as the economy, stock market crash, migrant, and dust bowl.
- Use graphic organizers (such as concept attainment charts, concept ladders, or concept flow charts) to help students see connections and use relevant vocabulary.
- Take five minutes at the beginning of a reading task to examine a particular paragraph or section that has an unfamiliar word or concept. Model for students how to use the context of the sentences and paragraphs to determine the meaning of the word or concept.
- Have students create and maintain a subject-specific dictionary of words, phrases and concepts with their definitions, synonyms, related words and examples.
### Engaging in Reading: Using Context to Find Meaning

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Select a reading passage on a current topic or issue. Identify one or more important concept words in the text.</td>
<td>• Recall what they already know about the topic or concept. Make connections to known words and phrases.</td>
</tr>
<tr>
<td>• Write the concept word on the chalkboard and ask students to suggest possible meanings for the word.</td>
<td>• Locate the concept word in the passage, and read the text.</td>
</tr>
<tr>
<td>• Direct students to the concept word in the text. Ask students to read the paragraph(s) and confirm or reject their suggested meanings.</td>
<td>• Make connections between the new learning and what they already know about the concept.</td>
</tr>
<tr>
<td>• Discuss how they were able to determine the meaning of the concept word in context. Note that writers use different ways of providing meanings for concepts and words. Record these on the chalkboard.</td>
<td>• Note different ways a reader can use context to help figure out unfamiliar ideas, concepts and words.</td>
</tr>
<tr>
<td>• Show several examples from a course text or resource. (For subject specific samples, see the Teacher Resources on the following pages.)</td>
<td></td>
</tr>
<tr>
<td>• Model how to use context to determine the meaning of the words/concepts.</td>
<td>• Identify how to determine meaning and monitor understanding.</td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Provide groups of students with different reading passages on the same topic/concept.</td>
<td>• Read the passage, identify the important concept, and use context to understand the passage.</td>
</tr>
<tr>
<td>• Ask groups to read the passage, identify the important concept, determine the meaning of the concept, and (optionally) complete a concept map. For more on concept maps, see <em>Sorting Using a Concept Map</em>.</td>
<td>• Contribute to the concept map, if that strategy is used.</td>
</tr>
<tr>
<td>• Ask groups to share and compare their findings. Discuss similarities and differences in order to establish a common understanding of the concept.</td>
<td>• Define the important concept.</td>
</tr>
<tr>
<td>• Concept maps can be posted, or a class concept map can be created based on the compiled findings.</td>
<td></td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Ask students to describe how they used context to understand what they read.</td>
<td>• Describe how they used context to help understand the text (e.g.: “I read ahead to look for a definition or more information.” “I looked for diagrams and side bars,” or “I looked for signal words that pointed me to the relevant information.”).</td>
</tr>
<tr>
<td>• Assign further reading so that students can practise using context when reading.</td>
<td></td>
</tr>
</tbody>
</table>
In “Learning about Electricity,” the writer uses different ways to help the reader understand electricity and electric circuits. Context clues include definition, example, description, illustration, clarification, parenthetical, comparison, or elaboration.

Read the excerpt and see how many different context clues the writer provides for the different concepts and terms related to electricity and electric circuits. Write your annotations on the left-hand side of the excerpt. After reading, try to make a quick sketch of an electrical circuit.

3.1 Learning About Electricity

Electricity is a form of energy. It is produced by the movement of electrons. But do you know what actually happens when you flip a switch to turn on the light, or the computer, or the television set? Why don’t all the lights go out in your house when one light bulb burns out? Electricity is very useful, but if people do the wrong thing, electricity can also hurt. In some cases it can even kill. Safety is key when it comes to electricity.

Electric Circuits

How does electricity flow? Electricity flows through paths, or electric circuits. Electrons travel through these paths, but only if they can move around the path and get back to where they started. If the path is broken, the electrons will not move.

A closed circuit allows electrons to travel through an unbroken path and back to where they started. An open circuit has a break in the path. Electrons will not move through an open circuit.

All circuits must contain three things: connecting conductors, an energy source, and a load. A conductor is a device, such as a wire, that allows electricity to pass easily through it. An energy source, such as a battery, is what gives the circuit its energy. A load is a device or appliance that uses the energy, such as a light bulb. Figure 3.2 shows the symbols for the basic parts of a circuit.

Using Context to Find Meaning – Geography Examples

A typical textbook page may contain ten or more terms that students have difficulty understanding. Some textbooks put these terms in bold print.

<table>
<thead>
<tr>
<th>Text Samples*</th>
<th>Meaning in Context</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> People and the Hydrosphere In the past we thought oceans were great places to dump things. We felt that they were so large that there could never be a problem. Today, we know that isn’t so. With so many people living in coastal zones dumping their sewage and garbage into the oceans, there are big problems for the water life (the fish we eat!) and for us. (p. 89)</td>
<td>The term “hydrosphere” in the title can be associated with the words “oceans” and “water life” if you know the meaning of “hydro.” This is a case where students need to deconstruct the word into its two component parts: hydro = water; and sphere = domain.</td>
</tr>
<tr>
<td><strong>2</strong> The continental drift theory suggests that the earth’s crust is divided up into large pieces called plates which are floating on the hot, plastic-like top layer of the mantle (the large middle layer of the earth). (p. 100)</td>
<td>The terms “plates” and “mantle” are defined in context with descriptive phrases that help us to “see” what they mean.</td>
</tr>
<tr>
<td><strong>3</strong> Molten rock, magma, is formed and explodes up through the cracks and breaks in the plates to the surface of the earth to form volcanoes. (p. 101)</td>
<td>The term “magma” is defined by other words, (e.g., “molten rock”) that stand beside it.</td>
</tr>
<tr>
<td><strong>4</strong> The type of agriculture that is practised depends on several factors including climate, soil, and topography. Some areas are fortunate enough to have a wealth of sunshine and timely rain, rich soil, and flat (or gently rolling) topography. Others are faced with short growing seasons, lack of rainfall, and steep slopes. People have adapted their farming practices to suit their locations and climates. (p. 147)</td>
<td>Contrast is used here to give an indication that topography refers to a broad variety of landscape forms - “flat,” “gently rolling,” “steep slopes.” Climate elements add some confusion because they are not topography.</td>
</tr>
<tr>
<td><strong>5</strong> Most places where irrigation is practised use surface irrigation. In fact, about 96% of all irrigation is surface irrigation. Canals and ditches carry water to fields. Farmers make small openings in the walls to let the water flow from the canals and ditches into the fields. With sprinkler irrigation, the water is carried by pipes to the field and sprayed onto the crops using a sprinkler head. (p. 207)</td>
<td>The terms “surface irrigation” and “sprinkler irrigation” are explained through the use of examples of these forms of irrigation. For example, surface irrigation = canals and ditches; sprinkler irrigation = pipes with sprinkler heads.</td>
</tr>
</tbody>
</table>

*All text samples are taken from Physical Geography: Discovering Global Systems and Patterns, Toronto: Gage 2000.
Using Context to Find Meaning – Science & Technology Examples

Reading is a process of finding meaning in text. Writers use many ways to convey the meaning of words and concepts. Some are overt and some are subtle. These clues include definitions, examples, descriptions, illustrations, clarification, parenthetical notes, comparison, and elaboration. Here are some samples from Science & Technology texts:

<table>
<thead>
<tr>
<th>Sample Text</th>
<th>Type of Clue</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Electricity is a form of energy. It is produced by the movement of electrons.”</td>
<td>Definition</td>
</tr>
<tr>
<td>“Hydraulic systems use liquids under pressure to move many things. Huge amounts of soil at a construction site can be moved with <strong>hydraulic machinery</strong>, such as backhoes and excavators.”</td>
<td>Description</td>
</tr>
<tr>
<td>“Oil from the tank is sent along a <strong>conductor</strong> (a hose or pipe) to a pump where it is pushed into a <strong>cylinder</strong> or metal pipe. A cylinder is like a large syringe.”</td>
<td>Parenthetical note</td>
</tr>
<tr>
<td>“To find out more about atoms, scientists want to make particles move even faster. A machine called a <strong>supercollider</strong> will do this. Figure 2.1 shows how this machine works.”</td>
<td>Illustration</td>
</tr>
<tr>
<td>Clue</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Definition</td>
<td>The unfamiliar word is specifically defined in the sentence, or in the preceding or following sentences.</td>
</tr>
<tr>
<td>Example</td>
<td>The unfamiliar word is illustrated by one or more examples.</td>
</tr>
<tr>
<td>Description</td>
<td>Characteristics or features of the unfamiliar word are described.</td>
</tr>
<tr>
<td>Illustration</td>
<td>The unfamiliar word is shown in a diagram, picture or map.</td>
</tr>
<tr>
<td>Clarification</td>
<td>The meaning of the unfamiliar word is restated in slightly different language, summarized, or paraphrased.</td>
</tr>
<tr>
<td>Parenthetical Note</td>
<td>The meaning of the unfamiliar word is provided in parentheses directly following the word.</td>
</tr>
<tr>
<td>Comparison</td>
<td>The meaning of the unfamiliar word is provided by contrasting or comparing it to another word, phrase or concept.</td>
</tr>
<tr>
<td>Elaboration</td>
<td>Additional information about the unfamiliar word is provided in the following sentences and paragraphs. This may be a description of a related event, process or product, or a question prompt.</td>
</tr>
<tr>
<td>Typography and Design</td>
<td>Design features draw attention to important words and concepts, and to their definitions.</td>
</tr>
</tbody>
</table>
An inference is the ability to connect what is in the text with what is in the mind to create an educated guess. (Beers, 2003)

Making inferences from words that are read or spoken is a key comprehension skill. Students may miss vital information if they fail to make appropriate inferences.

Purpose
- Draw meaning from text – through explicit details and implicit clues.
- Connect prior knowledge and experiences to the text in order to make good guesses about what is happening, may have happened, or will happen in the future.

Payoff
Students will:
- develop greater awareness that texts can be understood on more than one level.
- become capable and confident in comprehending the subtle meanings in texts.

Tips and Resources
- Explicit details appear right in the text (for example, names, dates, descriptive details, facts).
- Implicit details are implied by clues in the text. Readers are more likely to recognize implicit details if they relate to prior knowledge and experiences.
- Inferences are conclusions drawn from evidence in the text or reasoning about the text. “Readers transact with the text, constructing meaning from the information that the author provides in the text and the information they bring to the text.” – Beers, 2003
- You can encourage students to make inferences by providing sentence starters similar to the following:
  - I realize that...
  - Based on… I predict that…
  - I can draw these conclusions...
  - Based on this evidence, I think…
- For more information, see:
  - Student Resource, Reading Between the Lines to Infer Meaning.
  - Teacher Resource, Making Inferences from a Job Ad – Sample.

When Students Can’t Read: What Teachers Can Do, Chapter 5. Reading and Writing for Success, Senior, pp. 262-263.
Cross Curricular Literacy; Strategies for Improving Middle Level Students’ Reading and Writing Skills, pp. 34-35, 58-59.
Cross Curricular Literacy; Strategies for Improving Secondary Students’ Reading and Writing skills, pp. 26-27, 48-49.

