DISCOVERY WORLD @HOME

UPCYCLED BOAT

30 **minutes**

3 **difficulty**

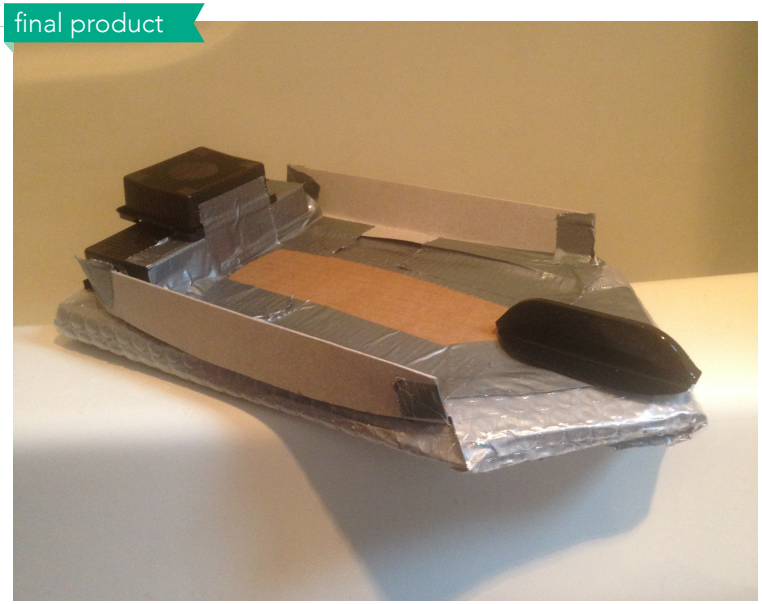
Tools & Materials:

-Pencil and paper for sketching
-Recycled objects:
Observe what different materials do when placed in water before you build. We recommend raiding your recycling bin for materials!
-Scissors
-Tape, glue, or rubber bands
-Sink or large tub with water

Description:

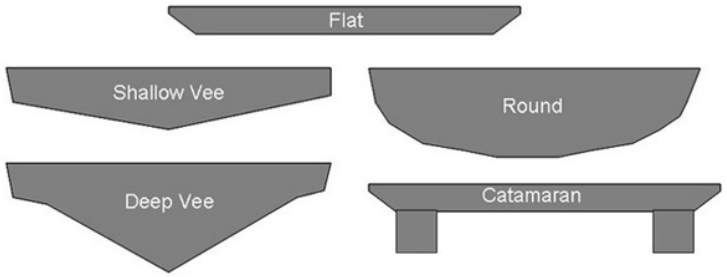
Let's explore the classic question, how can we cross the sea? To build a recycled toy boat we will explore materials that float, test buoyancy, and see how movement plays a role in boat design. Make multiple boats and put all of your ideas to the test!

final product



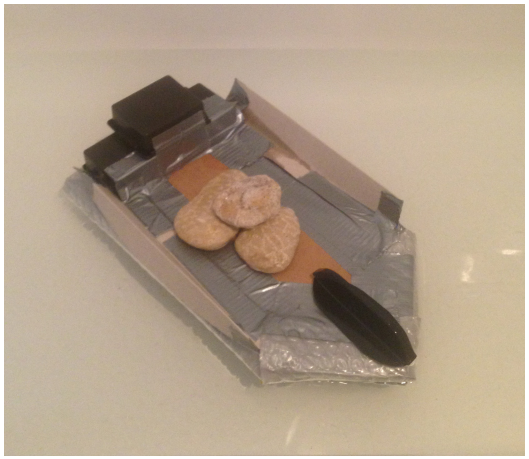
KOHL'S Design It! Lab

Directions:



1 Plan Ahead:
-What materials are waterproof? What materials float?
-Do you want to add a sail or paddle on your boat?
-Which base (hull) shape will help the boat glide the farthest?
-Which base (hull) shape will support the most weight?
-Sketch your boat idea on a blank sheet of paper

2 Build:
-Start by building the base or hull of your boat.
Test as you build to make any adjustments.
-Use scissors and tape to create the structure
How does the shape of the boat affect its ability to complete a task?
-Using extra materials, add a sail or build a stronger base for weights.



3 Test Your Design: Choose a test based on your boat build.
Fill a tub, sink, or a large container with water to test your boat.

-Float: *Can you make a boat out of non-waterproof materials? Can your boat float for 2 minutes?*

-Weight: *How much weight can your boat hold? Add rocks, paperclips, washers, pennies, or marbles slowly onto your boat.*

-Speed: *Can you move your boat across your test zone? Use "wind" to help sail your boat or race against another. Blow on your boat, blow through a straw, or wave a piece of cardboard to create wind.*

4 What did you notice during testing? What did you wonder? Make improvements to your boat and test again!