



# Make a Portable Planetarium



## Explore

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[www.nutures.utoledo.edu](http://www.nutures.utoledo.edu)

- 1 Decorate the outside of the oatmeal container. **Parents:** cut a hole in the bottom of the container with an X-acto knife big enough for the flashlight. Cut the middle out of the plastic lid so you just leave the edges.
- 2 Cut the black construction paper into circles big enough to fit inside the plastic lid. Find some constellations in a science book from the library like; *Once Upon a Starry Night: A Book of Constellations* by Jacqueline Mitton. Draw them on the black paper, then using the pushpin poke holes where every star in that constellation appears.
- 3 Place the constellations you drew in the lid and place the lid on the container. Go to a dark room, turn your flashlight on and enjoy! **Important:** Place the flashlight in the bottom of the container on a slant!

## Materials

Oatmeal Container  
Plain Flashlight  
Black Paper  
Tape  
White Crayon  
Pushpin  
Pencil

## Discuss

Ask these questions during the activity:

What will happen to our planetarium when we turn the flashlight on?

Go outside and look at the stars: Look carefully at the stars. What do you notice about the stars? What color are they?

How many stars can you count? Why do you think there are so many?

## Think

Big Dipper



Go outside and look at the stars. Find some constellations together and talk about the stars. Ask questions like those located above.

Constellations are pictures that we create by connecting the stars in the sky, like the Big Dipper. Can you make a picture from the stars you saw in the sky? Use your imagination! Draw your constellation on the back of this activity sheet!

Stars are giant (some are millions of miles across!) balls of super-hot glowing gases. The distance the star is from the Earth and the amount of energy the star puts out affects how bright the stars look in the sky. The closer or higher energy stars appear brighter to us