Further Support
- Provide additional opportunities for students to practise making inferences with subject-specific texts in a supported situation – perhaps in a small group with the teacher acting as the facilitator.
- Pair struggling or ESL learners with a more capable partner as they do the activities in this strategy.
## Engaging in Reading: Reading Between the Lines (Inferences)

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Explain to students that some information is stated explicitly in the text (for example, names, dates, and definitions). On the other hand, sometimes readers must draw a conclusion about what is meant based on clues in the text. This strategy is called “making inferences” or good guesses, and is also referred to as “reading between the lines.”</td>
<td>• Read the first item on the handout and pick out the explicit information about “the bouquet of flowers.”</td>
</tr>
<tr>
<td>• Distribute Student Resource, <em>Reading Between the Lines to Infer Meaning</em>.</td>
<td>• Make an inference about the meaning of the “bouquet of flowers.”</td>
</tr>
<tr>
<td>• Ask students to pick out the explicit information in the first item on the handout, and then to infer meaning, or draw a conclusion about the “bouquet of flowers.”</td>
<td></td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Direct students to read the remaining examples on the handout.</td>
<td>• Infer meaning from the clues in each statement on the handout.</td>
</tr>
<tr>
<td>• Engage the whole class in discussion about the meaning to be inferred from each statement.</td>
<td>• Provide various interpretations of the situations described in each statement.</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Help students to transfer the skill of inferring meaning by providing a sample of a subject-specific text or pictures that require them to make inferences. See Teacher Resource, <em>Making Inferences from a Job Ad</em> for a sample drawn from <em>Mathematics for Everyday Life II</em>.</td>
<td>• Practise inferring meaning from the subject-area text or picture.</td>
</tr>
</tbody>
</table>
Reading Between the Lines to Infer Meaning

Explain what you think might be happening in the following situations:

1. A young man brings a bouquet of flowers to the home of a girl who goes to his school.

2. A truck is parked in a Canadian Tire parking lot. No one is inside, the headlights are on and the driver’s door is open.

3. A man arrives at the home of a woman with red roses and a diamond ring.

4. Your neighbour, married about a year ago, is shopping for diapers and baby formula.

5. A car containing two men has been parked in front of your neighbour’s home every day for a week.

6. A car stops at a gas station in the middle of the night and a woman rushes in asking to use the telephone.

7. A friend of yours suddenly begins buying everything in sight — fancy food, expensive clothes, a big-screen TV, a dishwasher, and a new car.

8. Two of your friends were rushed to the hospital together one evening. When you see them the next day, they look fine, but seem embarrassed when you ask what happened.

9. You see your neighbours’ new truck in front of their house in the morning. All four tires are flat.
Making Inferences from a Job Ad - Sample

Sunil and Moira are applying for jobs they saw advertised at a busy restaurant in the shopping mall. The ad indicated the following:
- an hourly rate of $7.10 for greeters
- an hourly rate of $6.85 plus tips for servers.

Some job requirements for both positions were also indicated, and these are listed in the table below.

1. Sunil and Moira are both to be interviewed for a job at the restaurant. How might they prepare for their interviews, considering the requirements listed in column 1? In column 2, write some things the applicants might say to show their qualifications.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Possible things to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleanliness</td>
<td></td>
</tr>
<tr>
<td>Outgoing personality</td>
<td></td>
</tr>
<tr>
<td>Reliable work habits</td>
<td></td>
</tr>
<tr>
<td>Punctuality</td>
<td></td>
</tr>
<tr>
<td>An excellent attendance record</td>
<td></td>
</tr>
<tr>
<td>Reliable organizational skills</td>
<td></td>
</tr>
</tbody>
</table>

Why would cleanliness be an important requirement for a restaurant job?

2. The interviewer tells them that successful candidates will be contacted between 5 p.m. and 6 p.m. the next day.
   a. How should Moira and Sunil arrange their schedules the next day?
   b. What message would it send to the potential employer if they could not be reached between 5 p.m. and 6 p.m.?

3. While being interviewed, Moira and Sunil were told that
   - servers and greeters work 6-hour shifts
   - servers usually serve $100 worth of food and beverages per hour
   - servers could expect a 10% to 15% tip on all food and beverage sales

Based on this information and the wages mentioned above, which job would you recommend that the two request?

Engaging in Reading: Most/Least Important Idea(s) and Information

Determining important ideas and information in text is central to making sense of reading and moving toward insight. (Stephanie Harvey and Anne Goudvis, 2000)

Purpose
• Find the main idea(s) in text by distinguishing between the most important and least important information.

Payoff
Students will:
• become familiar with the text and make judgments about the content.
• work collaboratively with a partner – using reading, note taking, and oral strategies – to make sense of the text.

Tips and Resources
• Determining the main idea(s) in a text is not always a clear, straightforward process. Some or all of the following strategies can help the students:
  - Activate prior knowledge to help students connect to the information in the text.
  - Note the type of text and its typical audience and purpose (e.g., to persuade, to explain, to illustrate).
  - Set a clear purpose for the text so that students have common ground for finding the main idea.
• Main ideas are often found in first sentences or last sentences in a paragraph, or first and last paragraphs in a chapter.
• The reader constructs meaning, deciding on what is most important based on prior knowledge and experience. What is important to one reader may not be as important to another, unless both have a common goal or purpose.
• See Teacher Resource, Most /Least Important Ideas and Information – Sample from a Science Textbook. For a blank template that can be handed out in class, see Student Resource, Most/Least Important Idea(s) and Information.

Strategies That Work, Chapter 9.
Mosaic of Thought, pp. 94-95.

Further Support
• On the two days after you use this strategy, review the concepts orally using Take Five.
• After students have done a least-important/most-important “T” chart on their own or in pairs, model the process an additional time by thinking aloud through another passage. Ask students to compare their choices with yours.
• Put students in groups of four, with each group having a different passage from the same chapter of the textbook, to create their own think-aloud for that passage. Ask students to number off as they begin their work (from 1 to 4) and to remember their number. Students work together to decide most-important / least-important ideas and information and provide reasons for their choices as they prepare their think-aloud. Ask the #3s (and ask the #1s to assist them) to present their think-aloud to the rest of the class.
### What teachers do | What students do

**Before**
- Select a passage from a subject-area text.
- With students, set a clear purpose for reading the passage.
- Give students time to read the passage.
- Read the passage aloud to students, asking them to think about the most important and least important idea(s).
- While reading the passage silently, think about the purpose for reading.
- Listen to the passage being read, while thinking about their own choices for most important and least important idea(s).

**During**
- Reread the passage aloud, while thinking aloud through the various sentences and ideas, to make judgments about least important and most important ideas. See Teacher Resource, *Most / Least Important Ideas and Information – Sample from a Science Text book*.
- Record most important and least important ideas on a “T” chart in their note books, after the teacher has done the think-aloud through the passage.
- Read the assigned text, conscious of the purpose for reading.
- Reread and record the most important and least important ideas and information.
- Alternatively, ask students to use two different colours of highlighters on photo copied text – one colour for the most important ideas and information and one for the least important.
- Reflect on choices with a partner, and make any changes necessary to the chart based on this discussion.

**After**
- Assign students an additional passage of text, setting a clear purpose for reading.
- Ask students to use the handout, Student Resource, *Most /Least Important Ideas and Information* to record their choices for least important and most important ideas/information in the passage.
- Alternatively, ask students to use two different colours of highlighters on photo copied text – one colour for the most important ideas and information and one for the least important.
- Put students in pairs to share and justify their choices. (Provide a fresh photocopy for them to synthesize their ideas.)
- Read the assigned text, conscious of the purpose for reading.
Most/Least Important Ideas and Information

Sample from a Science Textbook

This short passage from *Sciencepower 9* could be used by the teacher as a script to demonstrate a think-aloud to students, showing how to decide what's important in a text, and what's less important. It could also be used as an overhead for the same purpose.

<table>
<thead>
<tr>
<th>Text: Chemicals in Farming*</th>
<th>Most/Least Important Idea(s) and Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you had been alive in Canada 150 years ago, you would have probably been living on a farm. Even 50 years ago, over 20 percent of Canadians worked and lived on farms. Today the farm population is about 2.5 percent, feeding a much larger population and producing food exports for the rest of the world. One reason for this change is mechanization. A farmer with a tractor and other machines can do the work that used to require dozens of farm hands. Another reason is chemicals, which can be used to produce crops with higher yields and less spoilage.</td>
<td>Less important – gives some background information. More background – less important. This seems important – quite a change from 150 or even 50 years ago. This is important, part of the reason why there are fewer farms and farmers. <em>Considering this is science class, this idea has got to be the most important idea in this text.</em></td>
</tr>
</tbody>
</table>

Key idea from this passage:

Fewer people are involved in farming today, because chemicals can be used to produce crops with higher yields and less spoilage.

Most/Least Important Ideas and Information

Read the text assigned by the teacher and record (exactly) the most important and least important ideas and information. When you have finished recording, go to the bottom section of the chart and write what you believe to be the key idea from the whole text.

Title of textbook, chapter, or article: _________________________________

Pages read: _______ Purpose for reading: ____________________________

<table>
<thead>
<tr>
<th>Most Important Ideas and Information</th>
<th>Least Important Ideas and Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key idea from this passage:
Engaging in Reading: Sorting Ideas Using a Concept Map

A concept map is a way to visually organize your understanding of information. It is hierarchical in nature, beginning with the subject or topic at the top or side of the page, and then branching into sub-topics and details.

**Purpose**
- Record ideas during reading.
- See the relationships among ideas, and distinguish between main ideas and supporting details.

**Payoff**
Students will:
- remember important details from the text.
- organize information in a memorable and accessible way to help with studying.

**Tips and Resources**
- Brain-based research shows that visual organizers, such as concept maps, can be highly effective in helping students who struggle with reading and writing.
- If possible, provide students with several samples of concept maps that look different so that they get a sense of how concepts can be organized.
- Concept maps usually have words written on the lines that join the bubbles to show the relationships between the items.
- Concept maps generally do not use colour or pictures. They are meant to show the connections between ideas and the hierarchy of those ideas.
- Spend time deconstructing the concept map and pointing out the connections between the various topics and ideas.
- To help students get started with concept mapping, see Student Resource, Concept Map – Sample Template. For a slightly more complex template, see Student Resource, Concept Map – Branching Template.
- To see concept mapping in action, turn to Teacher Resource, Concept Map – Weaponry Sample. There are three pages: page 1 contains sample text that can be read aloud to students as they listen for ideas that catch their interest; page 2 contains a partial concept map that can be filled in as the reading progresses; and page 3 contains a completed concept map to show what a finished product might look like. Both the partial and completed concept maps can be made into overheads for use with the whole class.

*Beyond Monet*, Chapter 10.
Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills, Grades 6-8, pp. 44-45.
Cross-Curricular Literacy: Strategies for Improving Secondary Students’ Reading and Writing Skills, pp. 36-37.

**Further Support**
- Pair students or put them in groups to read the text and create their concept maps.
- Encourage students in pairs or groups to choose one person who will read the text aloud first while a partner or group member records single words that represent main ideas or details.
### Engaging in Reading: Sorting Ideas Using a Concept Map

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Make an overhead of the sample text (3 paragraphs). Note: Do not tell students the topic of this text ahead of time.</td>
<td>• Listen and record ideas of greatest interest as the teacher reads the text.</td>
</tr>
<tr>
<td>• Read the sample text aloud to the class, asking them to listen for and note the ideas that stand out in their minds or are of greatest interest.</td>
<td>• Contribute ideas and suggestions to the class discussion.</td>
</tr>
<tr>
<td>• Engage students in discussion about the ideas that captured their interest.</td>
<td></td>
</tr>
<tr>
<td>• Show a sample concept map and record additional details on it.</td>
<td></td>
</tr>
<tr>
<td>• Ask students to suggest words to write on the lines between the concept map bubbles, to describe the connections between the items.</td>
<td></td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Provide students with miniature stick-on notes.</td>
<td>• Read the text and use stick-on notes to identify topics, sub-topics, and details.</td>
</tr>
<tr>
<td>• Assign a reading of part or all of a chapter in a textbook.</td>
<td>• Create a concept map using stick-on notes to guide them to the ideas they need to include.</td>
</tr>
<tr>
<td>• Challenge students to begin creating a concept map – based on the overall topic, sub-topics, and details – by drawing bubbles in the correct hierarchy.</td>
<td>• Complete the concept map, except for the words on the lines joining the bubbles.</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Put students in pairs to share and compare their concept maps.</td>
<td>• Compare and discuss differences between their concept maps.</td>
</tr>
<tr>
<td>• Ask students to discuss and reach consensus on the main ideas and details.</td>
<td>• Reach consensus on the topics, sub-topics, and details.</td>
</tr>
<tr>
<td>• Challenge students to add their suggested words to the connecting lines between the bubbles.</td>
<td>• Confer to add the words that show the connections between the topics, sub-topics, and details.</td>
</tr>
<tr>
<td>• Encourage students to use this strategy whenever they read complicated texts.</td>
<td></td>
</tr>
</tbody>
</table>
As war clouds gathered and even during the fighting, advances in technology were feverishly applied to a new industry – armaments. The types of weapons and the enormous quantities turned out by European, and later American, industries between 1900 and 1918 not only made the war longer and bloodier, but they changed the nature of war.

