



Green Educator Lesson Plan:

Oatmeal Container Planetarium





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Time:	45 minutes in class to make craft, 45 minutes to research constellation (homework or in library/computer lab)
Age Level:	5-10
Supervision required:	minimal
Can be used in conjunction with curricula about:	Astronomy, cultural myths, symbolism,

Materials

(per student)

- Cardboard oatmeal container (try to have a few jumbo size on hand for larger constellations)
- Pen
- Black and yellow construction paper
- Scissors
- Glue stick
- Silver marker or crayon
- Black marker
- 1 small flashlight (can be shared between students)



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Instructions:

1. Have the students pick a constellation. There are twenty constellation cards included at the end of this tutorial. These constellations have fewer than 12 stars and are simple enough to use for this project. Students who chose the large
2. Pass out materials. Students can work individually or in pairs depending upon the size of your class. Students who chose larger constellations should use larger oatmeal containers if possible.
3. Demonstrate how to cut the cardboard bottom off of the oatmeal container with scissors, then have the students complete this task. This can be accomplished with blunt scissors by poking a hole in the bottom first with a pen and then inserting the scissors into this hole to begin cutting.
4. Now, show the students how to peel the label off of the oatmeal container, revealing the raw cardboard beneath. Remove the plastic lid.
5. Have the students take the black construction paper and wrap it around the oatmeal container. Mark any excess paper by folding it inward, then trim the excess off.
6. Now it is time to use the glue stick to attach the black construction paper to the oatmeal container. Students can roll the paper covered cylinder on their desk to apply pressure to the glue.



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7. Next, students should get familiar with the name of their constellation by writing it on the yellow piece of construction paper with a marker. Then, they can cut the name out and glue it to the lower part of the oatmeal container (closest to the cut open end).

8. Students can get creative while making an image of their constellation on the side of the oatmeal container. A silver or white crayon can provide nice contrast. Construction paper scraps and glitter can also be applied for a more elaborate effect. Have the students connect the dots of their constellation and begin to imagine the picture that it forms.

9. Now that the students are more familiar with their constellation, have them carefully mark out the design on the plastic oatmeal container top with dots. Then, they can put the top on the container, and use their pen to carefully press down on the dots and poke holes through the plastic top.

10. Now it is time to use the planetarium. Dim the lights and demonstrate how to hold the flashlight inside the open end of the oatmeal container at a diagonal angle so that the light hits the side of the container then reflects through the plastic top. The constellation can be projected onto the ceiling if you have a strong flashlight, or onto the blackboard or other flat surface.

11. Students can take turns using the flashlight and showing their constellations to the class.

Follow up ideas:

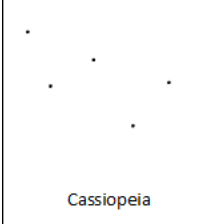


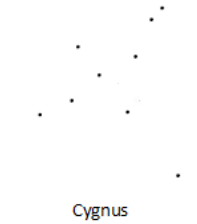
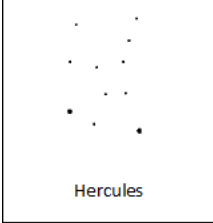
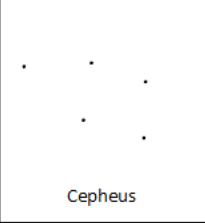
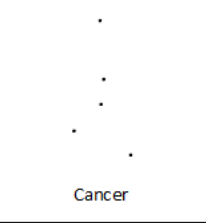
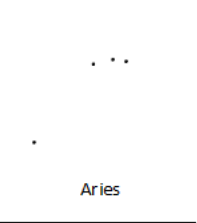
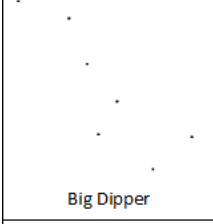


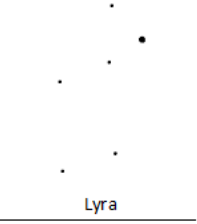
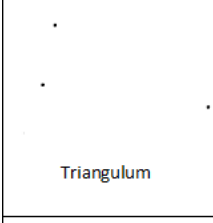
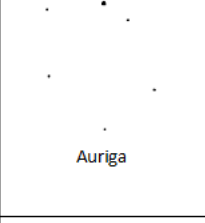

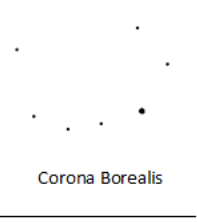
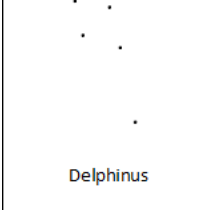
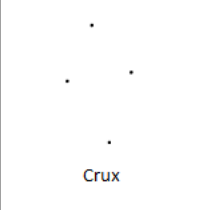
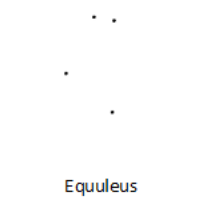

This tutorial can be extended to include a research and report component for older students. Here are some sample questions as a guide:

1. How many stars are in your constellation?
2. When can your constellation be seen in the night sky?
3. Does your constellation have any other names? What are they?
4. Share a myth story about your constellation. Which culture created this story?



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 <p>Cassiopeia</p>	 <p>Orion</p>	 <p>Ursa minor</p>	 <p>Cygnus</p>
 <p>Hercules</p>	 <p>Cepheus</p>	 <p>Cancer</p>	 <p>Aries</p>
 <p>Big Dipper</p>	 <p>Libra</p>	 <p>Aquila</p>	 <p>Lyra</p>
 <p>Triangulum</p>	 <p>Auriga</p>	 <p>Bootes</p>	 <p>Corona Borealis</p>
 <p>Delphinus</p>	 <p>Crux</p>	 <p>Equuleus</p>	 <p>Sagitta</p>