

Hollow or filled

Main Focus KUW - identify the best shape for a boat

Topic Sea

Suitable for Reception

Learning Objectives

I can identify hollow and filled shapes
I can identify materials that float
I can make different shapes

Early Learning Goals

4) Investigates places, objects, materials and living things by using all the senses as appropriate. Identifies some features and talks about those features s/he likes and dislikes.

Resources

- Common materials
- Plasticine
- Water bowls
- 3D shapes (hollow and filled)
- Classroom objects i.e. crayons, rulers, pencils etc

Teacher Input

Get the children to name different types of transport. Write a list of the suggested types of transport on the board. Ask the children to identify which types of transport travel on the sea, on the land and in the air. Get them to describe any journeys that they have made with their families on the water. Establish with the class that the materials and shapes used to make each boat helps to make it float on the water.

Show the children a selection of common materials. Pass around each material for the children to handle. Get them to identify the name of material. Ask the children to explain what might happen if each material was placed in a bowl of water. Discuss with the class the best materials to use when building a boat.

Display a hollow and filled cuboid at the front of the classroom. Discuss with the class the differences between the two shapes. Explain to the class that the hollow shape has air inside and that the filled shape is completely solid. Get the children to predict what might happen when you place both shapes into a bowl of water. Ask the children to vote as to whether each shape will float or sink. Choose some children to come out to the front of the class to place the shapes in a bowl of water to see what happens. Show the class some other hollow and filled 2D shapes. Get them to predict what might happen if they placed each shape in a bowl of water.

Guided Group Work

Provide the children with some plasticine. Work with the group to make some shapes for a boat that are both hollow and filled. Get the children to use the correct vocabulary to describe each shape. Ask the children to test their shapes to see if they will sink by placing them into a bowl of water. Tell them to identify the best boat shape that floats on the water.

Independent and Group Activities

Split the children into pairs and get them to carry out the following activity at staggered intervals during the school day. Provide the children with a box containing different classroom objects. Get them to predict whether they think each object will float or sink. The children can test each object in a bowl of water.

Plenary

Discuss with the class the best shapes to use when building a boat. Show the class a hollow and a filled shape. Get them to predict which shape will float best in the water.