The world was shocked by the frequent use of weapons of mass destruction such as gas. As early as 1914, gas was employed on the battlefield. The main types of gas were chlorine and mustard gas. Chlorine gas produced violent choking and death while mustard gas left horrible internal and external burns. Even those soldiers who survived gas attacks were often left with disfiguring scars or damaged lungs that often resulted in an early death.

Although machine guns had been developed earlier, they were perfected as brutally effective killing machines of the First World War. This marriage of industrial technology and the mass citizen armies resulted in millions of casualties along the killing fields of Europe. Placed in an entrenched position, defenders using a weapon such as the Vickers Mark 1 could fire 5500 rounds per minute at the densely packed and exposed waves of troops coming forward. Soldiers referred to this weapon as the “coffee grinder” because it ground to pieces waves of attacking troops.

Concept Map – Weaponry Example (Page 2 of 3)

Chapter on First World War 1914-1918

Causes

Advances

The Search for Peace

Technology-Armaments

Weapons of mass destruction

Teacher Resource
Chapter on First World War 1914-1918

Causes

Battles

Technology-Armaments

The Search for Peace

Advances

Gas

Guns

Weapons of mass destruction

Chlorine

Mustard

Vickers Mark 1

Machine gun

“Coffee grinder”

5500 rounds per minute

Gas never used before

Chlorine

Fatality

Choking and death

Mustard

Disfiguring

Burns

Scars

External

Internal

Lungs
Concept Map – Sample Template

Concept

Definition or Formula

Evidence or Steps

Examples or Review
Concept Map – Branching Template

- Concept

- Context Sentence

- Examples of Concept
- Words that Connect
- From Context

- Meaning of Concept

- Personal Connections to Concept
Unseen text is the information that resides inside the reader’s head: ideas, opinions, essential background knowledge. The unseen text is unique to each reader. (Cris Tovani, 2002)

Visualizing text is a crucial skill for students because if they can get the picture, often they’ve got the concept. When students don’t get those pictures in their heads, the teacher may need to think aloud and talk them through the ideas in the text, explaining the pictures that come to mind. Visualization can help students to focus, remember, and apply their learning in new and creative situations. It is an invaluable skill in subjects such as Math, Science, and Design & Technology, where understanding spatial relationships can be a key to solving complex problems.

Purpose
• Promote comprehension of the ideas in written texts by forming pictures in the mind from the words on the page.

Payoff
Students will:
• reread and reflect on assigned readings.
• develop skills for independent reading.
• improve focus and attention to detail.

Tips and Resources
• Words on a page can be a very abstract thing for some students. They don’t inspire pictures in the mind or create other types of sensory images. Teaching students to visualize or create sensory images in the mind helps them to transform words into higher-level concepts.
• In order to visualize text, students must understand the concepts of seen text and unseen text. Seen text involves everything they can see on the page: words, diagrams, pictures, special typographical features. Unseen text draws on their background knowledge and experiences, and their word knowledge as they come across unfamiliar vocabulary.
• See Teacher Resource, Visualizing from Text – Sample Text to Read Aloud. Also see Student Resource, Practise Visualizing from Text.

I Read It, But I Don’t Get It, Chapter 8.
Cross Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills, Grades 6-8, pp. 30-31.
Cross Curricular Literacy: Strategies for Improving Secondary Students’ Reading and Writing Skills, pp. 22-23.

Further Support
• Learning to visualize takes practice. Model the strategy of visualizing for your students, using a variety of texts from the subject area.
• Put students in pairs from the beginning of this strategy and allow them to work through the texts together.
### Engaging in Reading: Visualizing

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Read the assigned text to students, asking them to try and “see” in their minds what the words are saying.</td>
<td>• Listen carefully to the text, trying to picture the words.</td>
</tr>
<tr>
<td>• Share some mind pictures derived from the text. See Teacher Resource, <em>Visualizing from Text – Sample Text to Read Aloud</em>, which includes a think-aloud script. Invite some students to share the pictures in their heads.</td>
<td></td>
</tr>
<tr>
<td>• Engage students in a class discussion about the importance of visualizing text in their minds – to get the idea or concept the words are trying to convey.</td>
<td></td>
</tr>
<tr>
<td>• Give students an example of how important the picture/concept idea is by sharing the example of deciduous and coniferous trees – if students can picture a maple, oak or birch for deciduous trees and a spruce or pine tree for coniferous, then they have the concept of trees that lose their leaves, and trees that are ever green.</td>
<td></td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Provide additional text samples. See Student Resource, <em>Practise Visualizing from Text</em>.</td>
<td>• Read silently and make notes about mind pictures that emerge from the words in the texts.</td>
</tr>
<tr>
<td>• Ask students to work individually to create mind pictures from the text.</td>
<td>• Compare and discuss their mental images.</td>
</tr>
<tr>
<td>• Ask each student to join with three other students to compare their mind pictures.</td>
<td>• Ask questions of each other to determine why the mental images may differ.</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Engage students in whole-class discussion about the kinds of things that may have triggered their mind pictures or mental images – e.g., understanding of a specific word, personal experience, something read previously, a movie or television show.</td>
<td>• Contribute their responses to class discussion.</td>
</tr>
<tr>
<td>• Confirm that individuals may have some very different pictures in their minds, based on differing personal experience. Some of those pictures will be accurate and some inaccurate, and so students should confirm their picture with other details or elements of the text, as described below.</td>
<td>• Take notes about the features of text that may help them create pictures in their minds from text.</td>
</tr>
<tr>
<td>• Remind students that textbook features (such as diagrams, pictures, or a glossary) may help them create more accurate and detailed mind pictures.</td>
<td></td>
</tr>
</tbody>
</table>
## Visualizing – Sample Text to Read Aloud

<table>
<thead>
<tr>
<th>Text*</th>
<th>Think-Aloud Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumbering became a way of life for many in the pioneer communities. The season began in the fall. Canoes carried the loggers and their supplies to the camps in the forests. Thousands went to live in the shanties of the lumber camps as the timber trade grew in importance.</td>
<td>I can picture early settlements of houses among many trees. The leaves on the trees are orange, red, and yellow because it is fall. I can see the loggers with big bundles of supplies in long, wide canoes on a river.</td>
</tr>
<tr>
<td>The axemen carefully selected the trees they would cut. The best white pine might tower 50 m. high. Considerable skill was needed to bring these trees down safely. A good axeman could drop a tree on a precise spot. His skill and power were essential to the profit of the camp.</td>
<td>I’m having a hard time imagining how high a 50 m. pine tree would be. I think of my own height and multiply until I reach 50. Or I compare the height to the height of a room or a building. In my mind, the axeman is a big, muscular guy because the text talks about his power.</td>
</tr>
<tr>
<td>Once the logs were felled, they were squared to fit more easily into the timber ships. Rounded edges wasted important space. Squaring was done with an adze and a heavy broad-axe which could weigh as much as 4 kg. Actually, squaring timber was very wasteful. About a quarter of the log was cut away and left on the ground. In winter the logs were hauled out of the woods with teams of oxen.</td>
<td>I can see the loggers working with axes to chop off the round edges of the trees. I don’t know what an “adze” but I imagine it is a special tool with a sharp blade for trimming logs. I can see all that wasted wood on the ground, but at least it would decompose and be recycled into the soil as a nutrient.</td>
</tr>
</tbody>
</table>

# Practise Visualizing from Text

Read and think about each of the samples below. Then record in your notebook the pictures that come into your mind based on the words you read.

<table>
<thead>
<tr>
<th>#</th>
<th>Text Sample</th>
</tr>
</thead>
</table>
| 1 | The ocean’s water is moving constantly, pushed by prevailing winds. The winds create ocean currents; that is, water moving in one direction. Ocean currents flow in circular patterns. In the northern hemisphere, currents move in a clockwise direction, and in the southern hemisphere, they move in a counter-clockwise direction.  
The temperature of a current depends on where it comes from. Warm currents originate in the tropics and bring warm water into cooler regions. Cold currents originate in the polar regions and bring cool water toward the equator.  
| 2 | Before contact [with Europeans], there were 53 Aboriginal languages spoken across the Canadian land mass. Some speakers were so different from one another that they could be compared to Europeans trying to understand Tibetan or Japanese.  
The geographical diversity of Canada added to these differences. West Coast Indians, such as the Haida, fished for salmon, hunted sea mammals, and even owned slaves. Plains Indians were nomadic, hunting bison or buffalo. Eastern woodland Indians combined agriculture and hunting.  
| 3 | The source of all energy for ecosystems is the Sun. It lights and warms the surface of our planet. It gives the energy needed to evaporate water from the oceans and lakes, to form rain and snow. Sunlight also provides the energy used by green plants to make the compounds that maintain their lives and serve as food for all other organisms.  
The Sun acts like a distant nuclear fusion reactor, radiating energy out into space. Of the energy released by the Sun, only about one-billionth reaches Earth – after a journey of about 150 million kilometres. Much of the energy that reaches Earth’s atmosphere is filtered out before it reaches the surface.  
Engaging in Reading: Making Notes

Notes help readers to monitor their understanding and help writers and speakers to organize information and clarify their thinking.

**Purpose**
- Provide strategies for remembering what one reads.
- Provide a tool for summarizing information and ideas, making connections, and seeing patterns and trends in course-related materials.

**Payoff**
Students will:
- read course-related materials, analyze content and remember important information and concepts.
- learn a strategy for studying for a test, researching, or generating content for a writing task.
- be able to identify important information and details from a text.

**Tips and Resources**
- Student Resource, *Some Tips for Making Notes*. These tips can be modelled over several lessons or reading tasks.
- Student/Teacher Resource, *Shark Notes*.
- Student/Teacher Resource, *Sharks*.

*Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills*, Grades 6-8, pp. 46-55.

