

Exploring Orion - Activities (Ages 8-11)



Today we are going to investigate:

- How to find a famous wintertime constellation
- What are nebulae
- How to estimate if a star is cool or hot
- Two constellations that are companions of Orion

Activities

- 1 Today we are going to look at a famous Winter constellation called Orion. Start up Night Sky and use the Space Travel tile to change the date to any evening in December. Find a man with a club and shield running through the stars. (Tip: If you find this hard try typing Orion into Search).

Question: Which creature does Orion look as though he is running towards?

- a) Dragon b) Flying Horse c) Bull

- 2 In ancient Greece, people told tales of the mighty hunter Orion. Let the drawing of Orion charging fade away. You will see the constellation really looks like a person carrying a weapon and shield! Look for the three stars making up Orion's Belt.

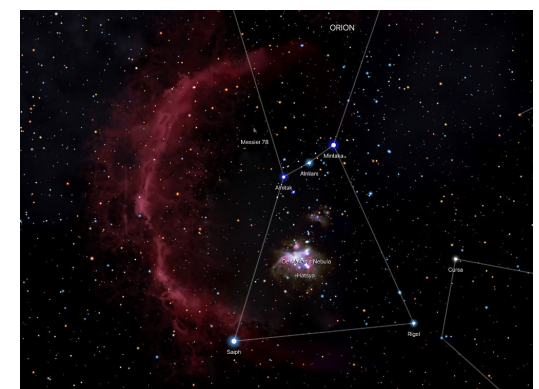
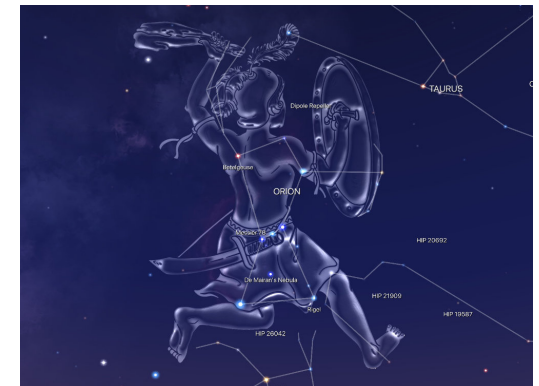
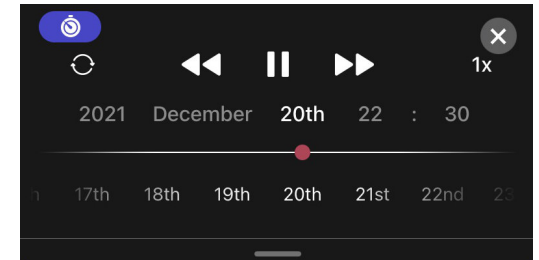
Question: Which one of these stars is in the Belt?

- a) Bellatrix b) Mintaka c) Saiph

- 3 Zoom in beneath Orion's Belt and you will see some colored areas called the Orion Nebula and De Mairan's Nebula. These are giant clouds of gas and dust which over a long time stick together and form new stars. Scientists have discovered over 400 new stars in the Orion Nebula alone!

Question: What do you think the word "nebula" means?

- a) Cloud b) Dustball c) Blob



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- 4 Bluish Rigel and reddish Betelgeuse are the two brightest stars in Orion. Tap on these stars for close up views to see their colors. The colors of stars are clues to how hot they are. All stars are very hot, but the very hottest stars are blue-colored while cooler stars appear reddish. This is the opposite to water faucets (or taps) where blue is cold and red is hot!

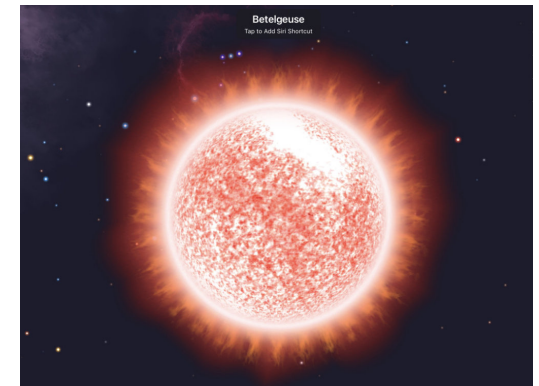
Question: Our Sun is yellowish in color, this means it is hotter than Rigel.

Is this statement True or False?

- 5 In ancient legends, Orion was followed everywhere by his two faithful hunting dogs. There are two smaller constellations following Orion in the sky. They are called Canis Minor and Canis Major. Move the sky around until you find them. In the Latin language “Minor” means “Small” and “Major” means “Big”.

Question: What do you think “Canis” means in Latin?

a) Follower b) Dog c) Friend



What we have discovered:

- Orion is the constellation of the Hunter
- The Belt of Orion is made up three stars
- New stars are forming in Orion
- You can estimate the temperature of a star by its color

★ ★ Well done!
You're a Night Sky
Superstar! ★ ★