

Reading Strategies for *BC Science 9*

How will this textbook help me be successful in Science 9?

BC Science 9 is your textbook for grade 9 science in British Columbia. It has been designed to help you understand the science concepts being taught in your Science 9 course.

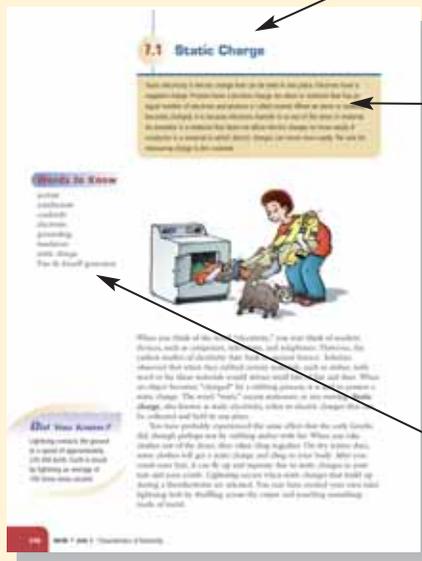
The next few pages describe some reading and practice strategies that you can use to help you better understand the information presented in each section.

Before Reading

Reading a science textbook is different from reading a novel or magazine. *BC Science 9* contains terms and concepts throughout the book that you need to understand and be able to apply. Each section in the textbook has built-in reading strategies ready for you to use. All you need to do is know how to use them.

Before starting any section, you should review the following features to help prepare you for the concepts you are about to cover.

The **Title** describes the main idea for the section.



The **Section Summary** gives you an overview of what you are going to learn. If there are any words you do not understand, check in the Glossary or ask your teacher.

Words to Know identifies words you will need to know before you start reading. Use the Glossary to help you define these terms.

Other Strategies

Before starting the section, scan or survey the pages. The purpose of scanning is to give you an idea of what to expect in the section. Look at the pictures, tables, and bolded words, and try to predict what you think the section will be about. Ask yourself what you already know about the concepts in this section.

Go back to the Chapter Opener and review the Foldables activity. This activity is designed to help prepare you for the reading and activities you will do in this section.

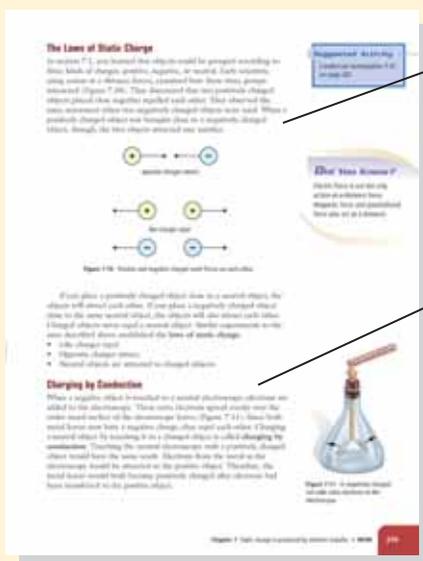
As You Read

As you read through *BC Science 9*, use these Reading Strategies to help you understand the concepts.

Notes

There are many ways to take notes, but one of the easiest methods is to take each title in a section and change it into a question. Then, as you read and find the answer to the question, you can add the answer to your notes. Make sure you use any bolded terms in your answer. This helps you learn key terms as well.

For example, for the page below, here are two questions that you could use in your notes.



What are the laws of static charge?

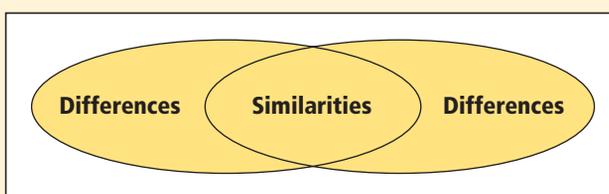
How do you charge an object by conduction?

Science Skills

For more information on graphic organizers, go to Science Skill 12 on page 494.

