



Title of topic: Alchemy Island
 Topic focus: Science

Year 5 Autumn 2

This is the knowledge organiser for our topic. It includes all the learning outcomes, key facts and vocabulary. Please share this with your child to help them develop their knowledge and understanding of our topic.

A reversible change is when a material that was altered returns to its original state.
 Irreversible changes are when materials are permanently altered.

A metal is a solid material that conducts heat and electricity and is often hard, strong and shiny. The properties of a metal determines its uses such as electrical wiring, jewellery and use in construction.

Alchemy is an ancient study of how to change basic metals into gold. Alchemists used metals, salts, acids and many other chemicals in their attempts to make gold. They also tried to create potions that would cure all diseases and allow people to live forever.

- Key Vocabulary:
- Alchemy/ alchemist
 - Citadel
 - Conductor/non-conductor
 - Contours
 - Coordinates
 - Dissolve
 - Fantasy
 - Human/physical features
 - Insoluble
 - Irreversible/reversible change
 - Landscape
 - Solution
 - Soluble
 - Solvent
 - Terrain
 - Transparency

Metal	Properties	Uses
gold (Au)	shiny yellow, malleable, non-magnetic, good conductor of electricity and heat	jewellery, wire, money, tooth fillings, electrical components
silver (Ag)	shiny, malleable, non-magnetic, excellent conductor of electricity and heat	jewellery, mirrors, cutlery, ornaments, money
iron (Fe)	dull, strong, malleable, magnetic, good conductor of electricity and heat, rusts easily	bridges, railings, machinery, steel production
copper (Cu)	shiny reddish-brown, malleable, non-magnetic, excellent conductor of electricity and heat	wiring, motors, coins, piping

Property	Test
hardness	Squeeze the material between two fingers. If the material squashes, it is soft.
magnetism	Test the material with a magnet. If the material is attracted towards it, it is magnetic.
transparency	Shine a torch through a sample. If all the light shines through the material, it is transparent. If some of the light shines through, it is translucent. If none of the light shines through, it is opaque.
electrical conduction	Add the material to a simple series circuit containing a lamp and battery. If the lamp lights up, the material is an electrical conductor.
thermal conduction	Warm the material between two hands and place on thermochromic sheet, which changes colour when it is heated. If the sheet changes colour, the material is a thermal (heat) conductor.

Biomes are areas of our planet with similar climates, landscapes, animals and plants. There are several types of biomes, including desert, savannah, woodland, grassland and tundra.

Maps have been used for thousands of years to help people find their way around unfamiliar areas. Coordinates are used to pinpoint a specific location. The first set of numbers refers to the position along the x-axis and the second gives the location along the y-axis.

