###### Y11-12 Transition: Chemistry Week 2 Details

Watch a short introduction to the week (**password = chemweek2**):

<https://www.loom.com/share/ae647ba8da5e4659800259b97190250c>

This week we are going to look at atoms – all matter on earth and beyond is made up of atoms / sub-atomic particles and so to have a good understanding of chemistry, we must understand things at the atomic (or “quantum”) level. We’re going to recap some atomic structure from GCSE and then hone in on electrons.

I’ve included a resources list can be found in the links section – this is to help you get ready for the course and to give you some suggestions on wider reading/listening around science if you’re interested.

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Monday Task:

1. Click on this link to complete a short recap quiz online on elements and understanding atoms. Please do all the questions from section 1-3 (4 = optional fun).

<http://www.tv411.org/science/tv411-whats-cooking/salt-science-lesson>

1. Watch this video outlining what atoms are made up of – there is slightly more detail here than you need to currently know but hopefully this gives you an insight what atoms are like (and how much more there still is to know).

<https://www.youtube.com/watch?v=ooWfzpUIoNM>

1. Complete the worksheet titled “Mon task – atomic structure” to check your understanding. There is an attached GCSE Periodic Table if you need any help. Please upload this to SMHW/email me this piece of work.

Thursday Task:

Hello – this is the work for part 2 of the introduction week.

Do some research on electrons and present your work either as a poster or as a presentation (powerpoint or on paper is fine) – see if you can include the following things from GCSE.

* Who discovered electrons and how
* How they are arranged inside atoms
* Any patterns in the periodic table that you notice with electrons
* How atoms can lose or gain electrons to form ions

*Optional Challenge: A level and (slightly) beyond*

* Shells are also called “energy levels”. Find out what the phrase “fixed energy levels” means.
* Learn about how “electron shells” can be broken down into subshells called “orbitals” using the chemguide link below.

Below are some links to help you with your task:

<http://padakshep.org/otp/subjects/chemistry/physical-chemistry/discovery-of-electrons-protons-and-neutrons/>

<https://www.bbc.co.uk/bitesize/guides/zy2h9qt/revision/5>

<https://www.bbc.co.uk/bitesize/guides/zy2h9qt/revision/6>

<https://www.bbc.co.uk/bitesize/guides/ztr8nbk/revision/2>

For the optional challenge

<http://www.brooklyn.cuny.edu/bc/ahp/LAD/C3a/C3a_build.html>

<https://www.chemguide.co.uk/atoms/properties/orbitsorbitals.html#top>