

# Knowledge Organiser - Year 2 DT: Construction - Boats

## Key Vocabulary

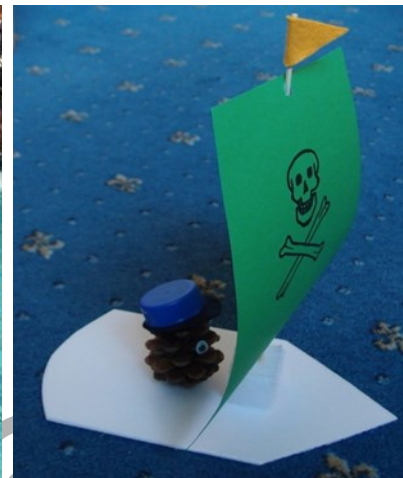
<b>absorb</b>	take in or soak up.
<b>buoyant</b>	able to float or keep something else floating
<b>cut</b>	pierce, slice, or open with a sharp tool such as a knife, axe, saw, or scissors.
<b>decorate</b>	make more beautiful by adding colour, decorations or designs.
<b>float</b>	rest on the surface of a liquid without sinking, or drift in a gas such as air without falling.
<b>hull</b>	the rigid frame and outer shell of a ship.
<b>join</b>	put, bring, or fasten together.
<b>keel</b>	a long piece of wood or metal that runs down the length of the bottom of a boat or ship. The keel makes a boat or ship stable in the water.
<b>mark-out</b>	draw a particular section or area.
<b>mast</b>	a long upright pole that rises from the bottom of a sailboat or ship to support the sails and
<b>pattern</b>	a guide; model.
<b>port</b>	Left side of a ship when it is facing forwards
<b>rudder</b>	a movable blade at the rear end of a ship or airplane, used to control direction
<b>sail</b>	a large piece of cloth that is attached to a boat. Sails move boats forward by catching the wind.
<b>sink</b>	to fall or drop slowly to another level.
<b>starboard</b>	Right side of a ship when it is facing forwards
<b>template</b>	a pattern used as a guide for cutting or drawing. Templates are usually made of thin metal, wood, or plastic.
<b>waterproof</b>	not letting water through; not absorbent.

**Key Question:** What are the best materials to make a boat?

**Focus :** Construction , materials, cutting, shaping and finishing

**What will children design, make and evaluate?**

Boats – models (linked to historical topic of Pirates)

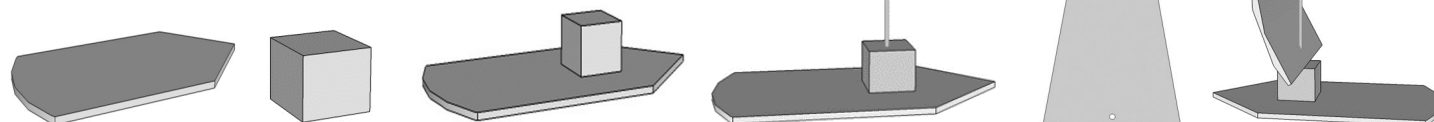


## Materials

<b>balsa wood</b>	Wood which is very light in weight. Often used for models
<b>cork</b>	Made from the bark of a type of oak tree. Cork is light and is water resistant, it is used to make floats and bottle stoppers.
<b>fabric</b>	cloth that is woven or knitted; material.
<b>polystyrene</b>	Hard, clear plastic or rigid foam that can be moulded. Often used as packaging as it is very light but rigid.
<b>wood</b>	hard material lying under the bark that makes up the trunk and branches of a tree.
<b>Wooden dowel</b>	a narrow round wooden rod.

## Tools

craft knife, glue, glue gun, hacksaw, scissors, stapler



## Designing, making and evaluating

Investigate and evaluate toy boats

Draw examples of model boats, identify and label, the materials and fastenings used.

Investigate materials to determine which is best - which float, which sink, which absorb water?

Come up with a range of ideas e.g. *What parts will the boat need to have? Label them and explore the role they play in a boat, e.g. mast, sail, keel, rudder, etc. What will they be made from? What size will it be? How will it be joined and finished?*

Make your own templates or paper patterns to make a simple hull for your boat.

Use tools safely to mark out and cut shapes to combine to make a very basic boat.

Use joining techniques e.g. stapling, gluing or cutting notches to fit pieces together to join the pieces of the boat together.

Decorate the boat - think about cladding in lollipop sticks as adding colour or pattern.

Evaluate the final boat—Can it survive the high seas of the Talbot swimming pool? Were the materials the best choices? Did the joining techniques hold?