

## How to Build an Origami Canoe

This activity was created by Sophia and Brandi.

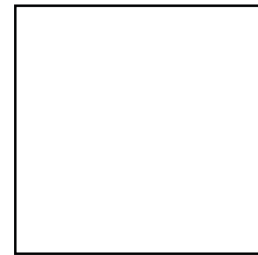
Follow the instructions below to build your own origami canoe! All you need is a piece of paper!



Did you know that Indigenous people in Canada, like the Algonquin and the people of Eastern woodlands, used the birchbark canoe to travel across water? They were made to be light and thin for easy travel over shallow water and so that they could be carried when needed.

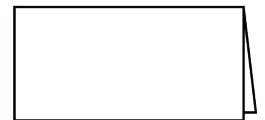
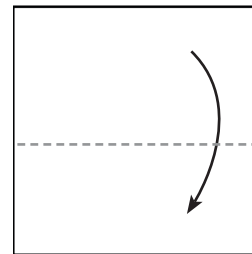
### STEP 1

Ask an adult for help to cut your paper into a 7cm x 7cm square (or use some origami paper).



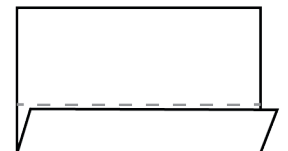
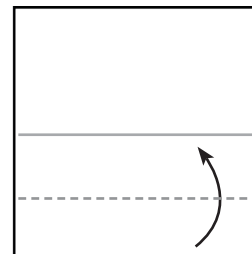
### STEP 2

Fold the piece of paper in half.



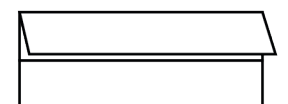
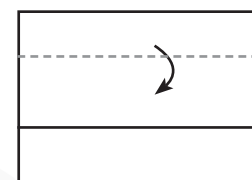
### STEP 3

Unfold the paper, then fold one side in to the crease you just made.



### STEP 4

Fold the other side to the middle crease too.

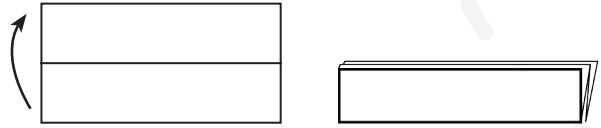


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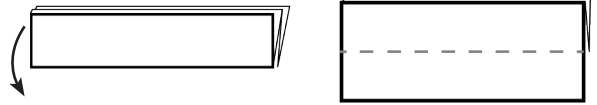
STEP 5

Fold the paper in half again, so that the edges are facing out.



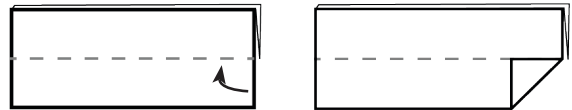
STEP 6

Unfold one flap.



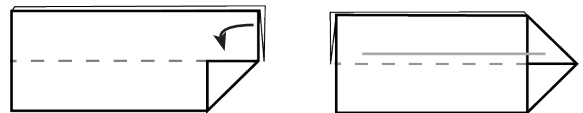
STEP 7

Fold the top corner down to the middle crease.



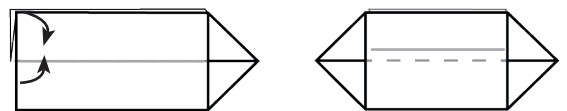
STEP 8

Fold the other corner (that is 3 papers thick) down to the middle crease too.



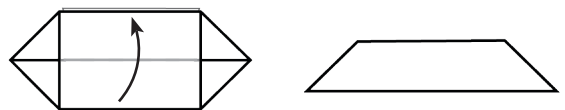
STEP 9

Repeat on the other side.



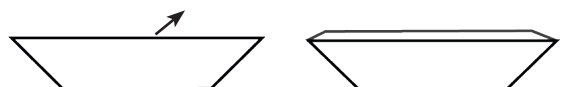
STEP 10

Fold it in half.



STEP 11

Turn it around and open up the long side.



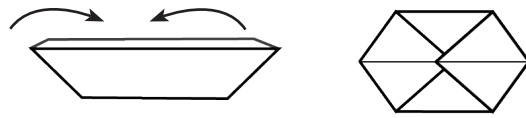
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STEP 11

Fold the pointy edges towards the middle.



STEP 12

Fold down the ends of the hexagon, and really push down hard on the seam.



STEP 13

Open up the longer flaps (that you folded down in step 12).



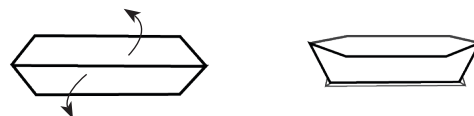
STEP 14

Fold the top edges towards the middle crease.



