

Exploring The Bear Constellations - Educator's Guide (Ages 8-11)



At the end of these Night Sky activities students will understand:

- Ursa Major and Minor are northern constellations
- The Pointer Stars can be used to find the star Polaris
- Polaris is in the constellation Ursa Minor
- Polaris is located over Earth's North Pole

Astronomy background information

The seven brightest stars in the distinctive constellation Ursa Major (the Great Bear) form a shape called the "Plow" in the U.K and the "Big Dipper" in the U.S. Three of the stars form the handle and the other four make up the blade of the Plow or the cup of the Dipper. On the opposite side of the handle are a pair of stars called Merak and Dubhe, these are often called the "Pointer Stars".

Continue an imaginary line between the Pointer Stars up the sky until a bright star is encountered. This is Polaris, a member of a smaller constellation called Ursa Minor (the Little Bear). Polaris, also called the North Star or the Pole Star, Polaris is almost exactly lined up with the Earth's North Pole. This means it is always in the same position in the sky and when we look towards Polaris we are looking towards true north. In ancient times Polaris was a vital aid for navigation. Polaris is not especially bright so the easiest way to find it is by using the Pointer Stars.

In Greek mythology the bears are Callisto and her son Arcas who were grabbed by their tails and pulled into the sky by the god Zeus.

Night Sky App Essential Settings

Go to Night Sky Settings  and make sure the following Preferences are set.

Turn On these Effects:

Real Sky Representation
Show Glass Mythology
Enable Messier Objects

Turn Off these Effects:

Show Satellites
Day Time Effect
Show Ecliptic Line
Stop Glass Mythology Melting
Show Trajectories and Orbits
Show Constellation Lines

Accessible Learning:

- Text size can be increased in the Preferences section
- Star numbers can be reduced by sliding two fingers down the screen