**Further Support**
- Provide students with visual organizers such as a two-column T-chart, K-W-L chart or key word list to record their thinking and make notes.
- Model for students how to use charts and flow charts to organize notes into clusters or related chunks of information. For example, use a Know, Want, Learn chart, a Venn diagram, an outline, a T-chart; a simple heading with key words listed below; a web or tree chart. As a class, you could develop templates for a number of types of charts and keep blank copies of them available for students to fill in as they read or research.
- Model how to use key words and phrases to create a summary in your own words, or, for a longer reading passage, model how to reread sections and then summarize them in point form. Continue to model how to ask questions and write point-form answers, such as:
  - What part of this section is the most important?
  - What does the author want me to know about this topic?
  - What did I find really interesting about that part?
  - What other questions do I have?
- Provide students with *Some Tips for Making Notes*. Create tips as a class for future reference.
- Use sample notes to illustrate identifying important, irrelevant or missing information, and possible ways to organize notes. For struggling readers, use a two-column T-chart or a simple list of key words under a heading, on a large sheet of chart paper. Model how to choose important words or details and write them down on the chart. For example, read a sentence aloud, then ask students what the important idea or information is (what do they want to remember). Record the words and phrases from the sentence or paraphrase the important idea. Two-column notes might include headings such as facts/questions, opinion/proof, questions/answers, interesting/important, or direct quote/my thoughts. Provide students with a simple sample for practice. See Student/Teacher Resources, *Shark Notes* and *Sharks*. 
## Engaging in Reading: Making Notes

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
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<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Make an overhead transparency of a course-related reading selection to model the process of making notes. Use a blank transparency as a “notebook”.</td>
<td>• Preview the text and note strategies that others use to preview a text.</td>
</tr>
<tr>
<td>• Preview the text with the class, noting features of the text and using them to form questions and responses such as:</td>
<td></td>
</tr>
<tr>
<td>- What does this heading tell me? (Write down the title as the topic)</td>
<td></td>
</tr>
<tr>
<td>- What form of writing is this? (Write down the form such as magazine article and the date)</td>
<td></td>
</tr>
<tr>
<td>- What does this subheading tell me? - What do I already know about this section topic? (Write down some points)</td>
<td></td>
</tr>
<tr>
<td>• Preview the text and note strategies that others use to preview a text.</td>
<td></td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Continue modelling reading and making notes. Read the text aloud, stopping after each section or paragraph to identify keywords. Ask students to suggest key words and phrases.</td>
<td>• Listen and observe the teacher modelling. Create their own notes based on the teacher’s class example.</td>
</tr>
<tr>
<td>• Model how to use keywords and phrases to create a summary or point-form notes in your own words.</td>
<td>• Identify key words and phrases in the reading selection, and paraphrases important information.</td>
</tr>
<tr>
<td>• Model rereading sections to clarify notes or ask questions about the text such as:</td>
<td>• Ask questions about the reading selection.</td>
</tr>
<tr>
<td>- What part of this section is most important?</td>
<td></td>
</tr>
<tr>
<td>- What does the author want me to know about this topic?</td>
<td></td>
</tr>
<tr>
<td>- What did I find interesting about that part?</td>
<td></td>
</tr>
<tr>
<td>- What other questions do I have?</td>
<td></td>
</tr>
<tr>
<td>- Does this remind me of anything else I have read about or seen?</td>
<td></td>
</tr>
<tr>
<td>• Model using the questions to generate the content for the point-form notes or summary.</td>
<td></td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Ask students to read a short passage on the same topic and make notes.</td>
<td>• Read passage and use note-making strategies to record important ideas and information.</td>
</tr>
<tr>
<td>• Have partners or small groups share and compare notes. Students use partner’s ideas to change or add to their notes.</td>
<td>• Use other’s notes to add to or refine their own.</td>
</tr>
<tr>
<td>• As a class, discuss effective note-making strategies.</td>
<td>• Identify note-making strategies and resources to use in the future.</td>
</tr>
<tr>
<td>• Create class reference materials such as visual organizers, word charts, note-making prompts.</td>
<td></td>
</tr>
</tbody>
</table>
## Some Tips for Making Notes

<table>
<thead>
<tr>
<th>Tips</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write down the date of your note-making.</td>
<td>• helps you remember context</td>
</tr>
<tr>
<td></td>
<td>• if you have written the notes on a loose sheet of paper, date helps you organize notes later</td>
</tr>
<tr>
<td>Give the notes a title, listing the text the notes are about.</td>
<td>• helps you quickly identify information you may be looking for later</td>
</tr>
<tr>
<td>Use paper that can be inserted later into a binder, or have a special notebook for note making, or use recipe cards. Use notepad, outlining, or annotation features of your word processing software.</td>
<td>• you need to be able to organize your notes for easy access for use in studying, or in research reports</td>
</tr>
<tr>
<td></td>
<td>• loose-leaf paper, a single notebook, or small cards are convenient in library research</td>
</tr>
<tr>
<td>Use point form, your own shorthand or symbols, and organizers such as charts, webs, arrows. Use the draw and graphic functions of your software.</td>
<td>• point form and shorthand is faster, easier to read later, helps you summarize ideas</td>
</tr>
<tr>
<td></td>
<td>• organizers help you see links and structures, organize your ideas</td>
</tr>
<tr>
<td>Use headings and subheading in the text as a guide for organizing your own notes.</td>
<td>• this part of the organization is already done for you; provides a structure</td>
</tr>
<tr>
<td>Don’t copy text word for word. Choose only the key words, or put the sentences in your own words. If you want to use a direct quote, be sure to use quotation marks. Don’t write down words that you don’t know unless you intend to figure them out or look them up. Use software’s copy and paste function to select key words only.</td>
<td>• helps you understand what you have read</td>
</tr>
<tr>
<td></td>
<td>• short form is much easier for studying and reading later</td>
</tr>
<tr>
<td></td>
<td>• helps avoid plagiarism (using someone else’s writing or ideas as your own)</td>
</tr>
<tr>
<td>Write down any questions you have about the topic.</td>
<td>• gives you ideas for further research</td>
</tr>
<tr>
<td></td>
<td>• reminds you to ask others, clarify points</td>
</tr>
<tr>
<td>Review your notes when you are done.</td>
<td>• ensures that they’re legible</td>
</tr>
<tr>
<td></td>
<td>• enables you to go back to anything you meant to look at again</td>
</tr>
<tr>
<td></td>
<td>• helps you reflect on and remember what you’ve read</td>
</tr>
</tbody>
</table>
Shark Notes

1. The following information about sharks has been gathered for a brief report. Read the notes. What questions do you still have about the topic? What information is missing? How might the writer fill in the information gaps?

Sharks: An Endangered Species
- Chondrichthyes class, 30 families, 400 species of sharks
- vertebrates with skeletons made of cartilage
- some species over 350 million years old, little need to evolve
- Great White Shark is one of oldest living species
- most are predators and carnivores
- Great White Shark feared among humans as “man-eating machines” (fiction and movies)
- shoes, cow’s hoof, deer antlers, medieval armour, chicken coop with feathers and bones have been found inside tiger shark bellies
- skin smooth in one direction, rough in the other
- shark may grow and use 20,000 teeth in lifetime
- sharks have powerful jaws
- have tongues called basihyal
- both upper and lower jaws move
- GWS is threatened species

2. The ideas and information gathered could be sorted into two categories with the headings of “Important” and “Interesting”. Read the chart below.

<table>
<thead>
<tr>
<th>Important</th>
<th>Interesting</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chondrichthyes class, 30 families</td>
<td>• 400 species of sharks</td>
</tr>
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<td>• vertebrates with skeletons made of cartilage</td>
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<td>• little need to evolve</td>
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</tr>
<tr>
<td>• most are predators and carnivores</td>
<td></td>
</tr>
<tr>
<td>• Great White Shark is one of oldest living species</td>
<td></td>
</tr>
<tr>
<td>• GWS is threatened species</td>
<td></td>
</tr>
</tbody>
</table>

Reread the point-form notes. How else might you organize this information? Use a graphic organizer to illustrate how you might organize your information.
Sharks

Introduction

Before Dinosaurs wandered the earth, sharks swam and hunted in the oceans. They have survived for nearly 400 million years and adapted to many different habitats. Over 400 species live all over the world along shallow coastal areas, along the deep-water ocean floor and in the open ocean. The shark is a predator with few enemies; only other bigger sharks and people hunt them.

Sharks belong to the class of fish called Chondrichthyes or “cartilaginous fishes”. They have skeletons made of flexible cartilage, like the soft bone in your nose. Their powerful jaws are loosely connected to their skulls, so that they can move both their upper and lower jaws. This means they can open their mouths very wide to catch and swallow their prey.

Shark Senses

Sharks use many senses to catch their prey. They have a keen sense of smell and hearing that helps them track the scent and sounds of injured fish and mammals. Their eyes are similar to a cat’s eyes, which allows them to hunt in murky water. Sharks also have some extra-special senses. They can feel vibrations and movement in water through the fine hairs on special tubes under their skin. Around their snouts is a group of cells called electro-receptors that help them detect the signals put out by prey.

Feeding Habits

Sharks have rows of sharp teeth. If one is lost, another one moves forward from the rows of backup teeth. A shark may grow and lose over 20,000 teeth in a lifetime. Each type of shark has its own shape of tooth, depending on what they eat. Carnivores like the Great White shark and Tiger shark have sharp, jagged teeth so they can bite and tear the flesh of large fish. The Mako shark has sharp pointy teeth that help it spear small fish and squid. Some sharks have very small teeth because they eat tiny sea creatures like plankton.

Most sharks need to eat a large meal every two or three days, but some can go without food for several weeks. Normally sharks like to eat alone, and follow their prey as they move from one place to another or travel to where their prey lives. Sometimes one feeding shark attracts other sharks. They sense the blood and movement and swim up quickly and bite at anything that gets close to their jaws. This “feeding frenzy” can be very dangerous for other sharks.

Strange things have been found inside a shark’s stomach. A driver’s license, cow’s hoof, deer antlers, a chicken coop (with feather and bones) and a rubber tire are just a few of the items people have found inside Tiger sharks.

Sharks

Although sharks are feared by humans, sharks don’t usually attack people. There are only about 100 shark attacks each year, and only 10 of those end in death. Most attacks take place off the coasts of North America, Australia, Hawaii and South Africa. People and sharks like to swim in the warm, shallow waters. Usually a shark attacks a human because it thinks the person is its prey. Sharks go to beaches to look for food. In the murky water the shark may mistake swimmers’ splashing arms and legs for fish or surfers on their board for a seal or turtle. You have a greater chance of being struck by lightning than of being attacked by a shark.
However, people kill millions of sharks each year for sport and food. Shark skins are used like leather to make shoes and belts, shark fins are made into soup, the meat is used for shark steaks, and sharks’ teeth are made into jewelry. Pollution is also killing many adult sharks and their young. As a result the shark population is getting smaller, and some species are in danger of disappearing from the oceans. The Great White shark is the oldest living species on earth. In popular fiction and films, it is often the villain that terrorizes the people, so people believe that all sharks are like the shark on the screen. The movie *Jaws* kept people out of the water and off the beaches for years. This magnificent animal needs saving.

**Conclusion**
Sharks and people can live together. People need to learn more about sharks so that they can help protect them from extinction. Air and water pollution is a serious problem that affects all life forms. Everyone can help by asking our governments and businesses to stop polluting rivers and lakes. As well, countries could have laws that limit how many sharks can be killed each year. It would be sad to lose an animal that has managed to survive for 400 million years.

**References:**
Gander Academy’s Sharks Theme Page [http://www.stemnet.nf.ca/CITE/sharks.htm](http://www.stemnet.nf.ca/CITE/sharks.htm)
Reacting to Reading: Responding to Text (Graffiti)

Good readers ‘wake up’ and use the information they have about a topic in order to help them understand what they are reading. (Cris Tovani, 2000)

Graffiti is a collaborative learning strategy that can be used before or after an assigned reading. Here you can see how it might be used after reading. The strategy involves students working in groups to generate and record ideas on chart paper. The teacher sets up as many chart pages as there are groups. On each chart page, the teacher writes a topic related to the assigned reading. The groups travel in rotation from chart to chart, writing responses to the topic and to the comments previously written by other groups.

Purpose
• Provide an opportunity for students to make a personal connection to a topic or unit of work by expressing their opinions, demonstrating their understanding of the assigned text, and making connections to their prior knowledge and experience.

Payoff
Students will:
• connect their personal knowledge and experience with a curriculum topic or issue.
• expand their understanding of the reading by seeing and hearing the ideas and opinions of others.

Tips and Resources
• Use a Numbered Heads strategy to randomly assign roles in small groups. For example, if you are working with groups of five, have the students in each group “number off” from 1 to 5. After the students have numbered off, assign a particular role (e.g., recording, reporting, displaying work, etc.) to each number. Rotate the roles as the students continue with the exercise.
• For sample role descriptions designed to promote small-group discussion, see the Group Roles strategy in the Oral Communication section.
• In the version of graffiti described here, each group uses a different coloured marker so that everyone can identify which group made which contribution to the charts.
• After a specified period (usually no more than three to five minutes), and at a specific signal, each group rotates to the next chart page until the group has traveled full circle and arrived back at its page.
• The rotation and recording aspect of the strategy should take about 15 to 20 minutes. If groups have too much time at any chart page, there won’t be anything for subsequent groups to write.
• Subsequent groups may put checkmarks beside ideas to agree with them, may write disagreements beside items already recorded, or may add new information and ideas to the chart page. They may also put question marks beside items that they feel require clarification.
• For tips on generating the topics, see Teacher Resource, Graffiti Strategy – Topics for Geography.
• For step-by-step instructions on leading the class through the graffiti strategy, see Teacher Resource, Graffiti Strategy – Procedure for Groups.

