

Year 12 Transition

Welcome to Nailsea Sixth Form



KS5 Subject: **Chemistry**

Objectives for Transition Tasks:

- To start to develop expected 6th form study skills, including independence
- To culture an interest and passion for your chosen subject through enquiry
- To learn core concepts of the subject to use in your studies

Watch:

<https://www.youtube.com/watch?v=ppgklUrK89w>

If you can find it, the series "Chemistry, a Volatile History" (Jim Al-Khalili) is fantastic. No longer available on the iPlayer.

Dark Waters – recent film with Mark Ruffalo documenting the true story of DuPont and their fluorinated chemicals.



Independent Task
(to be submitted):

Read:

Catching a Cheat Available at:

<https://www.stem.org.uk/system/files/elibraryresources/2017/03/Catching%20a%20cheat.pdf>

This Catalyst article looks at analytical chemists who are involved in many kinds of testing, including drug testing to catch cheats in sport.

Microplastics and the Oceans Available at:

https://www.stem.org.uk/system/files/elibraryresources/2016/11/Catalyst27_1_microplastics_%20and_the_oceans.pdf

This Catalyst article looks at microplastics. Microplastics are tiny particles of polymer used in many products. They have been found to be an environmental pollutant especially in oceans.

www.chemguide.co.uk

An amazing resource with chemistry theory you can trust, from an experienced teacher.

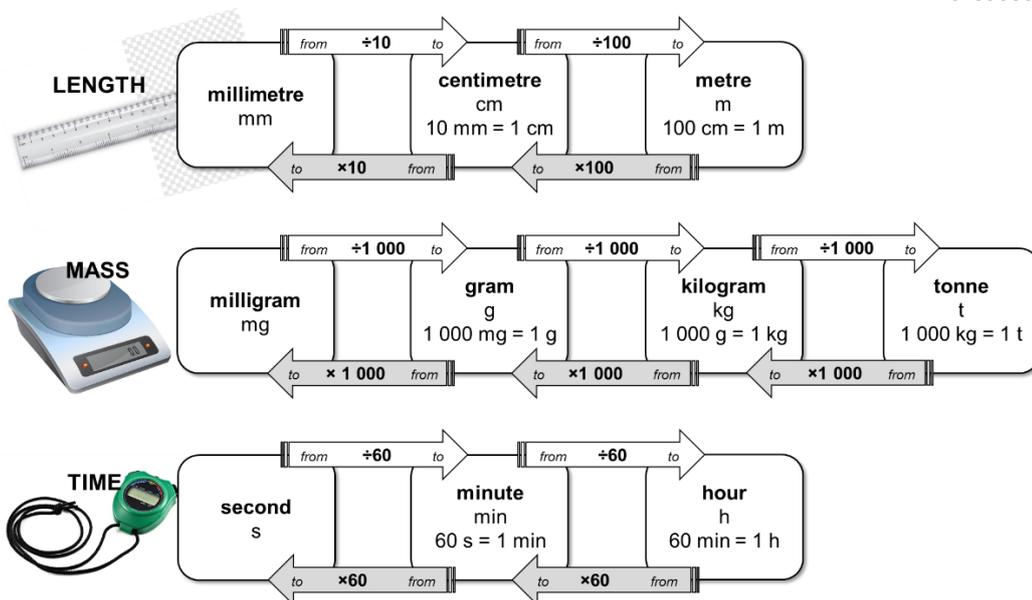


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Aim Higher Task:

1. A block of iron has a length of 1.2 cm. Calculate its length in millimetres.
2. The width of the classroom is 7200 cm. Calculate its length in metres.
3. A reaction reaches completion after 4½ minutes. Convert this time into seconds.
4. The stop clock reads 2 min 34 s. Convert this time into seconds.
5. A method states that a reaction needs to be heated under reflux for 145 min. Calculate this time in hours and minutes.
6. A factory produces 15 500 kg of ammonia a day. Calculate the mass of ammonia in tonnes.
7. A paper reports that 0.0265 kg of copper oxide was added to an excess of sulfuric acid. Convert this mass of copper oxide into grams.
8. A packet of aspirin tablets states that each tablet contains 75 mg of aspirin. Calculate the minimum number of tablets that contain a total of 1 g of aspirin.
9. A student measures a reaction rate to be 0.5 g/s. Convert the rate into units of g/min.
10. A factory reports that it produces fertiliser at a rate of 10.44 kg/h. Calculate the rate in units of g/s.



DEADLINE FOR TRANSITION TASK: Please bring to your first lesson in September.