

Why You Should Color Code Your BILL, and How to Do It

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One of the requirements of keeping a learning log in our AP Biology class is that information that is placed into it should either be **color coded** or **highlighted**. Many students **do not** engage in this practice because either:

- a) they don't know how to make effective use of it, or
- b) they have never been taught how to do it for maximum benefit.

This handout will explain the HOW and the WHY. Let's start with WHY.

Color-coding and highlighting your learning log can help you organize information.

How often have you taken notes over several chapters and then gone back to review them, only to discover that you aren't able to pick apart what's important from what's not? By using a color-coding or highlighting system, you can help yourself distinguish what information is truly important from what is not as important. For example, as you read this tip sheet, you are probably noticing that the headers for each paragraph are in boldface type and in red. The information in boldface red type is the key information, while the information that is highlighted in orange-yellow represents supporting information. This is one such way to organize information, but we'll talk about that more later.

Color-coding and highlighting your learning log can help retain more information.

Research performed by a group of Turkish scientists in 2009* indicates that color coding is beneficial because it causes the learner's eyes to track more often over material, and fixate on the color-coded items less frequently, but for a longer period of time. The fixation of the eyes on the color-coded items for a longer period of time leads to more information processing in the brain, which leads to more learning. Students who read information that had been color-coded were better able to retain information since their eyes would immediately track to what had been marked as important. Additionally, this led to improved performance on multiple-choice tests.

So how do you begin using a color coding system? Let's talk about the HOW.

- **Choose a color coding or highlighting scheme.** For example, you may choose to identify key concepts in one color, and supporting concepts in another, and key terms in another. Whatever colors you choose is up to you, as long as you identify what information belongs to what color. Another way you can do this when taking notes is this:
 - Highlight or underline information you thoroughly understand in green.
 - Highlight or underline information you still are unsure about or have questions about in yellow.

- **Highlight or underline information you truly do not understand in red.**
- **The number of colors you use matter.** If you narrow down the number of colors you plan to use, this will reduce confusion for you when you go back to study later on. Also, realize that not every piece of information you gather from viewing lectures or reading your text is important. How you decide to color code/highlight will determine how many colors you end up using.
- **The colors you use must make sense to you.** In the end, it will not matter to me what the colors you choose to use mean, but only that you are implementing some sort of color coding scheme to organize your studies. Additionally, the colors you choose must make some sort of organizational sense for you. If you feel that all key terms should be circled in blue, then by all means, do that!
- **Color coding connections between units of study is also helpful.** For example, if you color code by themes, you could choose a color to represent all the things we study that relate to evolution, or to cellular processes. This will enable you to see the connections between units, and prevent you from viewing them as isolated topics. Biology is all about interrelationships and connections! This practice will help you see how all the things we study are related to one another.
- **Use colored symbols to identify items that require further review or study or to identify items you are confident you know.** When you are going back over your notes after you have taken them, it is a good idea to identify those items that you need to ask questions about, or need further instruction about. If you color code them or use a colored symbol to denote these things, it will make it easier to identify what you need help with. For example, you could put a red star by the things that you need more help with. Conversely, you could use a green star to note the concepts and ideas you are confident you understand.

With these tips, you will be on your way to becoming an organized learner who will see more success in retaining information you have learned.

*see <http://dl.acm.org/citation.cfm?id=1553033> for an abstract of the research study.