

In this unit: Pupils will investigate different properties of materials and then use what they have learned to design and build a pirate ship, which floats.

Children should already know:

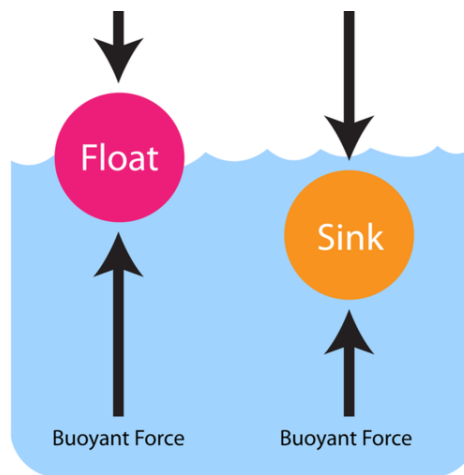
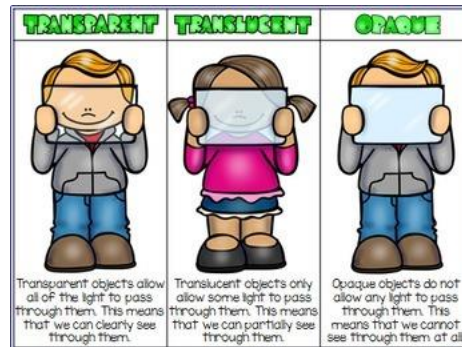
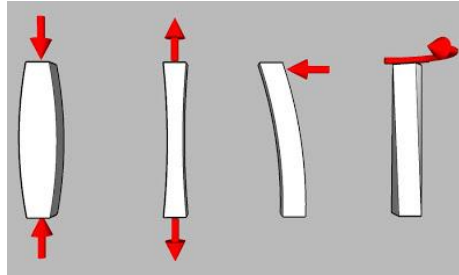
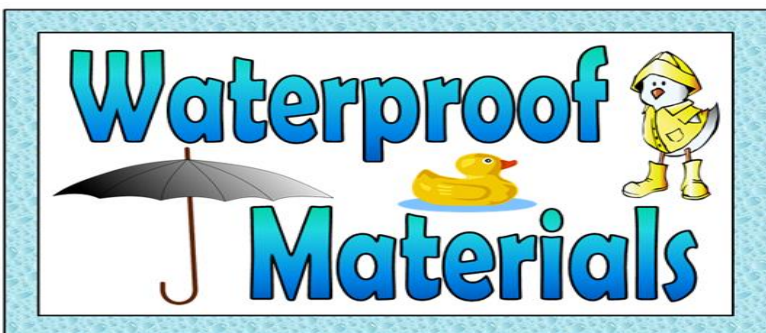
- that objects are things that you can touch or see.
- that objects are made from materials and can name many of these materials.
- that some materials are natural and some are man-made.
- the properties of everyday materials.
- that objects can be compared and grouped on the basis of their physical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

Children could investigate:

- the link between surface area and floating/sinking.
- waterproofing and absorbency.
- 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 |

Key Questions:

- which material would be best for and why?
- why is not a good material for?
- will this object float, why?
- is this material waterproof, why?

