The Art of Studying Science

Build your scientific vocabulary

- Know the meaning of the words, both technical words and other words used in the context.
- Read scientific journals, other science textbooks, visit credible scientific websites (they usually end with .org or .edu not .com) and hold discussions with other students.
- Definitions – sometimes authors define or use synonyms next to words, especially when introducing new terms crucial to the meaning of concepts presented.
- Examples – authors often explain meanings of terms by providing simple examples.
- Contrast – authors may explain a term by contrasting it with another term, opposite in meaning.
- Additional information – sometimes authors provide further details to clarify the meaning of a term.
- Use word analysis by breaking a word into its parts: prefix, root and suffix (Prefixes are placed at the beginning of the word; the root is the main part of the word).
- Develop a systematic way of studying words found in your textbooks. Make flashcards, associate the term with a picture, create acronyms.

Mark your chapters

- Mark the important information as you read, preferably with a colored pen, pencil, or highlighter.
- Identify what is important by looking for the headings, key terms, lists, and illustrations.
- Be a reporter – use questioning! Ask yourself, “Who, what, when, where, and why is this important when studying this subject?”
- Underline the answers to your questions.
- Watch for key terms in bold and italics.
• Circle the words that introduce and explain a list.
• Number or letter items as an outline.
• Remember to read through each section before you mark it!

**Using Maps, Diagrams, Graphs and Tables**

• Authors use tables and graphs to help their readers visualize information, and to clarify the text.
• Titles appear in large print and tell what figures and tables are about; always read titles, captions and explanations – they contain important information!
• Details may appear at the top, bottom, or side of the figures and tables.
• A diagram is a drawing or a sketch used to help picture an object, a series of events, a process, or an organization and classification of information.
• A graph is used to compare sizes or amounts. When studying a graph, look for a title or explanation. A circle graph is also known as a “pie chart” or “pie graph.” Look at the entire circle; how a quantity is divided into portions and labels that identify those portions.
• A bar graph contains a series of bars to help you compare several quantities or amounts. A line graph is most often used to show how some quantity increases or decreases over time. When you study a line graph, look at the vertical and horizontal scales to see what the line(s) represent. An upward sloping line represents an increase; a downward sloping line usually represents a decrease.
• Tables are used to present a large amount of detailed information in a short, easy-to-read format. They usually contain statistical or numerical information. Columns in table run from top to bottom.  

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1 Developed By LLCC Learning Lab, Springfield, Illinois.