Further Support
• Pre-teach some vocabulary related to the topic or issues, to support struggling or ESL students. Consider putting key terms on a Word Wall.
• Assign two students the role of reporter, to ensure that struggling or ESL students are supported if they are chosen as the reporter.
# Reacting to Reading: Responding to Text (Graffiti)

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<th>What students do</th>
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</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Assign the reading to students.</td>
<td>• Read the assigned text.</td>
</tr>
<tr>
<td>• Determine how many groups of five you will have in the class, and set up that many “stations.” At each station, put a chart page and a different-coloured marker. On each page, write one issue or topic related to the reading.</td>
<td></td>
</tr>
<tr>
<td>• Define graffiti for the class (e.g., &quot;scribbling on walls or in public places that represents a highly personal expression of thoughts or feelings&quot;), or ask students for definitions.</td>
<td>• Contribute to the discussion about graffiti.</td>
</tr>
<tr>
<td>• Explain the graffiti process to students: groups of five students will begin at a chart page, choosing one student to record their information and ideas with the coloured marker.</td>
<td>• Listen carefully to instructions about the process. Clarify if needed.</td>
</tr>
<tr>
<td>• Ask students to number off from 1 to 5 to create groups. See the Numbered Heads strategy on the facing page, under Tips and Resources.</td>
<td></td>
</tr>
<tr>
<td>• Indicate that #1 will be the recorder for the first chart page. Recorders for later chart pages will follow sequentially, and other students will be designated at the end of the rotation to display and report on the original chart page.</td>
<td></td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• After a specified length of time, ask groups to rotate to the next chart page, taking the same coloured marker with them. At the next chart page, a new recorder will be chosen to write down ideas and information, and so on.</td>
<td>• Rotate as a group to each chart page, keeping the same coloured marker.</td>
</tr>
<tr>
<td>• Monitor activity and remind students of the task and process.</td>
<td>• Respond to the next topic or question using the same coloured marker they began with.</td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Designate #s to be reporters and displayers for the chart page (e.g., #3 students will be displayers and #5s will be reporters). This keeps all students accountable until the last moment.</td>
<td>• Have a different recorder for each chart page they encounter.</td>
</tr>
<tr>
<td>• As each group reports, ask other students to record in their notes the top three items that interest or concern them, leaving spaces between each item.</td>
<td>• Take turns contributing ideas and information to the graffiti page.</td>
</tr>
<tr>
<td>• Invite students to reread the assigned reading and add page numbers to the top three items they chose from each report, in preparation for making more complete notes.</td>
<td>• Ensure that each group member has an opportunity to contribute to the graffiti.</td>
</tr>
<tr>
<td>• Review the original chart page together to ensure they can read and understand each item.</td>
<td>• Conclude at the original chart page.</td>
</tr>
<tr>
<td>• Display and report the information on their chart page, as requested by the teacher.</td>
<td></td>
</tr>
<tr>
<td>• As other groups report, individually record the top three items of interest or concern in one’s own notes.</td>
<td></td>
</tr>
<tr>
<td>• Reread the textbook chapter and add page numbers to the three items listed from each of the other groups’ reports, to prepare for making more complete notes.</td>
<td></td>
</tr>
</tbody>
</table>
Graffiti Strategy – Topics for Geography

• Subheadings from a textbook chapter often provide very useful topics for graffiti charts when you turn them into questions.

• In this instance, the topics are based on subheadings from a Grade 7 textbook, Chapter 5, “The Themes of Geographic Inquiry: Interaction” in Physical Geography: Discovering Global Systems and Patterns (Toronto: Gage, 2000.)

• Try to keep questions short so that they do not take up much space on the chart.

Questions:

1. How does weather influence people’s lives?

2. Why do some crops grow really well in some places in Canada and not in others?

3. What land features may be a barrier to human settlement?

4. How have human beings overcome difficult geography in Canada and other places?

5. What are some ways human beings have damaged the landscape and the environment?
Graffiti Strategy – Procedure for Groups

1. Form groups of five students each.

2. In each group, assign each student a number from 1 to 5. (Tell the students that they will not know the role for their number until later, and that the roles will change. They are all accountable for the work in the group.)

3. Give each group a colour name (e.g., red, blue, black, green, orange, brown), and a marker of that colour. The group will keep that marker as they move to a different chart page and topic.

4. Give each group a piece of chart paper, with a topic already written at the top.

5. Tell the students that they will have about three minutes to write their group’s responses to the topic on the first piece of chart paper. Number 1 will be the recorder when the group is at the first chart; Number 2 will be the recorder when they rotate to the second chart; and so on.

6. As the first three-minute time-limit approaches, tell the students, “When I give the signal, finish your last word, leave your chart page where it is, and move on to the next chart page. Be sure to take your marker and give it to the new recorder in your group. You will have two to three minutes to read the responses at the next chart page, and add comments, question marks, disagreements, or additional points.”

7. As the students return to the chart page where they first started (their colour of marker will be the first one on the page), tell them, “Prepare to report on the information by reading it carefully, and deciding what is most important to tell the whole class. I will choose a reporter and a display when the time comes to report. Everyone should be ready to take on these roles.”
Reacting to Reading: Drawing Conclusions (I Read/I Think/Therefore)

Readers draw conclusions based on the ideas and information that they read from one or more sources. Providing a graphic organizer before reading helps students to organize their thinking during reading in order to analyze, make inferences and draw conclusions after reading.

Purpose
• Actively use prior knowledge and experiences when reading.
• Read and respond to the important concepts and issues in the course, making inferences and drawing conclusions.

Payoff
Students will:
• develop content and opinions for persuasive writing.
• become thoughtful speakers during whole-class and small-group discussions.

Tips and Resources
• Drawing conclusions involves gathering information and deciding what the information means. For example, a report may describe effects on the Trans Canada Highway during the months of July to September (e.g., more injured wildlife, increased damage to roads, air pollution/smog complaints, visible litter); it may draw a conclusion about the information (increased vacation traffic is a local environmental concern); and it may offer recommendations.
• See Teacher Resource, I Read/I Think/Therefore - Sample Response. This annotated sample illustrates the thinking process that a reader might follow to gather information, reflect, and draw a conclusion.
• Also see Student Resource, Template for Drawing Conclusions. This graphic organizer helps students to organize their thinking while they are reading or conducting research that will require them to make inferences and draw conclusions. In column one (I Read), students record the relevant information from the text. In column two (I Think), students record what they know about that information and what they think it means. In the bottom row (Therefore), students record their conclusion based on all of the information gathered and their prior knowledge.

Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills, Grades 6-8, pp. 60-61.
Cross-Curricular Literacy: Strategies for Improving Secondary Students’ Reading and Writing Skills, pp. 50-51.
Reading in the Content Areas: If Not Me Then Who?, pp. 41-55.

Further Support
• Encourage students to use their real-life experiences as models for drawing conclusions.
• Create a wall chart to illustrate the strategy I Read/ I Think/ Therefore and post it as a reference for students.
### Reacting to Reading: Drawing Conclusions (I Read/I Think/Therefore)

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Select text related to a current topic or issue in the course. Create a question or reading prompt to guide the reading (e.g., &quot;How does light enter your eye?&quot; &quot;Describe the games of soccer or football.&quot;).</td>
<td>• Read the information provided and make inferences based on the information.</td>
</tr>
<tr>
<td>• Prepare a scenario based on the topic or issue. Provide students with information and details about the subject.</td>
<td>• Make a conclusion.</td>
</tr>
<tr>
<td>• Use a thinking strategy such as &quot;I Read/I Think/Therefore&quot; to demonstrate how to draw a conclusion based on gathered information. See Tips and Resources on the previous page.</td>
<td>• Observe the teacher’s thinking process for drawing a conclusion.</td>
</tr>
<tr>
<td>• Provide students with a graphic organizer to record their thinking as they read a course-specific text. See Student Resource, Template for Drawing Conclusions.</td>
<td>• Provide students with copies of the reading selection and ask them to preview it.</td>
</tr>
<tr>
<td>• Provide students with a transparency of the graphic organizer to model for students how to read and record information and inferences. Read the first two or three paragraphs to model the process.</td>
<td>• Set a purpose for reading.</td>
</tr>
<tr>
<td>• Read the text, pausing to record important information, and make inferences.</td>
<td>• Observe how to complete the graphic organizer.</td>
</tr>
<tr>
<td>• Review the information gathered in the &quot;I Read&quot; section. Note responses and ask students to account for similarities and differences.</td>
<td>• Preview the text to get ready to read.</td>
</tr>
<tr>
<td>• Compile information on the transparency of the graphic organizer.</td>
<td>• Clarify the purpose for reading (prompt or question).</td>
</tr>
<tr>
<td>• Discuss the students’ responses in the “I Think” section. Model how to make inferences, and complete the section on the transparency.</td>
<td>• Observe how to complete the graphic organizer.</td>
</tr>
<tr>
<td>• Review the information and inferences. Ask students to suggest conclusions that can be made based on the information gathered so far. Discuss possible “Therefore” conclusions.</td>
<td>• Reread their graphic organizers. Identify similarities and differences among responses.</td>
</tr>
<tr>
<td>• Model how to make a conclusion based on gathered information.</td>
<td>• Draw a conclusion based on the information and inferences in the chart.</td>
</tr>
<tr>
<td>• Ask students to use this thinking process to read a short passage on the same topic. Ask students to share and compare their conclusions.</td>
<td>• Compare own conclusion with those of others.</td>
</tr>
<tr>
<td></td>
<td>• Apply their learning to a different reading task.</td>
</tr>
</tbody>
</table>
I Read/I Think/Therefore – Sample Response

We started this section with Elijah Harper’s opposition to the Meech Lake Accord in 1990. You will remember that the Accord was designed to persuade Quebec to sign the 1982 Canadian Constitution by giving the province special status. Harper opposed the Accord because he believed that Aboriginal Peoples deserved special status, too. With that status, the inherent right to Aboriginal self-government would be recognized. After the defeat of the Meech Lake Accord, the government of Prime Minister Mulroney tried again to revise the Constitution. This time, Aboriginal self-government was included in the agreement, called the Charlottetown Accord, though what self-government involved was not defined. However, this Accord was defeated in a national referendum in 1992.

Since then, Aboriginal Peoples have made some gains. A major one was in 1998 when the federal government issued a Statement of Reconciliation. It stated that government policies had undermined Aboriginal political, economic, and social systems in the past. The federal government apologized for past mistakes and went on to state that

\[ \text{In renewing our partnership, we must ensure that the mistakes which marked our past relationship are not repeated. The Government of Canada recognizes that policies that sought to assimilate Aboriginal people, women and men, are not the way to build a strong country.} \]

Also in 1998, after 30 years of negotiations, the Nisga’a signed a treaty with British Columbia and the federal government. In 2000 the treaty was officially ratified by Parliament. In this treaty, the Nisga’a were given wide powers of self-government in matters of culture, language, and family life.

Therefore…

The issue of Aboriginal self-government is a very complex issue. There are still many concerns that have not been addressed in political and economic matters.
## Template for Drawing Conclusions

<table>
<thead>
<tr>
<th>I Read</th>
<th>I Think</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Therefore...
Reacting to Reading: Making Judgements (Both Sides Now)

Readers increase their understanding by reviewing what they have read, reflecting on what they have learned, and asking questions about the significance.

