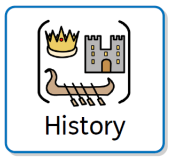
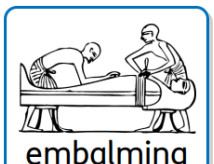
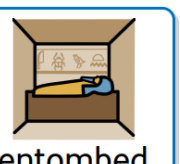
Engineering Egyptians







Afterlife	The place where Egyptians believed they would go after they died.
Akhet	The season of the year when the Nile river flooded.
Canopic Jars	Special jars that held organs of a mummy including the lungs, intestines, liver and stomach.
Hieroglyphics	A type of writing that used a combination of pictures and symbols.
Mummification	The process of preserving a body after death in preparation for the afterlife.
Papyrus	A plant that grew on the banks of the Nile. It was used as an early version of paper.
Pharoah	The supreme ruler of all of Ancient Egypt.
Sarcophagus	A large stone box that held a mummy's coffin. Often richly decorated for Pharaohs.

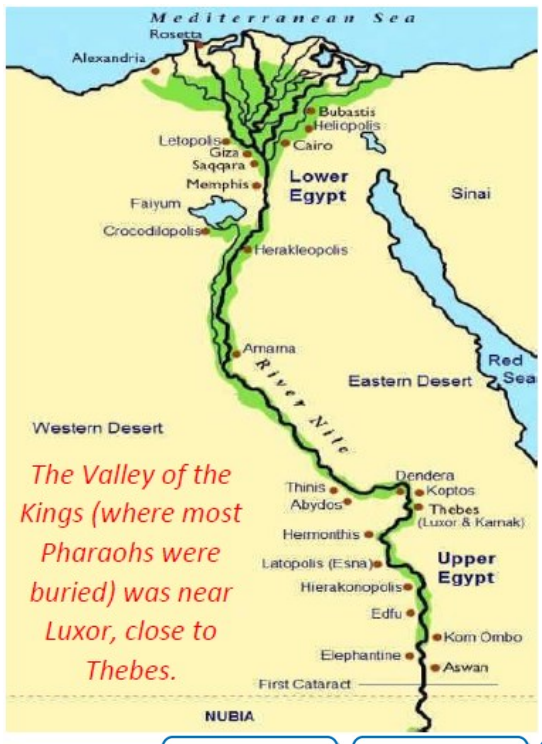
The word "pharaoh" means "Great House," a reference to the palace where the pharaoh resides. Pharaohs were the rulers of ancient Egypt; they were considered the divine intermediary between the people and their Gods. Religion was an important part of their civilisation. Maintaining religious harmony and participating in ceremonies were part of the pharaoh's role as head of the religion.

The most significant artifacts associated with Pharaohs were found in their tombs, including sarcophagi, statues representing the pharaoh as a God, and various personal items like jewellery and weapons.

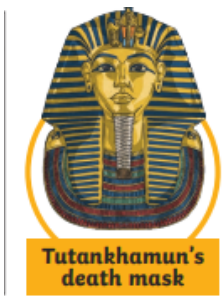
Embalming and Mummification

1. Wash the body.
2. Pull out the brain through the nostrils with a hook and fill the skull with sawdust.
3. Remove all internal organs except the heart. Put them into canopic jars.
4. Cover the body in natron salt and leave it to dry for 40 days.
5. Remove the natron salt and pack the body with straw, dried grass or linen.
6. Apply makeup and fake eyes.
7. Wrap the body in linen fabric, adding amulets and a Book of the Dead.
8. Place the mummy in a sarcophagus (decorated coffin).


canopic jars



Pyramids were built as tombs and monuments to pharaohs. They were built from limestone blocks that were cut from the ground. Wooden sleds pulled by people over wet sand were used to move the blocks. The Pyramids were built to the west of the Nile River, which was associated with the land of the dead. The base of a pyramid was a perfect square, and the pyramids had four triangular sides and deep inside a burial chamber was located which contained the pharaoh's mummified body and treasures. To prevent people from entering, statues of guards were placed outside the burial chamber doors and traps and curses were put on the tombs and pyramids to keep robbers out. The largest pyramids were made from over 2,000,000 blocks of limestone. There are around 138 Egyptian pyramids.


