

3. Reading Science Textbooks

Scientific literacy helps students deepen understanding, appreciation and exploration of the natural world. Helping them become literate in science means they can read, write, and talk about science and that they understand basic scientific ideas and the processes used in science. It also involves helping students to see the links between science, technology, economics and society.

Reading for Science

Math and science textbooks are among the most difficult books that students must read in the course of their education.

Unfriendly science textbooks have dense text, small print, many colours and sizes of font, pictures, diagrams and other visuals, such as boxes that disrupt the normal left-to-right process of reading. They might also have italics or words in bold in various sizes, and margins that seem to shift and change from page to page. It can be very confusing to decide where to begin and end reading and in which direction to read. Your teen must learn and practice ways to handle these textbooks.

HERE ARE SOME TIPS YOU CAN SHARE WITH YOUR TEEN AS THEY WORK THROUGH THEIR SCIENCE TEXTBOOK:

- Generally, read from left to right.
- Sometimes the text is presented in two columns. The main text column is generally wider. The narrower text column often contains an introduction to the section of the book (if it is on the left), or the materials for an experiment or questions about the content.
- Bold type in the text usually identifies key words. Sometimes italics or a different colour are used for this purpose.
- Boxed material often gives an example or an illustration of the concept. Sometimes the boxes contain information needed to answer question.

They may also be coloured. Coloured boxes often contain the questions to be answered after reading the material.

- Photos are intended to be real-life examples.
- Diagrams often explain something in the text, give an example of how to do something, or make an abstract idea more concrete by helping us see things that we normally cannot see. They usually have captions and labels. The caption names the diagram, and the labels identify parts of the diagram.
- Different font sizes and colours are often used to divide the text headings into main headings and subheadings.
- Sometimes the text directs you to a particular diagram, so you will look at the diagram at that point. If the text does not do this, the reader should read all of the main text paragraphs in the section first, and then look at any illustrations on the page.
- Outside page edges are sometimes colour-coded by chapter.
- Chapter divider pages often tell what is to be dealt with in the chapters, as a kind of preview or mini table of contents.
- The table of contents and index are still in the same places and are easy to follow!

Use these steps to understand a selection that has a **diagram**:

1. Read the paragraph (or paragraphs) that relate to the diagram, and study the diagram, its caption and its labels.
2. Be sure that you understand all of the vocabulary in the passage.
3. Read the rest of the paragraphs.
4. Now visualize the diagram and its details. If you cannot, reread the material until you can.
5. Follow these steps until you can understand all of the ideas in the selection.