**Purpose**
- Assess different viewpoints or perspectives.
- Make judgements about viewpoints or opinions.

**Payoff**
Students will:
- think critically about course-specific materials.
- review different types of questions and how to answer them.
- summarize important ideas, concepts and information.
- develop critical thinking skills.
- develop a model for reading and thinking critically about important concepts, issues, and ideas.

**Tips and Resources**
- To make judgments, readers ask questions to help them process information, assess the importance and relevance of the information, and apply it in a new context. Evaluating is a skill that readers use when reading and critically thinking about a particular text. Readers make value judgments about the validity and accuracy of the ideas and information, the logic of a writer’s argument, the quality of a writer’s style, the effectiveness of the text organization, the reasonableness of events and actions, and more.
- See the following:

*Cross-Curricular Literacy: Strategies for Improving Secondary Students’ Reading and Writing Skills*, pp. 48-51.
*Cross-Curricular Literacy: Strategies for Improving Middle Level Students’ Reading and Writing Skills, Grades 6-8*, pp. 60-61.

**Further Support**
- Review reading skills of tracking main ideas, comparing and contrasting, making inferences, and drawing conclusions.
- Encourage students to ask questions about what they are reading. For example, have students write questions based on a textbook chapter, section or topic-related resource they have read. Ask one of the students to read his or her questions to the group. Model answering the question referring the student specifically to the text where appropriate. Ask another student to ask a question, and have them select a volunteer to answer it. After the volunteer answers the question, have this student ask one of his/her questions. Continue until all students in the group have asked and answered a question.
- As an alternative, have students identify the type of question (on the lines, among the lines, between the lines and beyond the lines) before they answer or determine the type of questions to be generated. Students may require teacher modelling over several lessons of asking, identifying and answering questions.
### Reacting to Reading: Making Judgements (Both Sides Now)

<table>
<thead>
<tr>
<th>What teachers do</th>
<th>What students do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td></td>
</tr>
<tr>
<td>• Select course-related reading material that presents two viewpoints on a topic or issue. Use one selection that presents two perspectives or more than one text on the same topic.</td>
<td>• Recall what they already know about the issue or topic.</td>
</tr>
<tr>
<td>• Prepare a question or statement about the text. Write the statement on the chalkboard or an overhead transparency (title of the reading selection, a question based on the title).</td>
<td>• Recall what they already know about information and opinions.</td>
</tr>
<tr>
<td>• Review the difference between information (fact, statistics, examples etc.) and opinion (inferences based on information, prior knowledge, experience, bias).</td>
<td>• Observe the teacher recording the evidence that supports or opposes the question/statement.</td>
</tr>
<tr>
<td>• Ask for one idea or piece of information that supports the question/statement and record it under the statement in a T-chart.</td>
<td>• Recall where they learned about the topic or issue.</td>
</tr>
<tr>
<td>• Ask for one idea or information that opposes the question/statement and record it in the right-hand column of the T-chart.</td>
<td>• Use reading strategies to preview the text and make predictions.</td>
</tr>
<tr>
<td>• Ask students where their responses came from (e.g., prior knowledge and experiences of other reading tasks, videos, discussions.)</td>
<td>• Contribute to the group discussion.</td>
</tr>
<tr>
<td>• Inform students that writers may include ideas and information to support both sides of an issue or may include only the evidence to support their viewpoint. Effective readers question the ideas and information in a text to determine and develop their own opinions.</td>
<td></td>
</tr>
<tr>
<td>• Ask students to preview the reading selection and make predictions about the content. Small groups share predictions.</td>
<td></td>
</tr>
<tr>
<td><strong>During</strong></td>
<td></td>
</tr>
<tr>
<td>• Ask students to read the selection to identify the viewpoint and find evidence that supports and opposes the viewpoint.</td>
<td>• Read the selection and ask questions about the information (e.g., What is the viewpoint? Does this support or oppose the viewpoint?).</td>
</tr>
<tr>
<td>• Observe students' reading and intervene to clarify task or content, if needed.</td>
<td>• Identify the opinion or viewpoint presented in the selection.</td>
</tr>
<tr>
<td>• Prepare possible viewpoint/opinion and evidence for recording on the T-chart.</td>
<td></td>
</tr>
<tr>
<td><strong>After</strong></td>
<td></td>
</tr>
<tr>
<td>• Ask partners to orally summarize reading material, and identify the writer’s viewpoint.</td>
<td>• Listen to partner’s summary and compare it to their own. Add to their own understanding.</td>
</tr>
<tr>
<td>• Ask students to provide an idea or information from the reading materials that supports the viewpoint. Continues recording alternating information that supports and opposes the viewpoint question/statement.</td>
<td>• Contribute to the discussion.</td>
</tr>
<tr>
<td>• Ask partners to review and discuss the evidence and make a decision based on the evidence and related inferences.</td>
<td>• Evaluate the evidence and make a judgement based on the information provided by the text, inferences they have made, and their own knowledge and experience.</td>
</tr>
<tr>
<td>• Partners share their decisions and state reasons for their decision.</td>
<td>• Develop an opinion based on accumulated learning.</td>
</tr>
<tr>
<td>• Students write responses to the question/statement based on their learning.</td>
<td></td>
</tr>
</tbody>
</table>

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**Notes**
Editorials, magazine articles, and reference materials often present one side or viewpoint on a particular issue, or limit one of the viewpoints. Therefore students may need to read several short selections on the same issue or topic to fully consider both sides of an issue before making a judgement based on the evidence provided.

### Both Sides Now

#### Evidence that Supports
- Help to educate people about different animals in their area
- Protect endangered animals
- Scientists can study animals up close
- Veterinarians and zoologists can learn how to care for different animals in the wild
- Can help injured animals that couldn’t survive in the wild
- Make money that can pay for animal care in the wild
- Zoos, wildlife preserves and aquariums may be the only way for some people to see wild animals and learn about them

#### Evidence that Opposes
- Animals show signs of stress, boredom and unhappiness
- Animals belong in their natural habitats
- Scientists would learn more about animals in the wild
- Some animals are abused in captivity
- The natural world is for the survival of the fittest; humans shouldn’t interfere
- Do humans have right to capture animals
- Animals are forced to entertain people so parks make lots of money that may not be used for animal welfare

#### Question or Statement
**Should there be zoos?**

#### Decision
Zoos could be created so that the animals can live in their natural habitats with minimal interference from people. Wildlife preserves help to protect animals from the expansion of towns and cities, and can provide a safe haven for migrating birds and animals.

#### Reasons
- The welfare of the animals is important, and they don’t choose to be in a zoo.
- People sometimes cause the animals’ problems in the wild by invading their habitats.
- People shouldn’t destroy the animals’ homes or kill them for fun or for a few body parts. Zoos can help to educate people about the importance of protecting wildlife and how to live in harmony with them.
- Videos can be used to show people animals in their natural world so that we don’t have to capture animals and put them on display.
Both Sides Now - Template for Making Judgements

<table>
<thead>
<tr>
<th>Evidence that Supports</th>
<th>Question or Statement</th>
<th>Evidence that Opposes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

Decision

Reasons
Clues for Finding Answers in the Text

ON THE LINES

Some questions can be answered by “reading on the lines”; the answer is right there in the text. The question asks for literal information from the selection such as details, facts and information stated by the author. Some “question starters” that ask for literal knowledge are give, list, find, describe, tell, retell, and what. To answer a question “on the line”:

- Find the words used to create the question.
- Look at the other words in that sentence to find the answer.

AMONG THE LINES

The answers to some questions are to be found by “reading among the lines.” This type of question has an answer in the text, but this answer requires information from more than one sentence or paragraph. Some “question starters” that ask for literal knowledge are list, compare, how, and summarize. To answer a question “among the lines”:

- Find the words used to create the question.
- Reread the sentences or paragraphs that contain the question words.
- Look at the other words in the sentences or paragraphs to find the answer.

BETWEEN THE LINES

Some questions ask you to “read between the lines”. This type of question asks the reader to make inferences based on the ideas and information in the text. The answer might be found interpretively in the reader’s own background knowledge, but would not make sense unless the reader had read the text. Some “question starters,” that ask for inferences are why, how might, what do you think, explain, predict, and what might. To answer a question “between the lines”:

- Look for key words and clues in the question.
- Re-read that part of the text in which the author gives the clues needed to construct the answer.
- Ask yourself:
  - Is this what the author meant?
  - Does this make sense?

BEYOND THE LINES

The answers to some questions are not in the text at all: they are “beyond the lines.” This means searching for the answer in the reader’s own background knowledge. Some “question starters” that ask for interpretations are what can you learn from, how might you, what if, and is it fair that. To answer a question “beyond the lines”:

- Read the question and identify the key words.
- Identify your beliefs, experiences and knowledge that relate to the question.
- Ask yourself:
  - Would the author agree with this conclusion?
Reading Different Text Forms: Reading Informational Texts

Informational text forms (such as explanations, reports, news articles, magazine articles and instructions) are written to communicate information about a specific subject, topic, event or process. These texts use vocabulary, special design elements, and organizational patterns to express ideas clearly and make them easier to read. Providing students with an approach to reading informational texts helps them to become effective readers.

Purpose
• Become familiar with the elements and features of informational texts used in any course
• Explore a process for reading informational texts, using a range of strategies for before, during and after reading.

Payoff
Students will:
• become more efficient at “mining” the text for information and meaning.
• practise essential reading strategies and apply them to different course-related materials.

Tips and Resources
• Some of the features of informational texts are headings, subheadings, questions, introductions, summaries, overviews, and illustrations. These work together to draw readers into the text at different levels. For example, in a magazine article, a heading is meant to grab your attention and give you an idea of what the article is about, while the accompanying photographs and captions might add information not included in the body of the article.
• Many informational texts are divided into sections or chapters, and are organized internally in ways that add meaning – for example, by sequence, chronology, cause/effect, comparison/contrast, classification, description, or definition. For example, news articles use a special organizational pattern called the inverted pyramid to answer the 5WH questions (Who, What, When, Where, Why and How), and present the facts and supporting details in order of importance.
• Many informational texts use visual elements (such as typeface, size of type, colour, margin notes, photographs and diagrams) to emphasize important words and concepts. Different texts use these features in different ways to effectively present information.
• Words such as then, next, while, beside, and following are often used to indicate a time or spatial relationship.
• How you read informational text will depend on your purpose for reading. If you want to find specific information in a textbook, you might refer to the table of contents to decide where to start reading, examine the headings and subheadings, and then skim through the section looking for key words and phrases related to the topic. Once you have located the appropriate section, a closer reading will help you to find the information and supporting details.
• See Student Resource, Tips for Reading Informational Texts. Focus one or two tips at a time to help the students before, during and after the assigned reading. Add tips as needed to guide the students as they read.

Further Support
• Provide students with an advance organizer to guide them as they read a particular text. This might be a series of prompts related to the reading task.
• See strategies for before reading, such as Previewing a Text, and Analysing the Features of a Text. Refer to these to support and reinforce the ideas described here.
Reading Different Text Forms: Reading Informational Texts

What teachers do

Before

Before reading, help students to connect new content and ideas to their prior knowledge by encouraging them to think about what they already know about the topic or the type of reading material. For example:

- Ask students to brainstorm related ideas, concepts and vocabulary, recall previous experiences and feelings related to the subject, recall what they have learned about the topic, or list questions they might have about the topic.
- Provide students with related experiences, discussion topics, readings, or background information to increase background knowledge.
- Pose questions to students before they read, to help them determine a purpose for reading.
- Invite students to ask questions about the content.
- Model (using a “think aloud”) how to predict the content based on the features of text, specialized vocabulary, illustrations, introductory information or personal experiences. Skim, scan and sample the text to make informed predictions.
- Identify and pre-teach unfamiliar vocabulary and concepts that appear in the text.

