

Name:

Did you know that there are objects in space that reflect light, and those that actually emit it? We can see them both, but one type actually produces their own light. Can you identify whether or not the following objects reflect or emit light?

Materials:

- Shoebox with lid
- Flashlight
- Clear tape
- Black Paper
- Pencil
- Thick pin or nail

Instructions:

Name:

Since ancient times, people have identified groups of stars that seem to form pictures. These star pictures are known as constellations. Can you tell why these constellations were given their names?

Galileo was an ancient astronomer who build a telescope to look up at the night sky. He looked at the Milky Way and discovered that it is made up of millions of stars. One special star is Polaris, the North Star. The North Star wasn't the brightest one out there (actually it's about the 40<sup>th</sup> brightest for us!) but it didn't move from above the North Pole as the Earth spun below.

How do you think historical navigators were able use the North Star to tell if they were off-course when sailing from Europe to North America?



Materials:

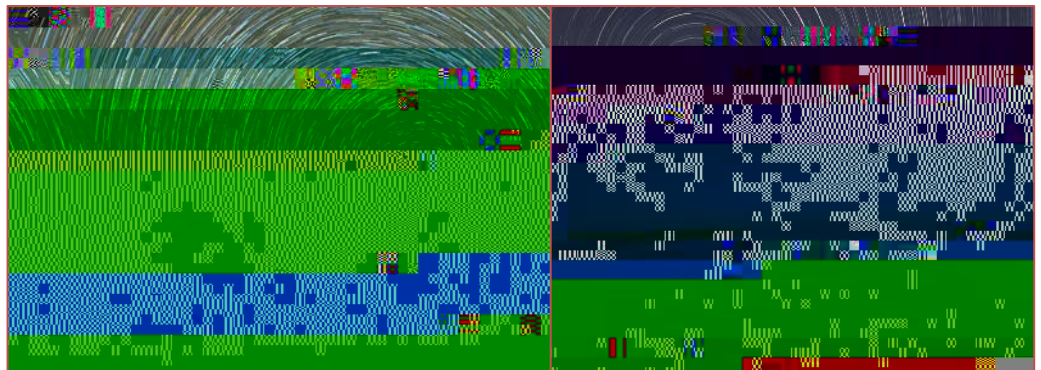
- Scissors
- 20cmx20cm Blue Construction Paper
- Paper Fastener
- North Star Finder template



Instructions:

1. Colour and cut out the North Star and the circle with the Big Dipper.
2. Attach the North Star and the Big Dipper circle together using the paper fastener.
3. Turn the circle... What do you notice about the Big Dipper constellation's position?
4. The Big Dipper always points to the North Star. Use your finder and line it up with the constellation to find the North Star at home on a clear night.

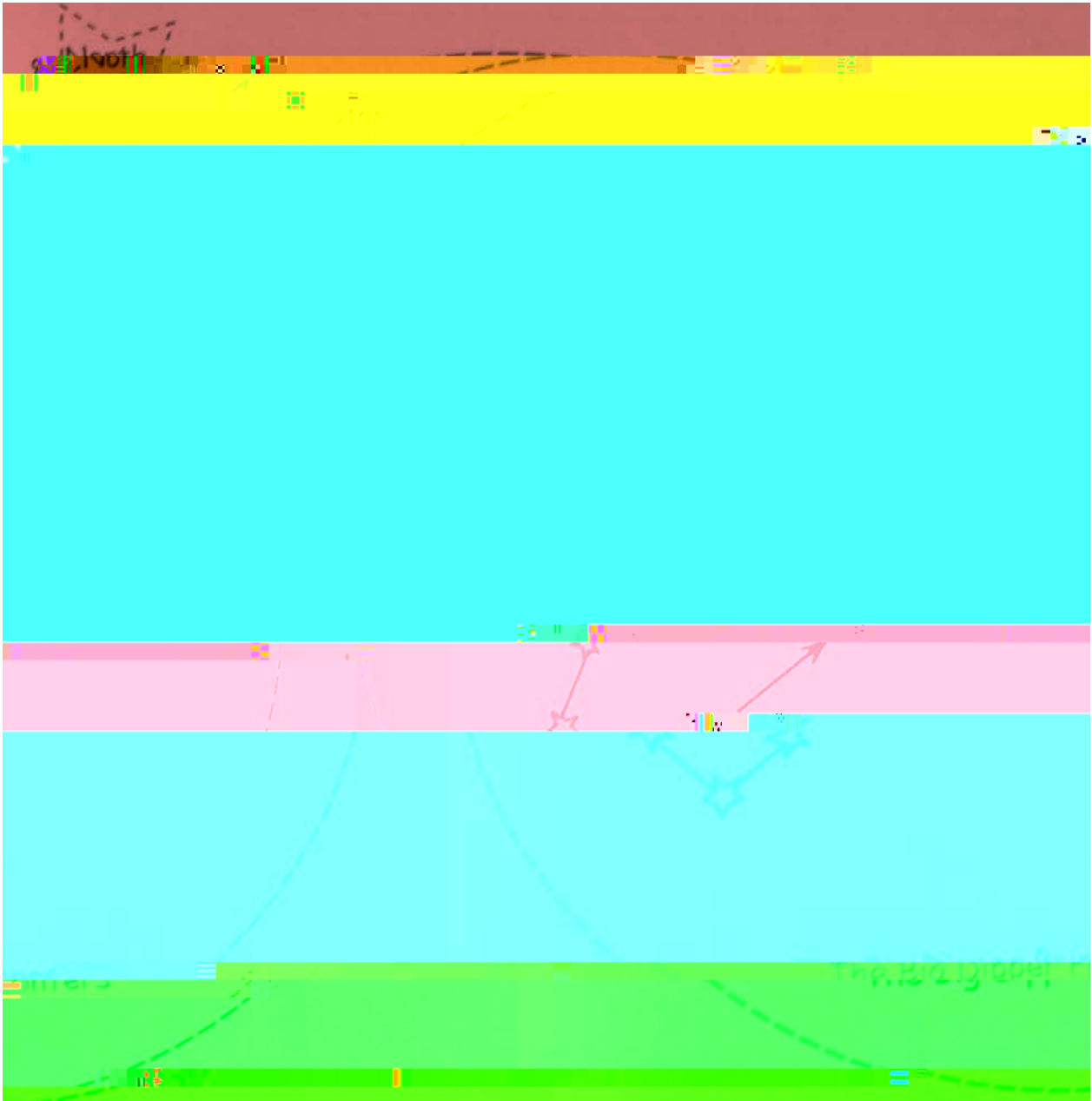
All stars in the sky move along their own trails, but the North Star stays in place. Star trails are pictures showing the paths that the stars take as the Earth spins at night.



The right picture is of the Northern Hemisphere. Can you spot the North Star?

The left picture is of the Southern Hemisphere. Is there a potential "South Star"?

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