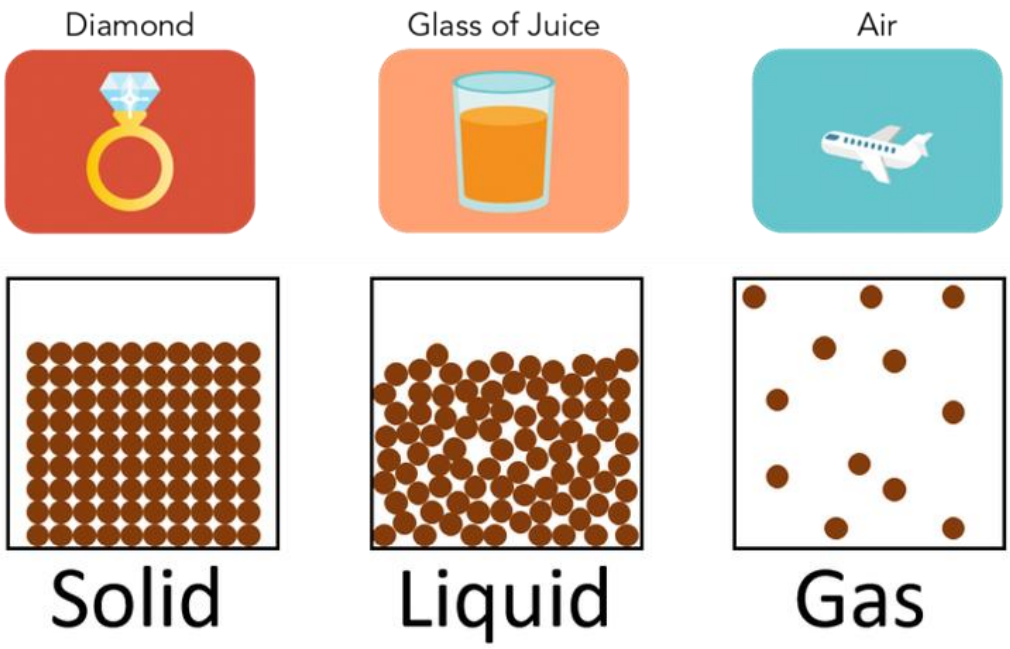
S1 Science
Model of Matter – Homework



Name ……

Class ……

PROGRESS LOG – Model of Matter

Homework	Due Date	What did I do well?	What do I need to improve upon?	Have I corrected my mistakes?	Parent signature
1. Solids, liquids and gases					
2. Diffusion and contraction					
3. Expansion					

End of Unit Assessment percentage:

Where are my 'learning gaps'?

How will I 'fill' them?

Model of Matter – Solids, liquids and gases Homework 1

1. How many main states of matter are there?

   _____

2. What is the solid state of water called?

   _____

3. What is the gas state of water called?

   _____

4. Which of the following diagrams – X, Y or Z represents:

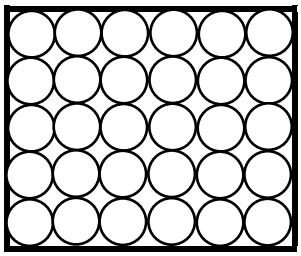
   (a) a liquid?

   _____

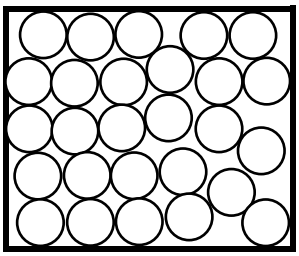
   (b) a solid?

   _____

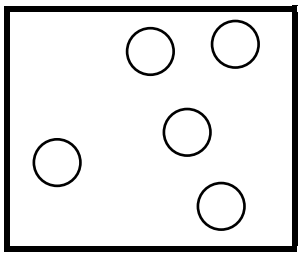
X



Y



Z



5. Describe the arrangement of molecules in:

(a) a solid

_____

_____

(b) a liquid

_____

_____

(c) a gas

_____

_____

6. Complete the table that displays the names of common solids, liquids and gases that you may find in your home (3 for each)

Solid	Liquid	gas

More to do

Internet Research:

7. There is a fourth state of matter that exists. Find out the name of this state and write a short paragraph to describe the properties of this state.

