Getting Ready to Read: Analyzing the Features of a Text
MATHEMATICS Grades 10-12

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 making sense of the mathematics 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 examine other types of text (e.g., magazines, e-zines, newspapers, e-learning modules).

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.

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
- Create a template that describes the main features of the texts, and post it in the classroom so that students can refer to it.
- Text features may include headings, subheadings, table of contents, index, glossary, preface, paragraphs separated by spacing, bulleted lists, chapters, answers, sidebars, footnotes, illustrations, captions, italics, colour, and icons.
- See Student/Teacher Resource, *Features of a Mathematics Textbook – Sample.*

  Cross-Curricular Literacy: Strategies for Improving Secondary Students' Reading & Writing Skills, pp. 20-21.
  Teaching Reading in the Content Areas: If Not Me, Then Who? , pp. 16-18.
  For an alternate approach: see ***Previewing a Text*** page 2.

Further Support
- Provide students with one or more reading organizers to guide them as they read a particular text.
- Ask students to investigate similar and different features of computer software (e.g., File, Edit,) and Internet websites (e.g., URLs and pop-up menus) to help them navigate and read the program or site.

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What teachers do	What students do	Notes
Before • Ask students to recall a magazine or informational book they have recently read, or a website they have 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. • Note similarities and differences among the responses and have the students make connections among the features of the different mathematical materials. • Provide students in small groups with two different reading samples (e.g., sequential textbook chapters, a textbook lesson and an EQAO assessment task, a textbook lesson and a news article). • Remind students that different sources have many different elements or features that are designed to help the reader understand the material being presented. Some material, like a textbook, has a greater variety of features than others.	• Recall something recently read or viewed and identify some features of that particular text. • Share findings with other groups.	
During ▪ Have groups scan the assigned materials and note features that are similar and those that are unique to the reading samples (e.g., chapter previews, tables of contents, charts and graphs, typography [italics, bold], questions, chapter reviews/summaries, timelines, and headings). ▪ Have groups record their findings on chart paper (e.g., point-form notes, Venn diagram, compare/contrast chart). • Ask each group to send an "ambassador" to the other groups to share one idea the group noted and to obtain one idea that the other group noted. The ambassadors return to their original groups and report. • Have each group report on the features of its samples (e.g., some textbooks contain an annotated overview of the textbook layout). • Create a textbook or chapter template on chart paper, indicating common features and noting unique features. (See Student/Teacher Resource, *Features of a Mathematics Textbook– Sample.*)	• Scan materials, and note the different features. • Contribute to the group discussion and chart-paper notes. • Share the groups' observations. • Contribute to a class template, itemizing features of a mathematics textbook.	
After • Assign a relevant reading task to small groups of students so that they can practise using the features of the text to locate information and help them understand and remember what they read. • Extend this strategy to electronic media.	• Use the features of text to complete the assigned mathematics reading task. • Discuss experiences finding information from electronic media.	

Features of a Mathematics Textbook – Sample

Textbook Title:

Table of Contents:	This is an ordered list with page references to the topics and subtopics for the lessons in each chapter.
Chapters:	These are used to group and organize important mathematical ideas.
Chapter Introduction:	This gives a brief overview of the important mathematics in the chapter and lists the learning goals. The Chapter Introduction might also pose a problem that can be solved by applying the mathematical concepts and/or skills presented in the chapter.
Skill(s) Review:	This provides review material of mathematical skills learned earlier that are necessary for doing the mathematics in this chapter.
Chapter Review:	This is a summary of the mathematics in the chapter. It includes additional examples and extra practice questions that are connected to the mathematics in the chapter.
Chapter Review Test:	This is a sample chapter test on the mathematics and its applications covered in the chapter.
Cumulative Review Test:	This is a sample test on the mathematics and its applications covered in several consecutive chapters.
Technology Appendix:	This section has specific instructions about technological tools such as: calculators, CBRs, spreadsheets, Fathom, and The Geometer's Sketchpad. Technology icons are often used to identify specific technologies.
Icons:	A textbook has a variety of icons. These visuals help locate related text.
Answers:	These are answers to exercise questions and are provided at the back of the textbook.
Glossary:	This text feature is an alphabetical listing of the mathematical terms used throughout the textbook. Some textbooks have a list of instructional words as well.
Index:	This text feature provides page references for specific information or concepts.