

Can you cross the river?



Can you build 3 boats using different materials to help the Gingerbread Man cross the river? Your boat must be able to carry a small load so he can build a bridge to get back to the other side.

Here's what you will need

- Lemons, oranges or limes, cut in half with the flesh removed
- Playdough
- Lolly sticks and cocktail sticks
- Cardboard
- Jam jar lids
- Sponges
- Egg cartons
- Corks
- Aluminium foil
- Water tray
- Small figures or objects



Here's what you can do

- 1 Build three boats using different materials each time. If you build three you can decide which one is best.
- 2 Place the boats in a filled water tray to see if they float. If they float, add small objects or figures to find out how well the boats float.



Questions to think and talk about

Do all the boats float? Which boat floats best?

Does it matter where in the boat you put the extra weight?

Does it make a difference if the water is deeper?

Which materials are the most waterproof?

What do you notice about materials that float? Do they have any properties in common?



Extra Activities

Does the shape of the boat affect how it floats?

Can you make the boats move across the water? How many different ways can you do this?

How else could the Gingerbread Man cross the river? Can you think of three more ideas?

Links with English



Can you write an alternative ending to the Gingerbread Man story where he builds a boat and escapes across the river?

How might the Gingerbread Man send a signal to ask for help? Who or what might come to his rescue?

Links with Maths



How much weight can you add before each boat sinks? What is the maximum weight a boat can hold?

How far does each boat travel if you blow it?



Opportunities for learning

- Understanding more about why some objects sink and some float.
- Understanding how different materials can be used to make a boat more buoyant.
- Using key vocabulary including sink, float, light, heavy, buoyancy, density.
- Calculating how much objects weigh.
- Comparing different solutions to a problem.