

Pinhole Planetarium

Create your own constellations

This activity can be used with

- **Bear Elective 1b:** Make a pin hole planetarium and show three constellations.
- Cub Scouts Sports and Academics Program **Astronomy Beltloop and Pin**
- **Astronomy Merit Badge**

Materials

- Clean, empty 15 oz cans (1 for each constellation)
- Scissors
- Glue
- Hammer
- Nail
- Constellation patterns (see following pages)

Instructions

1. Cut out the patterns.
2. Glue the patterns to the ends of the cans and let the glue dry.
3. Using the hammer and nail, punch holes through the patterns into the can where the dark black dots are locate.
4. Turn out the lights in the room.
5. Place a flashlight in the can and turn it on.
6. Look at the bottom of the can. You should be able to see the pattern of the constellation through the holes.

The universe is not static. Plus, some of the placements for the nail holes had to be adjusted due to being to close together. If the accuracy of the constellation pattern is important, you must use a star chart. The pictures on the patterns are just to give the scouts an idea how the ancients used their imaginations to visualize the constellations.

The constellations on this page are the easiest ones. The ones on the following pages require more holes to be punched in the can.





