

Science Engagement Programs

Great science plays here

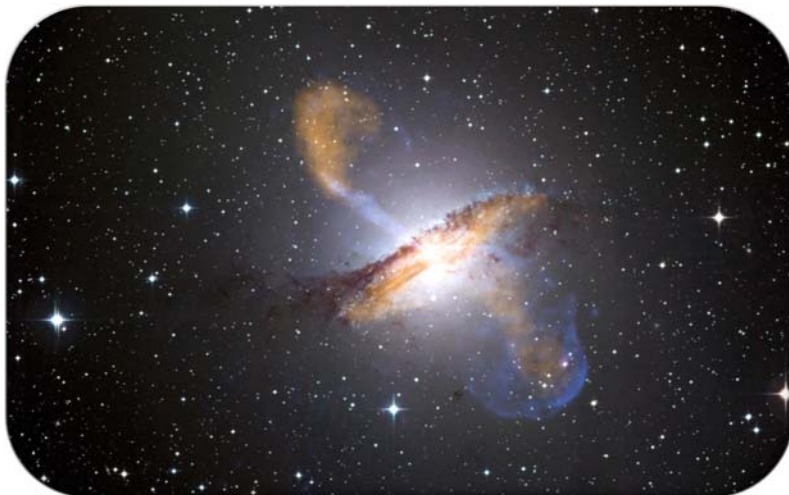
Constellation Art

Introduction

A constellation is a group of stars, a defined area of the celestial sphere. The word constellation comes from con- meaning together, and stella- meaning stars. Some popular constellations you may have heard of include the Big Dipper and Orion.

Currently, there are 88 total recognized constellations that covers the entire sky in both the northern and southern hemispheres. Constellations are recognized as humans, animals or inanimate objects. There are currently 14 men and women, 9 birds, 2 insects, 19 land animals 10 water creatures and more.

Although the constellations seem fixed in the sky, all the stars within the constellations are moving relative to the Sun at speeds of kilometers per second. However, stars in constellations are very far away, so it will take time for us to observe significant changes.



Safety Considerations

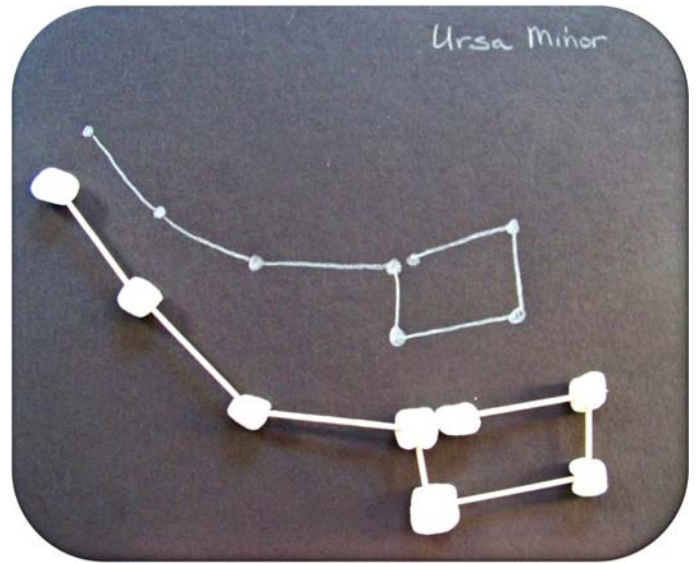
Toothpicks are sharp. Adult supervision may be required.

Materials Needed

- Bag of small marshmallows
- Toothpicks
- Paper (to draw constellations on)
- Pencil

Procedure

- 1) Here is a list of all of the constellations: <http://www.seasky.org/constellations/constellations.html>. Choose your favourite to model!
- 2) Draw or print the constellation you chose. The dots represent the stars and the lines will be the frame of the constellation.
- 3) Start building your constellation model by using a marshmallow for each dot/star. Connect the marshmallows using toothpicks. Note: you may have to break the toothpicks to make shorter star connections. Make sure to get an adult to do this for you.
- 4) There you have it, continue learning about constellations by modelling more!



<https://www.kcedventures.com/blog/astronomy-activities-for-kids-books-about-the-stars>

Further Questions and Understanding

Can you guess why we see different constellations in the summer night sky than we see in the fall, winter, or spring? In the summer, we can see Hercules the Hero but we can't see Orion the Hunter (we see Orion in the winter sky).

Now choose a calm night where you can see the sky with the stars bright and clear. Can you locate a constellation in the night sky?

Due to the earth's rotation around the Sun, stars appear to move as well. As the Earth rotates from west to east, the stars appear to rise from the east. The constellations gradually shifts as the Earth rotates. In the summer, viewers are looking at a different direction in space at night than they are during the winter!

Sources

- <https://www.juliantrubin.com/encyclopedia/astronomy/constellation.html>
- <https://www.kcedventures.com/blog/astronomy-activities-for-kids-books-about-the-stars>
- <https://www.masters.ab.ca/bdyck/Galileo/Constellations/index.html>