

## HL going into Year 2 IB Physics...*Fun during the break Activities!*

I have organized this fun into 7 nice little tasks. We have to do this for IB so we might as well have fun with it. I encourage you to get together, if you can, to do these. While everything is due on the first day of class, I wouldn't wait until the last couple of days to do them! Typical time needed is in red. Total time should be at least **5 to 8 hours**.

Here you go:

1<sup>st</sup>) **1hr+** Using your IB equation packet, [IB Objectives](#), your [Tsokos Topic 7 pdf](#), and the internet; please **READ** and **Outline** the concepts for Atomic and Nuclear Physics (Core Topic 7.1 - 7.2). This simply means that you read what is in the IB document and summarize the key points. If you do this online you can work together in a group on a **shared google doc** but make sure you read and understand the whole thing as best you can. An online one is nice since it will be a better outline and you can cut and paste pictures and make links. (I like to make a big table and type in the table. [Here](#) is a student's outline for the whole SL curriculum from last year. Use it as a guide, not a copy and paste) It's fine if you really want to do a good job and spend more than one hour, these documents are great to have when review time happens later in the year...

2<sup>nd</sup>) **1hr** Do the Alpha Particle Decay Lab. Here is the [link](#).

3<sup>rd</sup>) **1hr** Using our [Tsokos Topic 7 pdf](#) (or your text) you are going to use a "[Self Quizzing Method](#)" on the Twelve "Worked Examples" in sections 7.1 & 7.2. (Don't do 7.3)

1. Cover the answer and try to do the problem yourself.
2. Uncover the answer and see if you were correct.
3. If "yes" go to the next problem. If "no" repeat steps 1&2 as many times as needed. Go back and read the section if needed.

4<sup>th</sup>) **1hr** Do the Binding Energy Lab: (Using a database!). Here is the [link](#).

5<sup>th</sup>) Do **2+ hours** work on the "Test Yourself" problems in the [Tsokos Topic 7 pdf](#). The answers are in the back of the pdf. There are 24 of these so you might not get them all done! Do as many as you can in **2 hours** of focused work. I strongly urge you to use the "Self-Quizzing" method on this!

6<sup>th</sup>) **Optional** Please realize that you will be VERY busy when the 2<sup>nd</sup> Semester gets going, so please review things now. When IB exam review time comes, you will be glad that you did! I strongly urge you to read the [IB Objectives document](#) on those units we have already done and then use your text to see how well you understand what is written there in IB style. Or seriously just **don't do this** since you have other stuff to do. In anycase, I hope that this wasn't too painful. We have completed units 1-4, 6, 8, and 9

7<sup>th</sup>) **LESS Optional** Work on your IA!! At this point that means learning the requirements thoroughly and figuring out your topic/question! I have organized this for you [here](#). You should come back to school with 3 ideas/questions ready to go. Have them written down, not just in your head.

Have fun and learn some interesting stuff!!!