

13.4 Activity

Recognizing Constellations

In this activity, you will develop skill in recognizing some constellations like Orion (Figure 1). As you do, think about what sailors experienced hundreds of years ago when they relied on stars to find their way across the northern oceans. Why was the North Star the most important star in the sky to them?

Materials

- copy of star map
- ruler

Procedure

Part 1: Three Year-Round Constellations

1 Figure 2 shows the shapes of three star patterns that you can see in the Canadian sky all year. Near the middle of the star map, locate the Big Dipper in the constellation Ursa Major.

(a) Use a ruler to draw lines joining the stars that make up the Big Dipper.

2 Near the upper-centre of your star map, locate the Little Dipper and the star at the tip of the handle. This important star is called Polaris, or the North Star. Anybody in the Northern Hemisphere looking toward Polaris is facing toward the North Pole.

(a) Draw straight lines joining the stars that make up the Little Dipper. Label Polaris.

3 Find the two stars of the Big Dipper that are farthest from the handle.

(a) From these stars, use a ruler to draw a dashed line to Polaris. This line shows how to use pointer stars to locate other stars or constellations. (This is important when you try to view the night sky because the Little Dipper is not nearly as bright as the Big Dipper.)

4 From the same pointer stars you used in step 3, continue past Polaris until you are

Figure 1

To some people in ancient times, this constellation looked like a hunter whom they called Orion.



Figure 2

Three star patterns



close to Cassiopeia, a constellation in the shape of a spread-out W or M.

(a) Draw straight lines joining the stars that make up Cassiopeia.

5 Identify the three constellations you have found.

(a) Ask your teacher to check your star map now. Label the constellations.

Part 2: Seasonal Constellations

6 Figure 3 shows constellations that you can see in the night sky over Canada during the winter months. The easiest one for you to see is the constellation Orion, with three bright stars that line up to make the imaginary hunter's belt. Locate Orion on your star map. It is near the part of the map marked winter. This means that Orion can be seen most easily in

December, but it can also be seen in November and January.

(a) Draw straight lines joining the stars that make up Orion. Label Orion as well as the bright stars in Orion: Rigel and Betelgeuse.

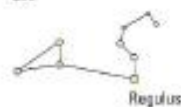
7 Use the stars of Orion's "belt" as pointers to locate the brightest star in the night sky, Sirius.

(a) Draw a dashed line on your map to show this method. Also draw Canis Major, the constellation in which Sirius is found.

Orion



Leo



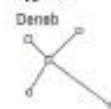
Andromeda



Canis Major



Cygnus



Pegasus



Bootes



Lyra



Aquila

