Name:

# Starry Skies!

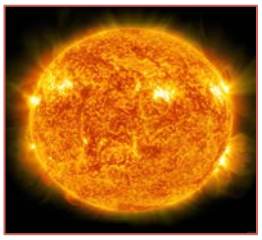
## Sky Watch!

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?

Reflect / Emit

Reflect / Emit

Reflect / Emit



Reflect / Emit

Reflect / Emit

Reflect / Emit

## The Night Sky

**Materials:**

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

**Instructions:**

1. Cut out one end of the shoebox. Cut a circle the size of the flashlight on the opposite end. Replace the lid of the box.

2. Using black paper, cut cards slightly larger than the open end of the box.

3. Make one constellation on each card by laying a constellation card on top of the black paper and punching holes on the points using a thick pin or nail.

4. Hold the constellation card over the end of the box, and place the flashlight at the round opening. Turn off the lights and observe your constellations.

*Source: Norris, Jill. Science Experiments For Young Learners. Monterey: Evan-Moor Educational Publishers, 2000. Print.*

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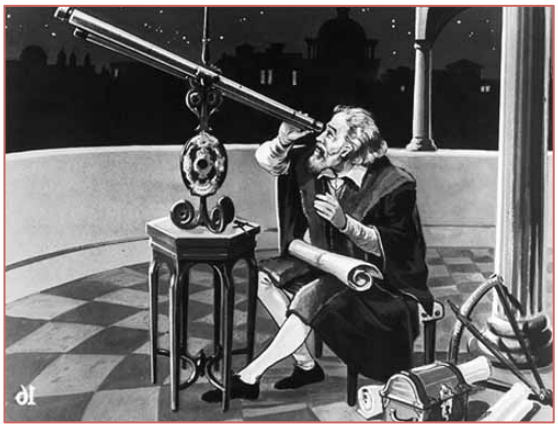
# Constellation Sensation



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 40th 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?

# Where is the North Star?

**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.

# Star Trails

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"?

*Source: Norris, Jill. Science Experiments For Young Learners. Monterey: Evan-Moor Educational Publishers, 2000. Print.*

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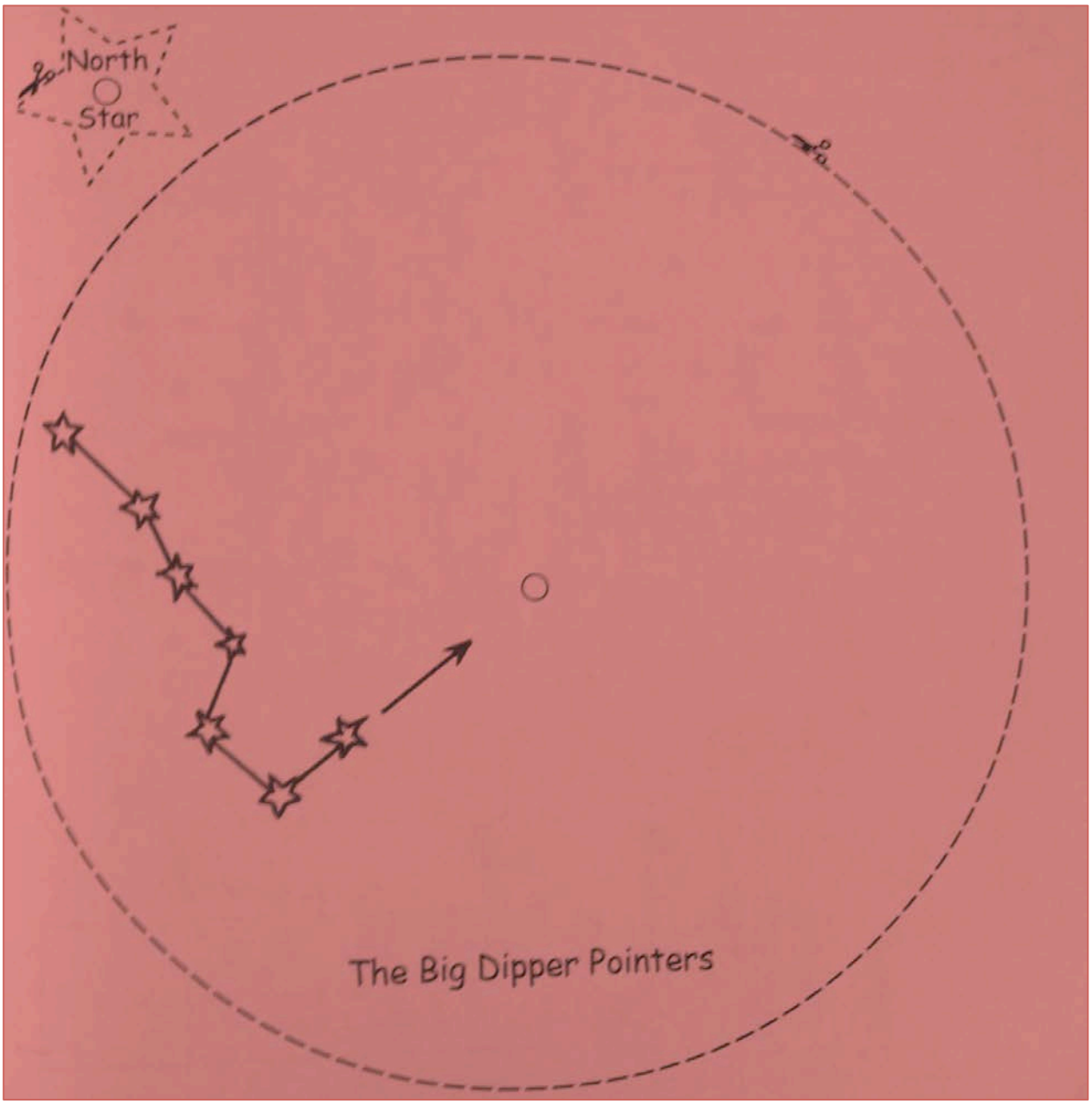


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