STEP 15

Unfold that last fold part way and there you have it! Your own canoe



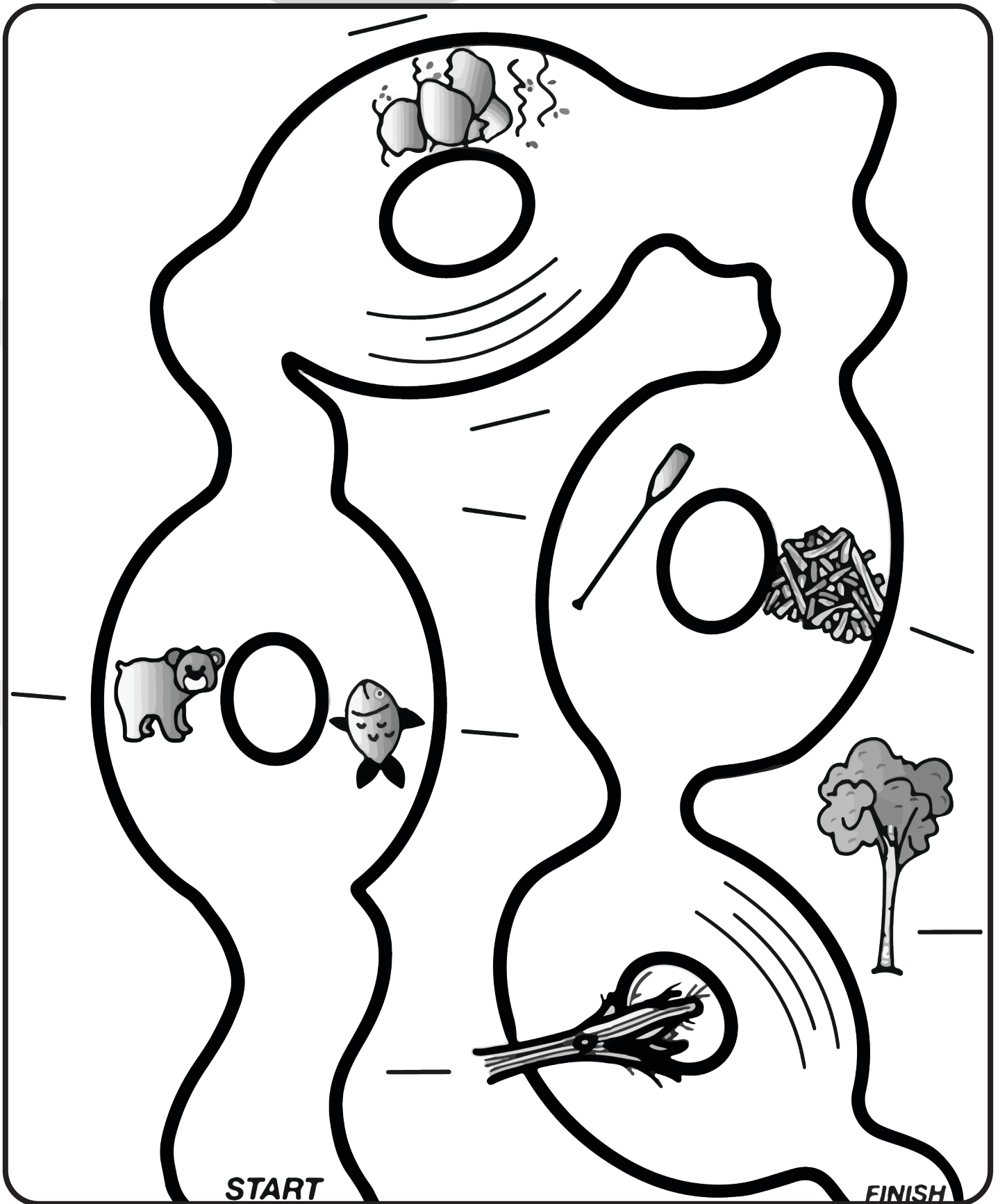
You can try making different sized canoes by starting with different sizes of square papers! How small can you make one?

And now you can use your canoe to travel through the river on the next page! Make sure you avoid paths with trees, rocks, dangerous animals and roughwaters, because they will cause you to sink!

To help you before you start look at the river and write a “0” on the line beside each object that will cause you to sink and a “1” on the line beside each object that will help you!

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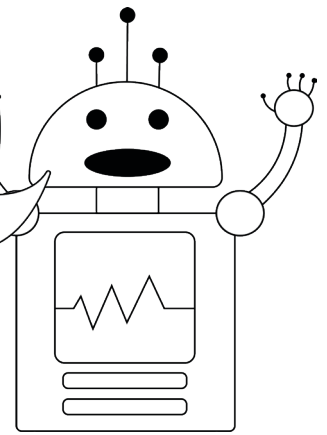


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Whoa! Did you know you just wrote in binary? Binary is the language computer use to run; it's just 0s and 1s, like "yes" or "no". With binary you showed me which paths I should not take with 0s and which paths I should with 1s! Now we both know how to travel on the river safely!



You did a great job! One problem though, I don't think our paper boat would do so well in actual water! Do you think our paper boat would sink or float in water? Why or why not?

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Can you think of something else we could build our boat out of that would float in the water without being destroyed? Maybe tin foil? Can you think of any other ideas?

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