

Finding Polaris - Activities (Ages 8-11)



Today we are going to investigate:

- Finding the constellation Ursa Major
- Identifying the Plough or Big Dipper
- Locating the Pointer Stars
- Finding Polaris
- Why Polaris is a special star

Activities

- 1 Start up Night Sky and use your finger to move the sky around. Look at the horizon and see the markers for the compass directions (N,S,E,W etc). Move your view around until you are looking towards north. Look in the sky for a big constellation that looks like a bear with a long tail.

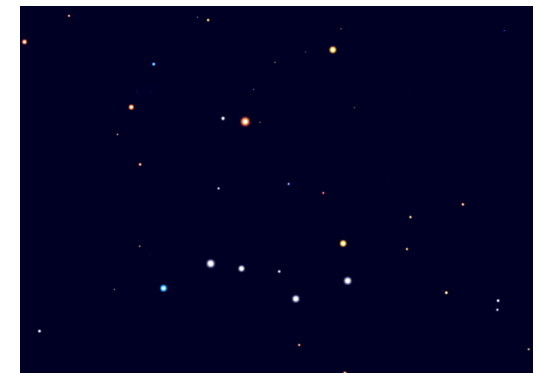
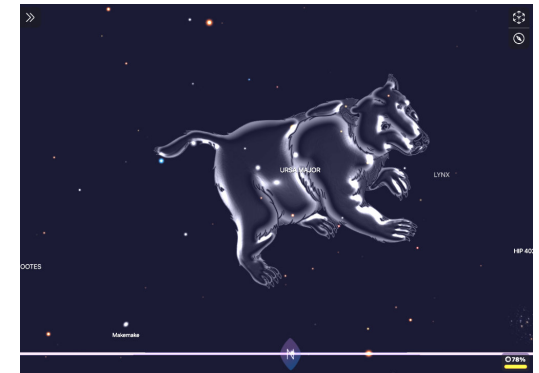
Question: What is the name of this constellation?

- 2 Find the seven brightest stars that make up the bear's hindquarters and tail. If you imagine joining them up they make up the shape of a familiar object. This is not an official constellation but has been given its own nickname.

Question: Do you know the name of this well-known pattern of seven stars?

- 3 Start at one end and tap each star to see its name. The first star is named Alkaid. Keep looking at each star until you find the two stars called Merak and Dubhe. These are known as the Pointer Stars as they 'point' to a very special star. Follow the line of these two stars up the sky until you reach a yellow star called Polaris (you'll need to go about five times the distance between the Pointer Stars).

Questions: What constellation is Polaris in?
What kind of animal is this constellation?

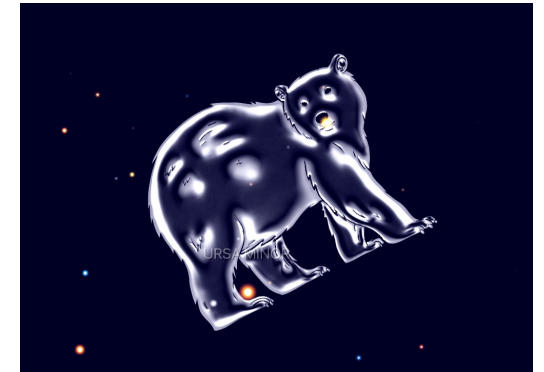


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- 4 Polaris is a very special star because it is almost directly above Earth's North Pole even though it is very far away in space. It never moves in the sky, it is always in the same place over the North Pole. This means that if you can see Polaris you must be looking north. Hundreds of years ago, long before compasses were invented, Polaris was very important for people trying to find their way. Back then, looking to see Polaris was the only way to find north! Now try finding Polaris with the mythological diagrams turned off!

Question: Do you know any other names for this star?



What we have discovered:

- The Plough or Big Dipper is a group of seven bright stars in the constellation Ursa Major
- Polaris is a star in the constellation Ursa Minor
- Polaris is a special star because it can be used to find north