

## Reading "Smart" in Environmental Science

Reading "smart" in Environmental Science involves two steps:

1. Knowing how the class is taught and what your professor expects you to do.
2. Knowing how to identify quickly what is most important in the reading.

**STEP 1. Decide what level of reading your professor expects so you know how much time to allot.**

In some classes, the professor's lecture covers most of the information you will need to know, so your main goal is reading to build your background knowledge. In other classes or at times when your professor assigns a project or "outside reading," the professor expects you to read and understand the material so you can discuss it when you come to class. Then you must be reading for understanding. *How do these types of reading differ?*

- **Reading for background = reading to become acquainted.**

Before class:

Get to know the general topics of the reading, note new vocabulary, study the "visuals" [photos, charts, diagrams, etc.], and read any summary. Your professor may also want you to read case studies which illustrate important concepts.

After class:

You should use the textbook to supplement your class notes.

For example, if your class notes are unclear about a particular topic, read the appropriate section in your textbook carefully.

Study charts, diagrams, etc. if your professor has emphasized them in class.

*This level of reading works well for lecture-based courses.* [See the Learning & Advising Center's website for information on course types, *Study Smarter.*]

- **Reading for understanding = reading for mastery of the material.**

For this level, it is important to read carefully, remember what you read, and be able to refer to specific evidence from the reading; therefore, you need to annotate\*!

*You should aim for this level of reading if your professor expects you to take part in class discussion or in-class group work which is based on the assignment.*

- **Reading for analysis / evaluation = reading to analyze, form an opinion, and support it.**

Be ready to support a point of view in discussion or in writing using specific evidence from the reading. This level is often required for papers or special projects. Annotation\* is essential. *Environmental Science professors sometimes assign articles related to topics you are studying and expect you to read at this level.*

[\* **Annotation** refers to brief notations made in the margins while you read which make it easy to go back and quickly find particular sentences or passages without spending a lot of time rereading. Although highlighting and underlining can be used, they are only marginally helpful for this purpose. They should not be used alone.]

**STEP 2: How can you figure out what is most important in what you read?**

In this course, there are two main types of reading: the textbook and "outside" readings. Plan to approach each type differently, using available "clues" about what is important to remember.

- a. **Use the clues in your textbook.**

Before you plunge into reading the entire chapter:

- Read the following carefully: *Objectives, Chapter Outline, Summary, Key Terms, Review Questions, Critical Thinking Questions, Concept Map lists.* These items let you know the main topics of the chapter and the terms which are most important.
- Skim some of the **case studies** [the "Environmental Close-Ups," "Global Perspectives," and "Issues-Analysis"]. These items illustrate important chapter topics and try to bring them to life for you. If you don't seem to get much out of these segments, see *Reading Case Studies* on this website.

- If you learn from looking, stop and study the "visuals" - charts, photos, and diagrams. The captions will help you know what point is being made. Remember, "A picture is worth 1,000 words!"

Also, you should know what visuals are in the book so you can study them more carefully after class if your professor has indicated particular ones are important.

When you begin reading:

- *Are you reading for background?* If so, you should not plan to "master" the material...just become acquainted with it. *Reading for understanding?* Be sure you can answer the questions you raise in the next step.
- It's good to have a question in mind when you begin to read. Try turning each heading into one or two questions and then read to answer the question(s). That strategy will help you focus on main ideas and avoid drowning in details. It will also improve your concentration.  
*For example:* for the sections in Chapter 4 you might ask, "What are the limitations of science?" "What is the structure of matter?" "What is the structure of an atom?" "What is meant by 'molecular nature'?" "How are acids, bases, and pH related?" "What is the difference between inorganic and organic matter? What are some examples of each?"
- If you are reading for understanding, underline, number, or circle words and phrases which answer the questions you have raised. [It's good to develop a variety of techniques!]
- As you encounter terms in **bold**, read the definition and examples but do not try to memorize these definitions before class unless your professor has asked you to. Just be ready to return to them later to supplement your class notes.
- If you are reading for understanding, stop at the end of each section and answer your question(s). If you are unable to answer, you may need to reread.

**b. Use the clues in articles, materials from websites, etc.**

Your professor has selected these readings to help you learn more about particular topics in Environmental Science. Often these readings provide current, "real life" examples of the issues you are studying, but they have fewer clues to let you know what is important.

- Start by searching for clues: the title, any introduction, captions, summary, visuals. Do any of them identify the main focus of the reading?
- Can you turn the title or a heading into a question and read to answer the question? Sometimes questions are provided for you in a subtitle or caption.
- If there is an example, what point does it seem to illustrate? For assistance with case studies, see "*Reading Case Studies*" on this website.
- Is there a difference of opinion about an issue? If so, what are the different perspectives? How is each opinion supported? Be ready to indicate the evidence for each "side."
- Is there a problem which needs to be solved? If so, what caused the problem? What are the possible solutions? Are there advantages and disadvantages to the various solutions?

**STEP 3:**

If you find you are spending a lot of time reading but not getting much out of it, call 951-2730 and make an appointment to work with a professional reading/study skills tutor who is familiar with Environmental Science! Don't spin your wheels when assistance is available!

*The Learning & Advising Center - a bright idea!*

