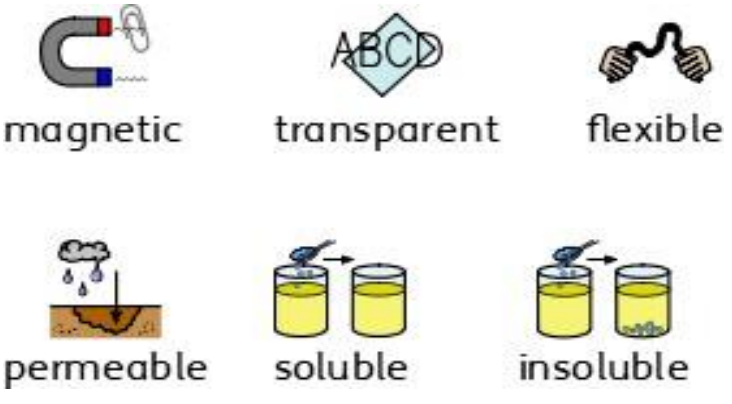
Year 5
The Americas

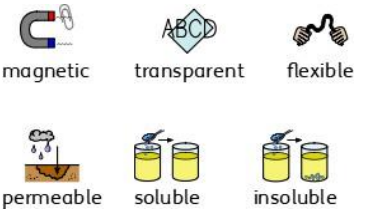
Science
Properties and changes of materials

Vocabulary	
circuit	a complete route which an electric current can flow around
condensation	small drops of water which form when water vapour or steam touches a cold surface, such as a window
conductor	a substance that heat or electricity can pass through or along
dissolves	when a substance is mixed with a liquid and the substance disappears
electricity	a form of energy that can be carried by wires and in used for heating and lighting, and to provide power for devices
evaporation	to turn from liquid into gas; pass away in the form of vapour.
filtering	a device used to remove dirt or other **solids** from **liquids** or **gases**. A filter can be made of paper, charcoal, or other material with tiny holes in it.
flexible	an object or material can be bent easily without breaking
gas	a form of matter that is neither **liquid** nor **solid**. A **gas** rapidly spreads out when it is warmed and contracts when it is cooled.
insoluble	impossible to **dissolve**, esp. in a given **liquid**.
insulator	a non-conductor of electricity or heat
irreversible	impossible to reverse, turn back, or change.
liquid	in a form that flows easily and is neither a **solid** nor a **gas**.
magnetic	having to do with magnets and the way they work
melting	to change from a **solid** to a **liquid** state through heat or pressure
particles	a tiny amount or small piece
permeable	of a substance, being such that **gas** or **liquid** can pass through it
process	a series of actions used to produce something or reach a goal.
properties	the ways in which an object behaves
rate	the speed with which something happens
resistance	the opposing power of one force against another.
reversible	able to turn or change back
solid	having a firm shape or form that can be measured in length, width, and height; not like a **liquid** or a **gas**
soluble	able to be **dissolved**.
solution	a mixture that contains two or more substances combined evenly
state	the structure or condition of something
temperature	a measure of how hot or cold something is
thermal	relating to or caused by heat or by changes in **temperature**



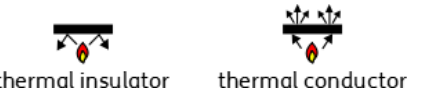
What will I know by the end of the unit?

How to group materials based on their properties using more complex vocabulary.



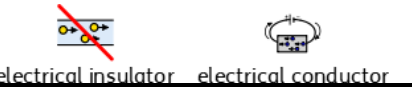
What are thermal insulators and conductors?

- **Materials** which are good **thermal conductors** allow heat to move through them easily.
- **Thermal conductors** are used to make items that require heat to travel through them easily, such as a saucepan which requires heat to travel through to cook food.
- **Thermal insulators** do not let heat travel through them easily.
- Examples of **thermal insulators** include woollen clothes and flasks for hot drinks.



What are electrical insulators and conductors?

- **Electrical conductors** allow electricity to pass through them easily while **electrical insulators** do not.
- **Electrical insulators** have a high **resistance** which means that it is hard for electricity to pass through these objects.



What is dissolving?

- When the **particles** of a **solid** mix with the **particles** of a **liquid,** this is called **dissolving**.
- The result is a **solution.**
- **Materials** that **dissolve** are **soluble**.
- **Materials** that do not **dissolve** are **insoluble**.

