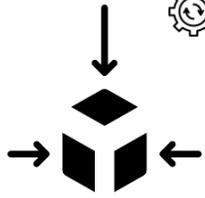


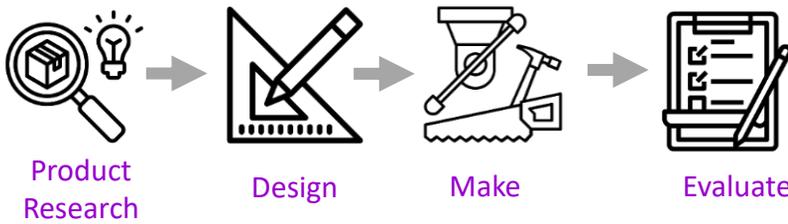
Design Brief: To make a small boat which can float on water.

Strand of DT



Structures

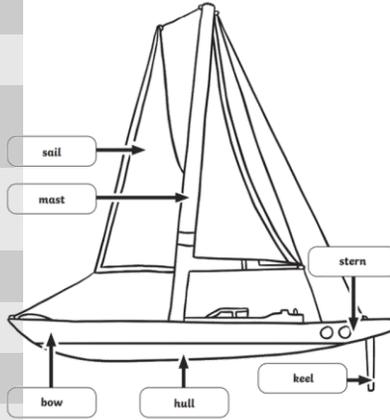
DT process



Vocabulary

hull	the body of a boat
deck	the floor of a boat
mast	holds the sail and blows in the wind to help the boat to move
rudder	attached to the back of the boat and helps to steer the boat
bow	the front of a boat
stern	the back of a boat
port	the left side of a boat
starboard	the right side of a boat

What?



- Boats are designed for different purposes: some carry passengers and some carry cargo.
- There are different types of boats e.g. sailboat, ferry, ship, hovercraft, fishing, rowing, pirate, trawler, canoe, containers, tankers, barges.
- The different parts of a boat are called sail, topsail, mast, deck, rigging, bow, stern, hull, keel, port (left), starboard (right), rudder.



- Boats can move using wind, oars, engines.
- The engines make the propellers go around and the boat move.
- The two main forces that act on a stationary sailboat are gravity and buoyancy.
- Gravity pushes the boat downwards and buoyancy pushes it upwards.
- The sailboat moves when the force of wind pushes on the sail and the boat moves.



- Float means to rest on the surface of water.
- Sink means to drop lower than the water.
- Whether something floats or sinks, it depends on its density.
- Heavy objects may not always sink.
- Large objects may not always sink.



Design criteria:

- To be able to float on water for two minutes.
- To have a sail.
- To be able to move across the water when wind is applied.
- To look attractive to the audience (Year 1 children) so that it would be picked off a shelf in a toy store e.g., colourful.
- Can hold a small toy on the deck of the boat.

Skills



joining, measuring, cutting



Lolly stick boat:

- Lay 8 regular paddle lolly sticks on the top of the 2 base layers and glue in place.
- Separate the paddle lolly sticks in the middle and glue a stick in place.
- Glue a paper sail to the vertical stick.

Cork boat:

- Lay three corks next to each other and secure with two elastic bands.
- Glue a piece of card to the top of corks to add a deck to the boat.
- Pierce your mast with a toothpick and add a sail.

Straw boat:

- Line up approximately 12 straws by laying it adjacent to the edges.
- Use a hot glue gun to stick a piece of straw across the top and bottom of them.
- Add another straw to the top and bottom for support.

Finished product



- Evaluations should reflect what you did well and what you want to change.