Tutankhamun's death mask

The Nile

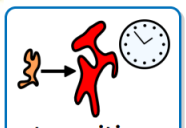
The river Nile was essential to life in ancient Egypt. Every year, it flooded, leaving behind a black silt that enriched the soil for growing crops. The river was also used to irrigate fields in other areas.

Most people lived along and around the Nile. This is still true in Egypt today. The river was used for water, fishing and trade. Mud from the river was used for bricks and papyrus plants were used to make paper.


Computing


manipulate

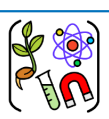

criteria


transition

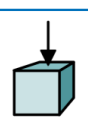

animation

Slide Show Top Tips:

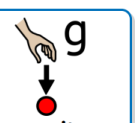
1. Choose a font style and size that your audience can read from a distance.
2. Keep your text simple and minimise the amount of text on your slides.
3. Use art to help convey your message.
4. Use high contrast between background colour and text colour.
5. Make slide backgrounds subtle and keep them consistent.


Science


resistance

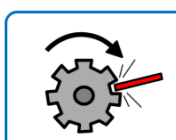

contact

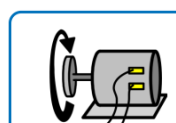

velocity

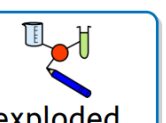

gravity


Design Technology


drive belt

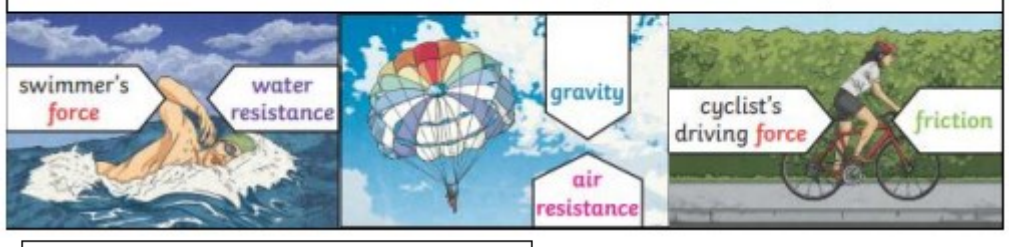

spindle


driver


exploded diagram

Examples of forces in action:

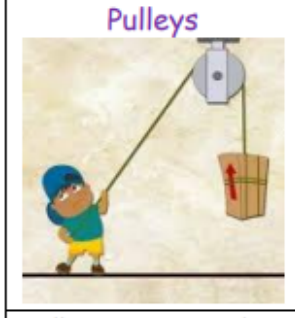
Water resistance and **air resistance** are forms of **friction**. **Friction** is sometimes helpful and sometimes unhelpful. For example, **air resistance** is helpful as it stops the skydiver hitting the ground at high speed. **Friction** on a bike chain can make the bike harder to pedal so it is unhelpful.



Types of Motion in Mechanical Systems	
rotary motion	Turning round in a circle, e.g. a wheel.
linear motion	Moving in a straight line, e.g. paper trimmer.
reciprocating motion	Moving forwards and backwards in a straight line, e.g. cutting with a saw.
oscillating motion	Swinging from side to side in an arc, e.g. a pendulum in a clock.

Key vocabulary	
friction	A **force** that acts between two surfaces or objects that are moving, or trying to move, across each other
air resistance	A type of **friction** caused by air pushing against any moving object
water resistance	A type of **friction** caused by water pushing against any moving object
buoyancy	An upward **force** that a liquid applies to objects
streamlined	When an object is shaped to minimise the effects of **air or water resistance**
mechanism	Parts which work together in a **machine**. Examples of mechanisms are **pulleys, gears and levers.**

This shark is **streamlined**. It has a pointed nose to cut through the water, and a smooth, low, curved back to allow the water to flow over and around it. It does not create much **water resistance** so it can move through the water quickly.

Pulleys	Gears/Cogs	Levers
		
Pulleys can be used to make a small **force** lift a heavier load. The more wheels in a pulley, the less **force** is needed to lift a **weight**.	Gears or cogs can be used to change the speed, **force** or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other.	Levers can be used to make a small **force** lift a heavier load. A lever always rests on a pivot.