

In this unit: Pupils will investigate different properties of materials. Pupils will also learn the names of the planets, their shapes and that they orbit the sun. They will then use what they have learned to design and build a space suit for Buzz Lightyear to wear in space.

Children should already know:

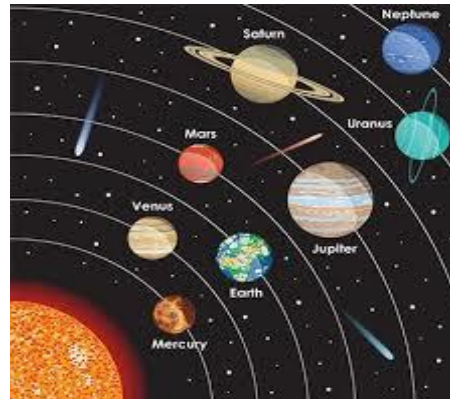
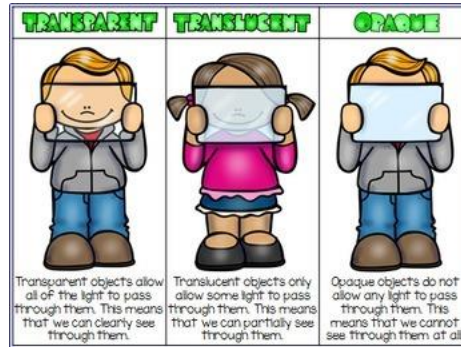
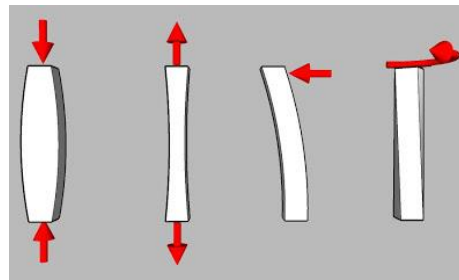
- that objects are things that you can touch or see.
- that objects are made from materials and can name many of these materials.
- that some materials are natural and some are man-made.
- the properties of everyday materials.
- that objects can be compared and grouped on the basis of their physical properties.

At the end of this unit, children will know:

- that different materials have different properties.
- that different materials are suitable or unsuitable for different purposes.
- that different materials can be used for the same thing.
- that everyday materials can be used in creative and unusual ways.
- that some objects are solid and be able to identify which objects are.
- that some solid objects can be changed by twisting, bending, squashing and stretching.
- the names of the eight planets in the solar system.
- that planets are spherical in shape and that they orbit the sun.

Children could investigate:

- waterproofing and absorbency.
- the link between surface area and floating/sinking.
- whether objects can change shape.
- whether materials are transparent or opaque.



### Key Vocabulary

bending	change a straight object so that it is curved.
brick	a small, man-made rectangular block made from clay used in building
cardboard	a thick, stiff form of paper
manufactured	when a natural material is made into a new one
paper	a material manufactured into thin sheets from wood – used for writing, drawing or printing on
squashing	crush something so that it becomes flat, soft or out of shape.
stretching	made longer or wider without tearing or breaking.
suitable	right or appropriate for a particular purpose, person or job
surface area	the amount of space the flat side of a shape takes up.
texture	how something feels when it is touched
twisting	change the shape of an object by turning it.
unsuitable	not right or appropriate for a particular purpose, person or job
earth	the planet that we live on
orbit	the path planets take around the sun
planet	a large, round object in space that travels around a star
spherical	round in shape like a ball
star	a large ball of burning gas in space
sun	the largest star in our solar system – the centre

Key Questions:

- which material would be best for ..... and why?
- why is ..... not a good material for ....?
- will this object keep the astronaut warm?
- is this material waterproof, why?
- if Buzz lands in water, will he float or sink?