Graphic Organizers

Graphic organizers are a good way to organize information you are learning. When you use a graphic organizer, you make diagrams and short notes to describe what you know and understand. If you are comparing two different things, you might use a Venn diagram. As the figure below shows, a Venn diagram allows you to show the differences and similarities between the two things.



A concept map is a diagram that represents visually how ideas are related. Examples of different types of concept maps can be found in *Science Skill 12*, beginning on page 494.

The collage shows four pages from a textbook, each illustrating a different reading strategy:

- Using Your Textbook as a Study Tool:** This page provides instructions on how to use a textbook effectively, including tips on reading, taking notes, and using the glossary.
- Using the Review Questions:** This page explains how to use review questions to check understanding and identify areas for further study.
- Using the Glossary:** This page describes how to use the glossary to find definitions for unfamiliar terms.
- Using the Appendixes:** This page shows how to use the appendixes to find additional information and resources.

Reading Checks

Reading Checks are questions located at various points in the textbook. The purpose of these questions is to check if you have understood what you have read in the previous pages. If you cannot answer these questions, you need to reread the previous section. If after rereading, you still do not know the answers, ask your teacher.

Reading Check

1. Define power.
2. How are power (P), voltage (V), and current (I) related?
3. What does a power rating of 40 W mean in terms of energy and time?
4. What is the formula that relates energy consumption (E) to power (P) and time (t)?
5. What unit of energy is commonly used when dealing with large quantities of energy?

Practice Problems

In units 1 and 3, there are Practice Problems. These problems ask you several questions related to a concept you just covered in the text. The answers are provided to help you check your work. For these questions, it is more important that you understand how you got your answer than it is just to get the correct answer.

Practice Problems

Try the following Ohm's law problems. Show each step of your solution.

1. The current through a load in a circuit is 1.5 A. If the potential difference across the load is 12 V, what is the resistance of the load?
2. The resistance of a car headlight is 15 Ω . If there is a current of 0.80 A through the headlight, what is the voltage across the headlight?
3. A 60 V potential difference is measured across a load that has a resistance of 15 Ω . What is the current through this load?

Answers

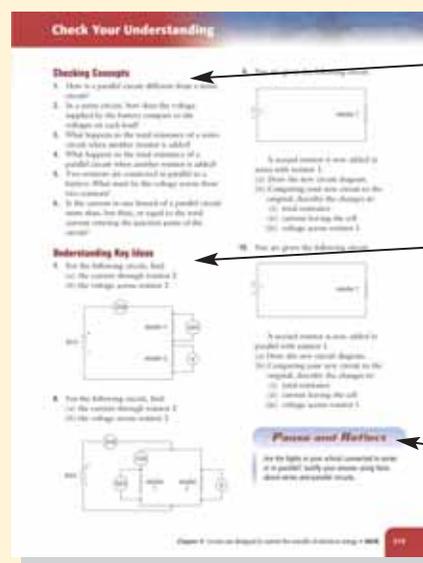
1. 8.0 Ω
2. 12 V
3. 4.0 A

After Reading

When you have finished your reading, there are different ways you can check your understanding. These include section reviews, chapter reviews, and unit reviews.

Check Your Understanding

At the end of each section is a series of questions related to the concepts you have covered. There are three categories of questions.



Checking Concepts asks questions about key ideas in the section. You should be able to answer all of these questions.

Understanding Key Ideas asks questions that require connecting two or more concepts covered in the section.

Pause and Reflect questions ask you to think about and apply what you learned to other situations in your life.

Chapter Reviews

The Chapter Review asks questions similar to those in the Check Your Understanding review. It also asks you prepare a summary of the key concepts covered in the chapter. This summary is an excellent study tool.

Unit Reviews

Unit Reviews begin with a Unit Summary. The summary lists the key ideas and the main concepts covered in each chapter. If you do not understand the information in this summary, you need to review your notes and your chapter summaries or check with your teacher.

The Unit Review asks a variety of different questions for you to check your understanding of the concepts covered in the unit.