

Studying for Science Effectively and Efficiently

What defines a good student in science? How does a student go the next level in the science classroom, transporting them from average to excellent?

There are several different strategies that can be applied to not only science but across the high school curriculum. With these tools at their disposal, any student with good effort can vastly improve their grades in science but more importantly their understanding of science in their world around them.

Taking Notes

A good science student will take good notes on what the teacher supplies them, an excellent science student will take notes that make sense to them. There is not one way to take excellent notes because not everyone learns exactly the same way. Some guidelines to follow and a basic structure can be the same starting point for everyone.

Start by dating your notes; this will keep your dates organized and easy to reference certain things. For example, if the teacher wants to get back to something that you did last Tuesday the 13th, you can easily find that. It is important to use headings for each section of your notes and the subsequent sections that follow under that heading.

It is essential to draw diagrams and pictures in your notes and be able to understand them and explain them. If the teacher is taking time to explain a diagram as opposed to just going over it in bullet form, you should draw them in your notes and write down what her or she is explaining about them.

Developing a shorthand notation is something that comes with experience but you do not need to write down every single word the teacher is going over in a lecture, you will run out of time and not get the essential information. Examples of this include for all subjects “w/” for “with” and “w/out” for “without” but a few for science would be “rxn” for “reaction” and “e-” for “electron”. Also, cut out words that are not essential to understand such as “the”, “a” or “an”.

The last thing to do is to color code, underline, bold, and highlight. Color code by section or by if that is comfortable for you but taking it to the next level would be having different colors for headings, definitions, diagrams, concepts and explanations, and basic notes. Underline headings and the most important things; same goes for bolding and highlighting. You may want to bold headings, underline definitions, and highlight concepts to differentiate amongst the important factors.

Read the Text

Actually read the text and take notes on it or go through it with you already existing notes to add on or change things. Truly reading for depth is something that you need to do in order to go to a level of understand beyond that of just memorization.

Flashcards

Flashcards are an efficient tool for the memorization and the eventual building of understand for terms, symbols, or any content that requires more depth that can be quickly viewed and recited back. Do them with a partner in order to not cheat yourself and peek at the answer. The longer you struggle with the content in your mind and the longer you think about it, the more likely you will be to remember it.

Do Practice Problems

Re-do problems that you have gone over in class and have done for homework that you know the answers for. Do not look at the correct answer as you do it and once again, the more you push yourself and struggle with it, the more you will remember what you do. This allows you to do more complex problems that involve heavy problem solving or the explanation of concepts that go beyond what a flashcard can encapsulate. Check your answer with what you have already done to check to see where you made your mistakes and continue to practice until you get it down.

Go Beyond Memorization, Learn to Apply

Memorization is a temporary technique that gets you by whether its for a quiz or a test but as soon as that assessment is done, you forget it. This information will be prevalent throughout the entire class so it is important to remember this information. Instead of memorizing a term, learn what it means in the context of application in your classroom as well as what is going on in the world around you. If you understand a term beyond the dictionary definition and can tell someone what it is about and where it is used and what it is used for, you truly know and understand it.