

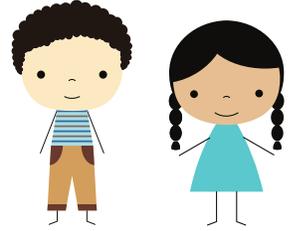


FIND TRUE NORTH USING THE SUN

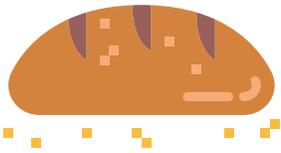


BETRAYED

"Early tomorrow morning we will take Hansel & Gretel out into the thickest part of the woods, make a fire for them, and give each of them a little piece of bread, then leave them by themselves and go off to our work. They will not find their way back home, and we will be rid of them."



FOILED



Hansel dropped a bread crumb trail to lead them home, but the children were tired and fell asleep in the woods. When they woke, all the bread crumbs had been eaten and they got lost even deeper in the woods.

NOW WHAT?

All they have is the sun. They need to go NORTH to get home. Follow these steps to find North and help point Hansel and Gretel in the right direction!

YOU'LL NEED:



medium size straight stick



two stones



the sun

- 1 Find a clear, sunny area and push the stick into the ground or have someone hold it.
- 2 Mark the end of the stick's shadow with a rock.
- 3 Keep the stick in the same place for 15-20 minutes. If you're holding it, you'll need to mark where you placed it if you want to put it down.
- 4 Mark the end of the stick's shadow again with the second rock.
- 5 Put your left foot on the first rock and your right foot on the second rock. The way you are facing is North.

THE SCIENCE

The sun always rises in the east and sets in the west. That means its shadow points in the OPPOSITE direction. If the sun is in the eastern part of the sky, that means its shadow is pointing west. Your first rock stands for west and your second rock stands for east. So the point directly in the middle of your rocks is north. Find north BEFORE heading out on an adventure too. If you know which direction you're headed and you get lost, you can find north to help you head back in the right direction!

 Watch an ORLA staff member perform this experiment here: <https://youtu.be/VvHutJOWQfc>

Try to get Hansel and Gretel out of the woods here: <https://forms.gle/nUXhU44jTrY2SD5k8>