

Lesson 4. Applying and assessing knowledge: Particle Model.

1. Write out and answer these questions from the video:

- a. What is shc measured in?
- b. What is slh?
- c. What is the area under a molecules energy graph equal to?



2. Think honestly whether you understand, or not, these important things

(Copy out the table and put a tick or cross in the column)

	😊	😐	😞
1. Density equation and changes of state.			
2. Applying the thermal energy equation, shc, slh.			

3. Test. (Write out these questions and answer. (Leave a gap for your corrections).

- 1. What is the equation for density?
- 2. What symbol is used to show density?
- 3. What is meant by the term "internal energy"?
- 4. What are the units of specific heat capacity?
- 5. Give an example of a change of state.
- 6. What is specific latent heat?
- 7. What is mass measured in?

Now check your answers by using your phone and typing each question into google. Mark your own work and give yourself a tick or a cross. Write in the correct answer where you went wrong.

4. "Sign off" your work.

Congratulations! You have completed Particle Model
Copy the box below, fill in the date and ask your teacher to put a stamp in your book to say it is done.

Topic	Verification	Teacher Signature	Date
<u>Cell biology</u>			

Subject: Biology	Topic: 20 Particle model of matter
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Lesson 1. Introduction to Particle model of matter.

The particle model is widely used to predict the behaviour of solids, liquids and gases and this has many applications in everyday life. It helps us to explain a wide range of observations and engineers use these principles when designing vessels to withstand high pressures and temperatures, such as submarines and spacecraft. It also explains why it is difficult to make a good cup of tea high up a mountain!

^D
Copy the simplified introduction below into your books:

The particle model is a model that describes the arrangement and movement of particles in a substance and is used to predict the behaviour of solids, liquids and gases. Understanding the particle model is useful for engineers and scientists especially. It helps design vessels such as submarines and spacecraft which have to withstand high temperatures and pressures, for

^D
Look these key words up*, write down their meanings and learn them.

pressure / observations

Produce a Frayer diagram like the one shown underneath for the following words (taken from the topic introduction as produced by your examination board):

predict

E.g.:

DEFINITION: An orbit is the path a smaller object travels around a bigger object because of its gravity.		ORBIT	CHARACTERISTICS: Orbits are circular or elliptical / The smaller mass orbits the larger mass / orbit can be a verb or a noun.
Examples: The Moon travels around the Earth / The Earth, Mars, Jupiter all orbit around the Sun / A satellite orbits around the Earth.			

* If you are allowed to use your phone in class then use Google. If not then use the index at the back of a textbook.

Lesson 2. Acquiring knowledge: Particle model of matter .**Watch the following video:**

<https://www.youtube.com/watch?v=cZz9oGgJOL0>

Questions that check you have watched the video will be included in the test at the end of the week, but you do not need to make notes unless you wish to.

**Follow this link:**

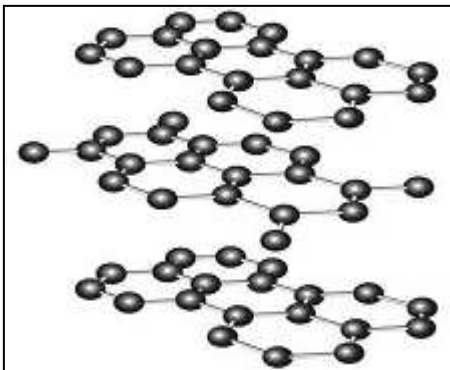
<https://www.bbc.co.uk/bitesize/guides/zqjy6yc/revision/1>

Read through pages 1 to 3. One question is for each of the pages.

**Answer the following questions.**

Write them out first, clearly separating them from the answers so that you can revise easily. Some of these will be included in the test at the end of the week.

1. What is density?
2. Write down the equations for the volume of a cube, sphere, cylinder and cone.
3. When you are investigating density, what 3 things are especially important to do?

**Finally make some summary revision notes on the same pages**

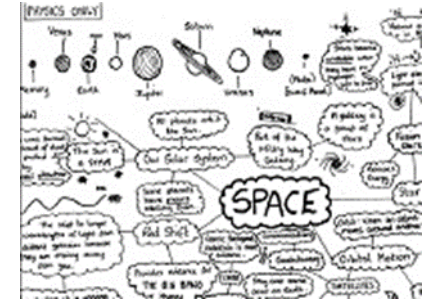
Make this a timed activity. Give yourself 20 minutes and try and select the things that you think are absolutely the most important.

Ask your teacher to "sign off" your work before you move on to the next lesson.

Lesson 3. Acquiring and applying knowledge: Particle Model of M.**Read the pages from the following link:**

<https://www.bbc.co.uk/bitesize/guides/zwwfxfr/revision/1>

Produce a mind map of these pages like the ones below

**Read the pages from the following link:**

<https://www.bbc.co.uk/bitesize/guides/z2xcfcw/revision/1>

Produce a word search, crossword or piece of display work (on plain paper) for these pages.

**Finally make a list of 3 important facts you think you will need to learn from the work covered today.**

Try and learn them.

Do you also remember the meanings of the key words from Lesson 1?

If not then try using a "cover and reveal" method to do so – ask your teacher if you are not sure.