Can materials be separated after they have been mixed?

- Some **materials** can be separated after they have been mixed based on their **properties** - this is called a **reversible** change.
- Some methods of separation include the use of a magnet, a **filter** (for insoluble materials), a sieve (based on the size of the solids) and **evaporation.**
- When a mixture cannot be separated back into the original components, this is called an **irreversible** change. Examples of this include when materials burn or mixing bicarbonate of soda with vinegar.

History

The Mayans

Key Events	
2000 BC	The Maya civilization comes into being in central America.
300 BC AD 900	Cities, such as El Mirador, become large and powerful. Cities in the rainforest are abandoned due to extensive drought. People move north to the highlands of Guatemala and the Yucatán.
AD 1000	Cities like Chichén Itzá (Which has two temple pyramids) are still thriving.
AD 1500s	The Spanish arrive in South America and set out to destroy the remaining elements of Mayan civilization as part of their conquest.
AD 1839	American explorer and writer, John Lloyd Stephens, and British artist, Frederick Catherwood explore Copán and extensively document what they find, reigniting interest in the Maya civilisation. They go on to document other Maya cities, including Chichén Itzá.
AD 2014	The cities of Lagunita and Tamchén are rediscovered.

Vocabulary	
Civilisation	An organized society with its own culture and way of life, existing in a particular area over a particular period of time.
Drought	A long period with very little rain.
Ritual	A ceremony, often religious, with set actions performed in a set order.
Jaguar	A big cat, heavier than a leopard, with yellowish fur and black spots
Scribes	People paid to write things down, either as an official record or for someone else unable to write.
Codices	Ancient handwritten texts. Maya codices could be unfolded like a concertina. One text is called a codex.
Maize	Another word for sweetcorn or corn on the cob. It can be made into a dough and baked into tortillas.
Cacao beans	Cacao trees sprout pods directly from their trunks. When they are ripe, the pods can be broken open to reveal the beans, which can then be dried, roasted and ground.

Religion

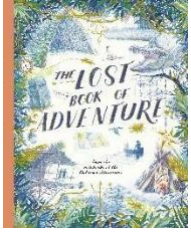
The Maya believed in and worshipped a number of different gods. They believed that the gods had a good side and a bad side and that the gods could help or hurt them. The Maya would dance, sing and sometimes make offerings of blood to the gods. Priests were very important in Maya society as it was believed that they could communicate directly with the gods. They would perform different rituals during festivals or special ceremonies in order to appeal to the gods.

The Upperworld and the Underworld.

The Maya people believed that the earth, which they called the Middleworld, was large and flat and resting on the back of a creature, such as a turtle or crocodile. On the Middleworld grew a tree whose branches reached up into the heavens (the Upperworld) and whose roots grew down into Xibalba (the Underworld), which was guarded by gods of death who looked like jaguars. Ordinary Maya people believed that, after they died, their souls would travel through a series of caves and tunnels to Xibalba. Rulers and noblemen believed that they had a chance of getting to the Upperworld.

English

Exploration Narrative: Write a survival narrative
Information text: Write a survival guide



Grammar Focus:

- Indicate degrees of possibility using adverbs.
- Understand the difference between structures typical of informal speech and structures appropriate to formal speech in writing, eg the use of the passive form
- Linking ideas across paragraphs, using adverbials
- Semi-colons to mark boundaries between independent clauses of equal weighting
- Use hyphens to avoid ambiguity
- Commas for clarity

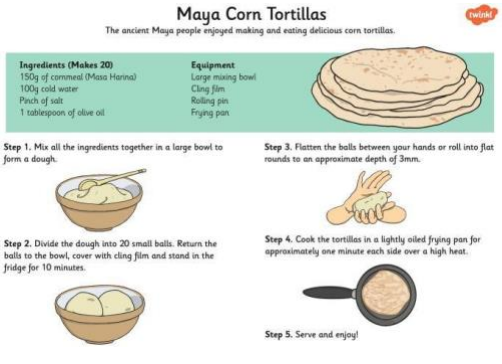
Maths

Statistics, Properties of Shapes

- Draw and interpret line graphs
- Read and interpret tables
- Read and interpret timetables
- Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.
- Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- Use the properties of rectangles to deduce related facts and find missing lengths and angles
- Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Design Technology

Food – Celebrating Cultures



PE

Rounders and Outdoor Athletics