Constellation Projectors

1. Cut out the constellation templates. They don’t have to be perfect, just separated. Either keep the names with each pattern or make sure to mark which side is the front or back so your constellations aren’t backwards.

2. Set a cup upside down on a flat surface and place a constellation template face down on the bottom of the cup.

3. Carefully use the push pin to poke holes through each star. Make sure each hole goes all the way through both the paper and bottom of the cup. If you have trouble keeping the paper in place, secure it with a small piece of tape.

WHAT YOU’LL NEED:
- Disposable Paper (or other opaque) Cups
- Push Pin
- Constellation Templates (provided)
- Scissors
- Flashlight
- Tape (optional)
4. Remove the paper and tape from the cup. If you’re careful, you can save the template for future use.

5. Repeat steps 2–4 for whichever constellation projectors you want to make. You can label the cups with the constellation names or leave them unlabeled and challenge yourself to identify each one.

6. Find a blank stretch of wall or ceiling to project your constellations. Dim or turn out the lights—the darker the room, the clearer your stars will be.

7. Point the projector at the wall or ceiling and aim your flashlight through the cup. The constellation will appear! *If your flashlight is very bright, the stars might not be clear. To fix this, aim the light at the inside of the cup instead of directly at the bottom.

MORE IDEAS

• Constellations are often named after myths and legends. Check out a book about constellations or look them up online to find the stories.

• Use blank paper to create your very own constellations! Make sure to name them and create a story or legend to go with them.

• Go outside on a clear night and see if you can find the constellations in real life.

• Learn about cardinal directions by identifying where each constellation appears in the night sky.
Constellation Projector Templates

Orion
Hercules
Perseus

Ursa Major: Great Bear (the Big Dipper)
Leo
Scorpius

Cassiopeia
Pegasus
Canis Major: Great Dog
Constellation Projector Templates

Perseus

Hercules

Ophiion

Scorpius

Leo

Ursa Major: Great Bear
(The Big Dipper)

Canis Major: Great Dog

Pegasus

Cassiopeia