

Make a Star Finder

Solar System and Beyond

Lesson 3



Prep Time: 5 min

Activity Time: 30 min



Materials Needed:

- ☐ Star finder template (for appropriate month)
- ☐ Scissors



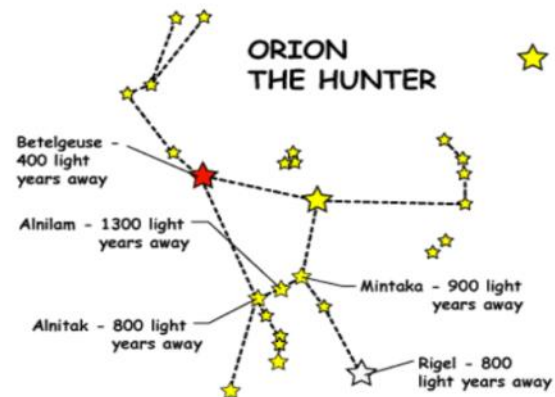
Preparations:

- Print the appropriate template for the current month.



Objectives:

- Students will make a Star Finder that will help them learn their way around the night sky by finding some of the constellations.



Next Generation Science Standards:

- 1-ESS1-1
- MS-ESS1



Website link and videos:

- <https://spaceplace.nasa.gov/starfinder/en/>

Key Concepts:

- Getting to Know Our Solar System

Introduction:

We see different views of the Universe from where we live as Earth makes its yearly trip around the solar system. That is why we have a different Star Finder for each month, as different constellations come into view. Also, as Earth rotates on its axis toward the east throughout the hours of the night, the whole sky seems to shift toward the west. The Star Finder charts show the sky at about 10 PM for the first of the month, 9 PM for the middle of the month, and 8 PM for the last of the month. These are local standard times.

Key Words:

Astrology: the study of how the positions of the stars and movements of the planets have a supposed influence on events and on the lives and behavior of people

Astronomy: the scientific study of stars, planets, and other objects in outer space

Constellations: a group of stars that forms a particular shape in the sky and has been given a name

Discussion/Follow Up Questions:

- Why do we sometimes see different constellations each month?* We see different views of the Universe from where we live as Earth makes its yearly trip around the solar system.

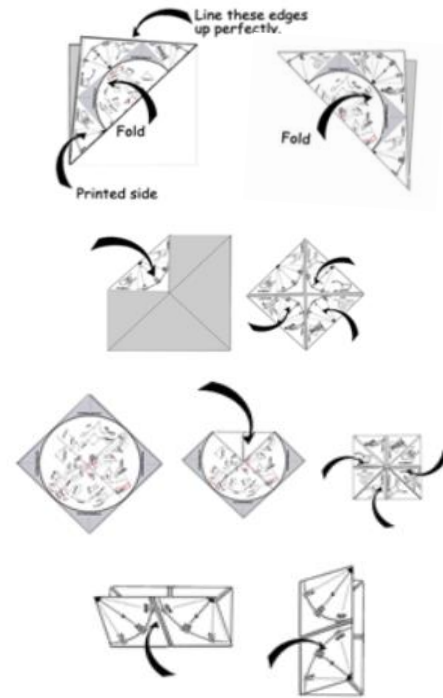
Extension:

- Have students track which constellations they can see over the course of the month. Explore the changes?

What are constellations anyway? A constellation is a group of stars like a dot-to-dot puzzle. If you join the dots—stars, that is—and use lots of imagination, the picture would look like an object, animal, or person. For example, Orion is a group of stars that the Greeks thought looked like a giant hunter with a sword attached to his belt.

Procedure:

1. Fold paper diagonally.
2. Fold the other two corners together.
3. Fold each corner point into the center.
4. Flip the square over, then fold all four of its corners into the center.
5. Fold in half one way, then unfold, and fold in half the other way.



Playing the Star Finder Game:

1. Stick your thumbs and first two fingers into the four pockets on the bottom of the Star Finder.
2. Ask another person to choose one of the top four squares. Then, depending on the number on the square she chose, open and close the Star Finder that many times (open up and down, close, open side to side, close, etc.). For example, if she chose number 6, open and close the Star Finder 6 times.
3. Then, ask the person to look inside the Star Finder and pick one of the four visible constellations. This time, open and close the Star Finder once for each letter to spell out his choice. For example, if he chose "Lyra," you would open and close the Star Finder 4 times, once for each letter: L - Y - R - A.
4. Ask the player again to pick one of the four constellations visible. Open the panel to see the name of a constellation (highlighted in red) she will try to find in the sky for this month.
5. For some of the months, not every part of the Star Finder may show a highlighted constellation for you to find. In this case, just try to find the constellation that is nearest to the part of the sky you picked. Or, just find any constellation!