_____

_____

Model of Matter – Diffusion and contraction Homework 2

1. When someone sprays deodorant at one end of a changing room, people at the other end can soon smell it. Using the space below draw two diagrams showing

a) Where the gas particles are immediately after spraying
b) Where the gas particles are after a few minutes

a) Immediately after spraying b) are after a few minutes

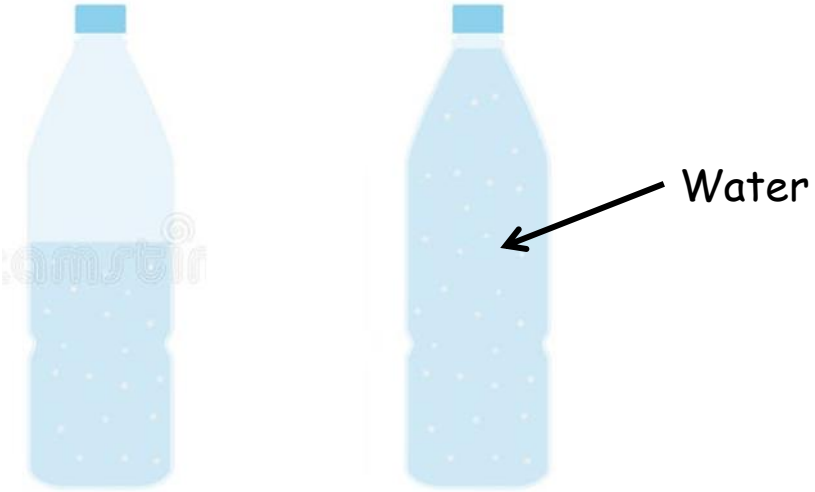
2. What word is used to describe this process of molecules moving?

_____

3. Complete the table below:

State of matter	Can it be compressed?	Explanation
Solid	No	The particles are too close together and cannot be squeezed closer.
Liquid		
Gas		

4. Which of these two bottles could be compressed? Explain why.



_____

_____

_____

More to do

5. This process is important for living things too. Can you think of any examples of this process happening in your body?

_____

_____

_____

Model of Matter - Expansion Homework 3

1. Imran and James were drinking full cartons of juice on a hot sunny day. While they were holding them, they noticed that the juice began to squirt out of the straw. Imran said "The juice is expanding inside the pouch and that's why it is leaking out".

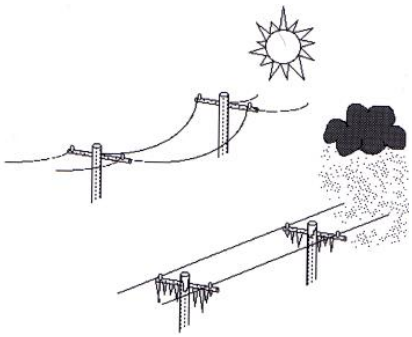
   Why does the juice expand?

How could they stop the juice from expanding?

What is happening to the particles of juice as they expand?

2. Describe the applications of expansion and contraction in the following situation.

Telephone wires



3. Here is some information about the densities of metals.

The least dense metal is lithium with a density of 0.53g cm^{-3} and the densest is osmium with a density of 22.5g cm^{-3}. Aluminium is used to make the structures of planes because it is light and strong; it has a density of 2.70g cm^{-3} and lead is used to make weights for divers; the density of lead is 11.3g cm^{-3}. Mercury, which is used in thermometers, has a density of 13.6g cm^{-3}.

Put the information into a table with two headings.

4. James left a pot lid in the hot oven by mistake. When he took it out it did not fit on the pot.

(a) Explain why this happened.

(b) How could James make the lid fit the pot?