KNOWLEDGE ORGANISER

SCIENCE: GET SORTED YEAR FIVE

KEY KNOWLEDGE:

QUESTION 1: What is a solid?

ANSWER

Solids stay in one place and can be held.
Solids keep their shape. They do not flow like liquids.
Solids always take up the same amount of space. They do not spread out like gases.
Solids can be cut or shaped.
Even though they can be poured, sugar, salt and flour are all solids. Each **particle** of salt, for example, keeps the same shape and volume.
Heating some solids can turn them into liquids.
Cooling a liquid can turn it into a solid: Ice.

QUESTION 2: What is a liquid?

ANSWER

Liquids can **flow** or be **poured** easily. They are not easy to hold.
Liquids change their shape depending on the container they are in.
Even when liquids change their shape, they always take up the same amount of space. Their **volume** stays the same.
Heating a liquid can turn it into a gas.
Cooling a liquid can turn it into a solid.
Heating a solid can turn it into a liquid.
Cooling a gas can turn it into a liquid.

QUESTION 3: What is a gas?

ANSWER

Gases are often invisible.
Gases do not keep their shape or always take up the same amount of space. They spread out and change their shape and volume to fill up whatever container they are in.
Gases can be squashed.
Heating a liquid can turn it into a gas.
Cooling a gas can turn it into a liquid.

QUESTION 4: Are all metals the same?

Around 75% of the elements in the periodic table are metals. Metals are known for conducting electricity and heat well. Many metals are strong, shiny, and hard. They are also often malleable, meaning they can be shaped without breaking or cracking.

There are all sorts of metals. These metals include many elements that you are probably already familiar with like iron, gold, silver, and platinum. There are alkali metals, alkaline earth metals, and transition metals, just to name a few.

Many metals that we use today are alloys. Alloys are metals that combine two or more elements. Often alloys are stronger and harder than pure metal.

Bronze was one of the first alloys used to make tools. Bronze is a combination of copper and tin. Metal is found inside of rocks in mines. These rocks are called ore. In order to separate the other minerals in the rock from the metal, the ore is heated to really hot temperatures in a process called smelting.