During

During reading, help students to connect the information and ideas in the text to what they already know as they monitor their understanding. (Monitoring their understanding means recognizing when confusion occurs and identifying strategies that help to regain meaning.) For example:

- Have students describe and model the different reading strategies they might use, such as predicting, questioning, activating prior knowledge, inferring, monitoring, adjusting, rereading, and decoding.
- Model (using a “think aloud”) strategies for pausing and thinking about the text. Encourage students to chunk the text, read, pause, think and ask questions or make notes about the section of text.
- Demonstrate how to use a graphic organizer to categorize and select main ideas, important details, and questions as you read. For example, comparison charts, T-charts, or Venn diagrams can help students to identify the ideas being compared and how they are similar and different.
- Invite students to visualize the concepts as they read. Have partners share and compare the visualizations.
- Provide students with focus questions, such as the following:
  - What are the main ideas?
  - How has the writer organized them?
  - How does the writer support the main ideas?
  - What is the writer’s viewpoint?
  - Is this a useful source of information?

After

After reading, help students to consolidate and extend their understanding of the content. For example:

- Ask partners to restate or paraphrase what they have read, and note similarities and differences in the retelling.
- Model how to summarize the reading selection (using a “think aloud”) by identifying the essence of the text, choosing the most important information, and organizing the information to convey the key ideas of the selection.
- Have students suggest possible diagrams or graphic organizers to illustrate connections among the topics, main ideas, supporting details, and prior knowledge.
- Review the process that students used for reading informational text, including strategies for before, during and after reading. See Student Resource, Tips for Reading Informational Texts.
Before Reading

- Set a purpose for reading. Ask yourself why you are reading this particular text.
- Look over the text to see which elements appear (such as headings, subheadings, illustrations and captions, etc.).
- Examine the titles, headings, and subheadings, and scan for words that stand out.
- Look for words and phrases that might give you clues about how the information is organized.
- Read any overviews, summaries or questions. In a shorter piece, read the opening and concluding sentences or paragraphs.
- Examine each illustration and read the titles or captions.
- Recall what you already know about the topic.
- Record some questions you might have about the topic.

During Reading

- Divide the reading task into smaller chunks (chunking the text into paragraphs, chunking sections by sub-headings, etc.). Read a chunk, pause and think about what you read, and write a brief one-sentence summary or brief point-form notes to help you remember important and interesting information.
- Read quickly, then slowly. Skim the sections you think will support your purpose for reading. When you find specific information you want, slow down and read it word by word. You may need to reread the passage several times.
- Read the selection and jot down thoughts, responses to your questions and new questions that occur to you.

After Reading

- Read the selection again to confirm the main idea and supporting details.
- Make connections to what you already know about the topic. How does the information you have read add to or alter what you knew about the topic?
- Record your thinking about and responses to the text. For example, write a summary, complete a graphic organizer, create a sketch, or orally retell to yourself or a friend.
Graphical text forms (such as diagrams, photographs, drawings, sketches, graphs, schedules, maps, charts, tables, timelines, and tables) are intended to communicate information in a concise format and illustrate how one piece of information is related to another. Providing students with an approach to reading graphical text also helps them to become effective readers.

**Purpose**

- Become familiar with the elements and features of graphical texts used in any course.
- Explore a process for reading graphical texts, using a range of strategies for before, during and after reading.

**Payoff**

Students will:
- become more efficient at “mining” graphical texts for information and meaning.
- practise essential reading strategies and apply them to different course-related materials.

**Tips and Resources**

- Sometimes a complicated idea or concept can be communicated more easily through a chart, graph, diagram or illustration. Many informational texts include graphics to supplement the main ideas and provide clues to the important concepts in the text. Some of the features of graphical texts include:
  - print features (such as typeface and size of type, bullets, titles, headings, subheading, italics, labels, and captions).
  - organizational features (such as tables of contents, legends, keys, pronunciation guides, labels and captions).
  - design features (such as colour, shape, line, placement, balance, and focal point). Design features can also include images.
  - organizational patterns (such as sequential, categorical, and explanatory).
- Each graphical text uses these elements and features in different ways to effectively present information in a condensed format. For example, a chart or table may illustrate key information and show how pieces of information relate to each other. A table uses columns and rows to organize the information and may include a title that describes the main idea or subject, and a caption to explain the purpose of the table. The information in a table can be read horizontally and vertically. An example of a common table format is a calendar that uses columns to show the days of the week, and rows to show the dates. Tables are often used in Mathematics, Science and Geography to help the reader quickly grasp key information (such as number patterns, pollution indexes, or city populations).
- Many of the strategies for reading informational and literary texts can also be used effectively to read graphical texts.
- See Student Resource, *Tips for Reading Graphical Texts.* Focus on one or two tips at a time to help students before, during and after the assigned reading. Add tips as needed to guide the students as they read.

**Further Support**

Provide students with an advance organizer to guide them as they read a particular text. This might be a series of prompts to guide them through the reading task.
Reading Different Text Forms: Reading Graphical Texts

What teachers do

Before
Before reading, help students to connect new content and ideas to their prior knowledge by encouraging them to think about what they already know about the topic or the type of graphical text. For example:
- Ask students to brainstorm related ideas, concepts and vocabulary, recall previous experiences and feelings related to the subject, recall what they have learned about the topic, or list questions they might have about the topic.
- Provide students with related experiences, discussion topics, readings, or background information to increase background knowledge.
- Pose questions to students before they read, to help them determine a purpose for reading.
- Invite students to ask questions about the graphic’s purpose and the information in it.
- Model (using a “think aloud”) how to predict the content based on the features of the graphic, specialized language, related written information, or personal experiences. Skim, scan and sample the graphical text to make informed predictions.
- Identify and pre-teach unfamiliar vocabulary and concepts that appear in the graphical text.

During
During reading, help students to connect the information and ideas in the graphical text to what they already know as they monitor their understanding. (“Monitoring understanding” means recognizing when confusion occurs and identifying strategies that help to regain meaning.) For example:
- Have students describe and model the different reading strategies they might use, such as predicting, questioning, activating prior knowledge, inferencing, reading slowly, and rereading.
- Model (using a “think aloud”) strategies for pausing and thinking about the text. Encourage students to examine parts of the text, read, pause, think, and ask questions or make notes about how this information relates to other parts of the text.
- Demonstrate how to paraphrase the information presented. For example, use the sentence stem- “This means.....”.
- Invite students to organize the information in a different way. Ask students to share and compare their interpretations.
- Provide students with focus questions such as:
  - What is the purpose of this graphic?
  - What information is provided?
  - Is all important information included? What information is missing?
  - How is the information organized?
  - How does this information relate to what you already know about the topic?
  - Is this a useful source of information?

After
After reading, help students to consolidate and extend their understanding of the content. For example:
- Ask partners to restate or paraphrase what they have read and to note similarities and differences in rephrasing.
- Model (using a “think aloud”) how to make connections between prior knowledge and what the text is saying.
- Have students suggest possible ways to check the accuracy and reliability of the information presented.
- Review the process that students used for reading graphical texts, including strategies for before, during and after reading. See Student Resource, Tips for Reading Graphical Texts.
Tips for Reading Graphical Texts

Before Reading

• Set a purpose for reading. Ask yourself why you are reading this particular text.

• Look over the text to determine what type it is and which elements are used.

• Examine the titles, headings, captions and images. Start with the title. The title tells you what the graphic is about. The captions may also use words and phrases from the text to show how the graphic is related to the information in the written text (e.g., “Figure 1.6”).

• Recall what you already know about the topic or subject.

• Record some questions you might have about the information presented.

During Reading

• Read all the labels and examine how they are related to the graphic. Each label has a purpose. The most important labels may be in capital letters, bold type, or a larger font.

• Follow the arrows and lines. They may be used to show movement or direction, or connect to the things they name.

• Look for the use of colour or symbols to emphasize important words and information. Some graphical texts have a legend or a key to explain the meaning of specific symbols and colours.

• Study the image carefully. See if you recognize the details in the image. Read the text near the picture to find an explanation of the information in the graphic. Use the figure number or title and key words to find and read the related information in the written text.

• Identify the relationships among the visuals and information presented.

After Reading

• Interpret the information conveyed in any of the graphics (e.g., diagrams, charts, graphs, maps). Ask yourself why this information might be important.

• Rephrase information orally or in writing. Imagine that you are explaining the graphic to someone who has not read it.

• Create your own graphical text (e.g., graph, map, diagram, table, flow chart) to represent the important information.
Literary texts (such as stories, descriptions, essays, biographies, dialogues, novels, scripts, and poems) are written to entertain, provide insights, or communicate a writer’s ideas and viewpoints. Literary texts are sometimes incorporated into informational text forms. Providing students with an approach to reading this type of text can help them to become effective readers in other contexts as well.

**Purpose**
- Become familiar with the elements and features of literary texts used in the course.
- Explore a process for reading literary texts, using a range of strategies for before, during and after reading.

**Payoff**
Students will:
- read for information and enjoyment.
- practise essential reading strategies and apply them to different types of course-related materials.

**Tips and Resources**
- Literary texts come in a wide range of fiction and non-fiction, with many forms and genres. Each uses language and literary elements in particular ways to communicate something significant.
- Some of the elements of fiction are characters, plot, setting, theme (big idea), perspective (point-of-view taken by the narrator), style, language, and structure. Dramas (scripts and dialogues) use many of the same elements as novels and short stories, but may include special features such as stage directions, acts and scenes, and notations. Poems use elements such as structure, rhythm, rhyme, imagery and figurative language to communicate an idea, feeling or image.
- Non-fiction literary texts include biographies and essays. Biographies often tell the story of their subject through narrative elements. Elements of biography include setting (how it influences the events in the person’s life), characterization of the subject (representation of the subject’s character and motives), theme, accuracy, structure (time sequence), illustrations, graphic features, structural patterns, and organizational features (table of contents, index, references). Essays might be persuasive, personal, or descriptive but often use the same elements to communicate a significant idea or viewpoint. These elements include thesis, introduction, body, conclusion, arguments, and evidence.
- Many of the strategies used for reading informational and graphical texts can be used effectively to read literary texts.
- See Student Resource, *Tips for Reading Literary Texts*. Focus one or two tips at a time to help them before, during and after the assigned reading. Add tips as needed to guide the students as they read.

**Further Support**
- Provide students with an advance organizer to guide them as they read a particular text. This might be a series of prompts to guide them through the reading task.
- Have students use literacy texts of their own choosing for some course assignments.
Reading Different Text Forms: Reading Literary Texts

What teachers do

Before
Before reading, help students to connect new content and ideas with their prior knowledge by encouraging them to think about what they already know about the topic or the type of reading material. For example:
- Ask students to brainstorm related ideas and themes, recall previous experiences and feelings related to the subject or theme, or list questions they might have about the topic.
- Provide students with related experiences, discussion topics, readings, or background information to increase background knowledge about the form, author or subject.
- Pose questions to students before they read, to help them determine a purpose for reading.
- Invite students to ask questions about the story or subject.
- Model (using a think-aloud) how to predict the content based on the text features, specialized vocabulary, illustrations, introductory information, or personal experiences. Skim, scan and sample the text to make informed predictions.
- Identify and pre-teach unfamiliar vocabulary and concepts that appear in the text.

During
During reading, help students to connect the information and ideas in the text with what they already know as they monitor their understanding. (Monitoring understanding means recognizing when confusion occurs and identifying strategies that help to regain meaning.) For example:
- Have students describe and model the different reading strategies they might use, such as predicting, questioning, activating prior knowledge, inferencing, monitoring, adjusting, rereading, and decoding.
- Model (using a “think-aloud”) strategies for pausing and thinking about the text. For example, demonstrate how to pause, think, and create thinkmarks (quick comments, questions, personal connections or interesting phrases) as you read. Have students write a sentence at intervals while reading the text.
- Demonstrate how to use a graphic organizer to select and organize main ideas, important details, and questions as you read. For example, timelines, story maps, flow charts, or thought webs can help students identify and track the main ideas or events and make connections.
- Invite students to visualize the concepts as they read. Have partners share and compare their images.
- Provide students with focus questions to help them make inferences and “read between the lines.” For example:
  - What details are included?
  - Why did the author tell you that?
  - What details have been left out?
  - Why didn’t the author tell you this?

After
After reading, help students to consolidate and extend their understanding of the content.
- Ask partners to retell or paraphrase what they have read, and to note similarities and differences in the retellings.
- Model (using a “think-aloud”) how to summarize a narrative by identifying the theme, main characters, setting and events, then organize the information to show how the characters, setting and plot develop throughout the story.
- Have students suggest possible diagrams or graphic organizers to illustrate connections among the topic, main ideas, supporting details, and prior knowledge.
- Review the process that students used for reading literary texts, including strategies for before, during and after reading. See Student Resource, Tips for Reading Literary Texts.
Before Reading

• Read the title and think about what might happen in the story or what the essay might be about. Does the title suggest any connections to your own life or raise any questions?

• Recall other selections you may have read by this author.

• Look at any illustrations. What do they tell you about the story or subject?

• Look the text over and sample the text to note its length, organization, level of language, and structure. Pay attention to punctuation.

During Reading

• As you read, ask questions about what is happening. Make predictions about what might happen next.

• Form opinions about what is going on. Think about your responses and reactions to what you are reading. Making notes can help you focus your thinking as you read.

• Picture the setting, events or images in your mind. Sketch them. As you read, imagine how the words will be spoken and see the action.

• While reading a narrative selection, try the following:
  - Read the first page and pause. What do you know so far about the people (characters), setting, conflict, and point of view? Where do you think the storyline is going? Make connections to what you already know.
  - Who are the people and how are they related to each other? Put yourself in their place. What would you say or do?

After Reading

• Write down favourite quotations from the text. Share and compare them with a partner.

• Create a visual interpretation of the text, such as a web, story map, or timeline, to show the relationships among the major characters and their feelings and attitudes.

• Create a sensory web of the setting. Use a graphic organizer to illustrate the story’s plot or sequence of events (situation, complications, climax, resolution).

• Retell/summarize the content in your own words, orally or in writing.
**Reading Different Text Forms: Following Instructions**

Students are expected to read and follow instructions in every subject area. This strategy asks students to examine different types of instructions, their features and elements, and how the features, language and organizational patterns can be used to help the reader understand and complete a task.

**Purpose**
- Provide students with strategies for reading, interpreting and following instructions to complete a specific task.
- Learn how instructions are organized.

**Payoff**
Students will:
- identify purposes for reading instructions.
- develop a process for reading and following instructions.

**Tips and Resources**
- Instructions give detailed step-by-step information about a process or a procedure (e.g., directions, recipes, experiments, manuals, tests). They are sometimes called procedures or how-tos. Most instructions use organizational patterns, language, and features (diagrams and illustrations, bold or italic type, headings, numbers, lists) to help the reader identify the task and the best way to complete it; however, some instructions are complicated without any features to help the reader determine the sequence of steps.
- Student/Teacher Resource: *Instruction Analysis 1 and 2*.

*Reading and Writing for Success: Senior*, pages 143, 283.

**Further Support**
- Provide students with a list of typical signal words and task prompts and suggestions/strategies for responding to them in your subject area (e.g., *explain, list, summarize, give reasons for, select, choose, support*).
- Provide students with flow charts and timelines to help track successful completion of oral or written instructions.
- Create a class framework for reading instructions such as:
  - Preview.
  - Highlight and annotate.
  - Think aloud and visualize.
  - Reread.
  - Go step-by-step.
  - Read the diagrams.
  - Ask questions.
- Have students read a set of instructions that has irrelevant or repeated information, or is poorly organized (you can create this by inserting sentences into or omitting sentences from a sample you already have). Have students identify the irrelevant or repetitious information and sentences, and highlight the important information. Ask students to determine what information is missing. Ask students to rewrite the instructions. Compare the original, the modified example, and the students’ work. Note similarities and differences, and suggest reasons for the writers’ decisions. Have students determine the most effective set of instructions and identify the elements that made the instructions easy to follow.
- Provide students with opportunities to follow oral instructions, and discuss how they were able to complete the instructions and what was challenging, confusing or frustrating.
Reading Different Text Forms: Following Instructions

What teachers do

Before

- Select a set of instructions typical for the subject area related to a current topic or process. See Student/Teacher Resources, Instruction Analysis 1 and 2.
- Ask students to recall an important occasion when they had to follow a set of instructions (e.g., driver’s test, an exam, making a table, fixing a bike). Discuss what was challenging and easy about following the instructions.
- Ask students to recall what they know about effective instructions.
- Make a list of the elements and features of instructions with the class.
- Make copies of another set of instructions and cut them into slips of paper with a step on each slip (unnumbered). Place one set of jumbled instructions in as many envelopes as there are groups or pairs. Provide partners or small groups with an envelope, and ask students to recreate the instructions and talk about the clues they used to reconstruct the instructions.
- Compare the groups’ reconstructions and discuss the decisions they made. Identify the strategies they used to determine the task and the sequence.
- Provide students with a copy of the selected instructions. Model for students how to preview the instructions (e.g., looking at title, organization, some of the signal words [sequence of steps and process verbs], graphics, illustrations, summary, materials list).

During

- Model reading the introductory material and the first 2 or 3 steps aloud, noting the signal words and what they tell the reader to do.
- Ask students to continue reading the instructions to identify the task to be completed. Suggest that students imagine themselves completing the instructions.
- Ask small groups to discuss the strategies they used to read the instructions and determine what they were expected to do.

After

- Clarify any confusing sections of the instructions. Use a flow chart to outline the steps, if necessary.
- Have students individually or in pairs complete the instructions. Compare the completed tasks.
- Discuss how students figured out what to do.
- Identify confusing or challenging parts and suggest additional strategies.
How to Mix Concrete by Hand

Concrete mixing is hard work. Power mixers do most of the work on the job site; however, sometimes the concrete is mixed by hand for a smaller job. Concrete is a combination of sand, gravel or other aggregates, and portland cement mixed with water to form a semi-fluid mixture. This mixture is then poured into a form to harden. There are special tools and materials that are needed to make a good mixture that is easy to use and finishes well.

First you need good quality materials. Choose the best type of cement for the masonry work you are doing. The aggregate (sand, gravel and stones) should contain large and small particles to make the strongest concrete. Measuring a litre of water will help you use the correct proportion of dry to wet materials.

The tools that you need to mix concrete by hand are:

- a wheelbarrow to mix up and move the mixture to the form,
- a mortar hoe to mix the concrete,
- a concrete hoe or square-end shovel to place the mixture in the form,
- a concrete rake to tamp down the mixture, and
- floats and darbies to smooth and finish the concrete.

Mixing the concrete takes time and patience. Chose a clean, flat surface or a mortar box. Measure the ingredients carefully for the amount that you need. First layer the dry ingredients starting with the gravel, then sand, then cement. Use a hoe or rake to thoroughly mix the dry ingredients. Next make a shallow depression in the centre of the dry ingredients and pour in a little water. Mix this thoroughly, then add more water and mix again. Continue adding water and mixing until all of the dry ingredients are wet and the mix is an even colour.

Finally test to see if you have mixed the concrete to your satisfaction. This is called a settling test. First, smack the concrete with the back of a shovel. Next, jab it lightly with a hoe to make some ridges. If the surface is smooth and the ridges keep their shape, then the mix is right. Now you are ready to pour your mix into the prepared form. Once it is in the form you will need to smooth or finish the surface and let it harden.

Adapted from Mike Markel, Technical Communications. (Toronto: Nelson Thomson Learning), pp. 76-79.
Magic Books Product Display

Procedures for Setting Up the Display

1. Check with the conference coordinator to ensure that our supplier, Better Displays has delivered and set up bookshelves, a display table, and chairs at our booth. If there is a problem with the delivery or the equipment, phone Jim on his cell phone at 244-7179 immediately.

2. Unpack the boxes that have been sent by the publisher to the display area. Unpack the box marked with a large purple X first. It is the supplies box, containing items you will need to set up the display. Use the checklist inside to ensure that you have all supplies and resources for the display.

3. Place ten copies of each of Easy Magic Tricks, Magic for Kids and More Amazing Magic on the bookshelves behind the display table. Display all titles with their covers facing out, and their spines to your left, assuming you are facing the bookshelves behind the display table. Follow these directions when placing the titles on the shelves.
   - Place Easy Magic Tricks in the bookshelf to your left.
   - Place Magic for Kids in the central bookshelf.
   - Place More Amazing Magic in the bookshelf to your right.
   - See diagram of a Magic Books Product Display.

4. Place the posters advertising the three new titles on the wall of the booth, above the bookshelves. Situate the posters above the titles they advertise. For example, place the poster for Easy Magic Tricks above the bookshelf displaying Easy Magic Tricks. Attach the posters to the wall with the poster glue that is in the supplies box.

5. Place the brochures for the three new titles on the display table in front of the bookshelf. Make sure that you put each brochure in front of the book that it is advertising. See the diagram of a Magic Books Product Display.

6. Place the small poster advertising the draw for the magic costume toward the back of the display table, in the centre. Prop it up with a display stand. Place the jar (which will hold the ballots for the draw) in front of the poster. Both the jar and display stand are in the supplies box.

7. Keep our catalogues in an accessible spot behind or under the display table.

8. Ask the conference coordinator to ensure that empty boxes are removed.

The communication posters included in this resource document are intended to provide reminders for students when they are reading, writing or engaged in discussion in class. The reading posters focus on before, during, and after reading strategies. The word “text” is used to refer to a reading selection of any length in any subject (paragraph, chapter, section, or textbook). Posters can be displayed during instructional time or when students are practicing the skills. While the posters appear as 8 1/2 x 11” size in this document, they can be enlarged to legal or ledger size using a commercial photocopier.
Before Reading

Ask Questions

What can I ask myself BEFORE reading to help me understand this text?

- What do I already know?
- I wonder if...
- What do I need to know?
During Reading

Ask Questions

What can I ask myself as I read this text to help me understand?

- Does this make sense?
- How does this information connect to what I already know?
- What does the writer say about...?
- What does the writer mean by...?
- I still need answers to the question...
At a tricky part in the text, I...

1. pause to think about...
2. take a closer look at...
3. break the text into “chunks”.
4. summarize as I read.
5. discuss what I have read.
How can I read between the lines?

- Based on what I have just read, I now realize...
- The evidence that supports my thinking is...
- I can now conclude...
- I think... because ...

Communication
During Reading

VISUALIZE

To better understand while I was reading...

- I pictured what ... might look like.
- I created a mental image of...
- I used the images to help me...
During Reading

Make Connections

How can I use what I already know to help me understand this text?

- I already know about...
- This text reminds me of...
- This compares to...
- This text is different from... because...
- This section made me think about...

Communication
When I get to an unfamiliar word or section, I...

- look at photographs, diagrams, tables, or charts.
- reread for meaning.
- use context and clues for hints.
- skip and return.
- pause and ask questions.
To take good notes I…?

- look for the main idea(s).
- use words I understand.
- limit the number of words – restate, delete, combine.
- organize with headings.
- use symbols, colours, and webs to organize.
- review, add, and revise.
What can I ask to help me better understand this text?

- What does the writer mean by...?
- Why did/didn't...?
- What have I learned?
- I wonder if...
After Reading

Find the Main Idea(s)

What is/are the main idea(s)?

What is important?

The most important thing I remember about this text is...

The main message is...

The text was mainly about...

Clues, words and features that helped me understand the text were...

Communication
How do I put all the pieces together?

- The message of this text is ...
- The purpose of this text is ...
- These ideas relate to... because...
- This text may be biased because ...
- This text doesn’t deal with ...