

# Constellation Ornament



## Materials needed:

Metal juice concentrate or canning lids  
Paper  
Nails  
Hammers  
Scissors  
Constellation cards or templates  
Pieces of scrap wood (surface to hammer)



## What to do:

1. What is a constellation? What are stars? Why did almost all ancient civilizations study the stars? What constellations do you know?
2. Choose a constellation to make.
3. Trace around your lid on a piece of paper and cut it out.
4. On the piece of paper, mark the star locations of your constellation. You can use the templates in this guide or find pictures of constellations elsewhere.
5. Tape your constellation onto the metal lid.
6. Place metal lid on wood table tops or on a piece of scrap wood. Line a nail up with one of the star marks and hammer a hole there.
7. Continue making holes at each star location. You can try to keep the holes the same size for each hole, or, if you know which stars are brighter in the constellation, make bigger holes for the brighter stars.
8. Once all the holes have been made, untape the piece of paper off of the metal.

## More info:

### What is a constellation?

A constellation is a group of visible stars that form a pattern when viewed from Earth. The pattern they form may take the shape of an animal, a mythological creature, a man, a woman, or an inanimate object such as a microscope, a compass, or a crown.

### How many constellations are there?

The sky was divided up into 88 different constellations in 1922. This included 48 ancient constellations listed by the Greek astronomer Ptolemy as well as 40 new constellations.

### **Star Maps**

The 88 different constellations divide up the entire night sky as seen from all around the Earth. Star maps are made of the brightest stars and the patterns that they make which give rise to the names of the constellations. The maps of the stars represent the position of the stars as we see them from Earth. The stars in each constellation may not be close to each other at all. Some of them are bright because they are close to Earth while others are bright because they are very large stars.

### **Hemispheres and Seasons**

Not all of the constellations are visible from any one point on Earth. The star maps are typically divided into maps for the northern hemisphere and maps for the southern hemisphere. The season of the year can also affect what constellations are visible from where you are located on Earth.

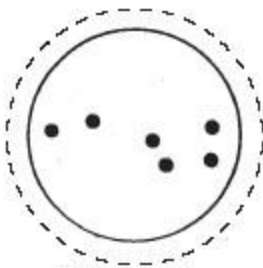
### **Ancient Egyptian Astronomy**

The annual flooding of the Nile was the foundation of Egyptian civilization and agriculture, so predicting this occurrence with accuracy was the driving force behind the development of Egyptian astronomy.

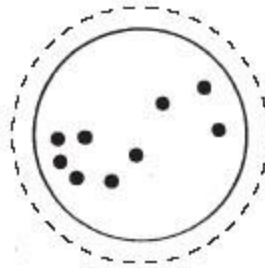
The Egyptians were fully aware that the year was about 365 days, and divided it into 12 months of 30 days, with five ceremonial, intercalary days, called the Epagomenal days, added. This calendar lost one day every four years, and they made little attempt to correct this. Instead, they developed another calendar based around the star Sirius, which also consisted of 365 days but which included the extra quarter day.

As with many ancient cultures, the Egyptian astronomy began with recording the time of year for agricultural periods, and may well have served a navigational purpose, a common practice in the desert. These observations became imbued with religious significance and became incorporated into their architecture.

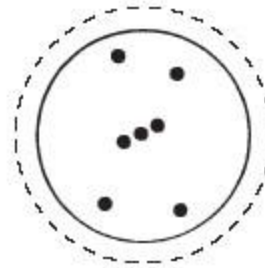
The Egyptians built their monuments pointing in the cardinal directions and used them to reflect important celestial occurrences revealing the time of year.



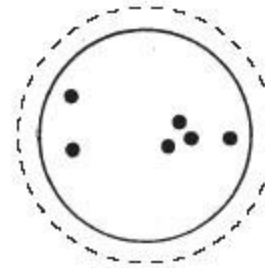
URSA MAJOR,  
the Great Bear



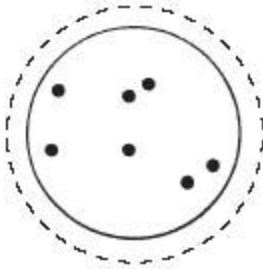
SCORPIUS,  
the Scorpion



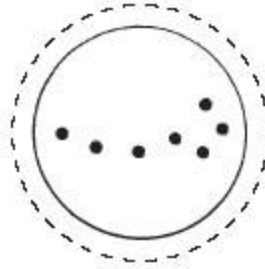
ORION,  
the Hunter



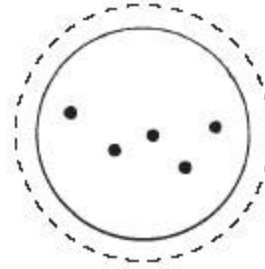
TAURUS,  
the Bull



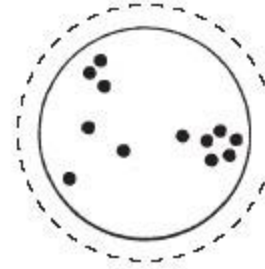
PEGASUS,  
the Flying Horse



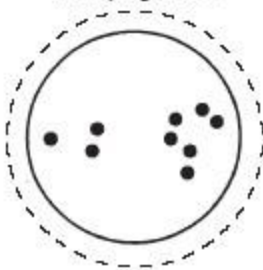
URSA MINOR,  
the Little Bear



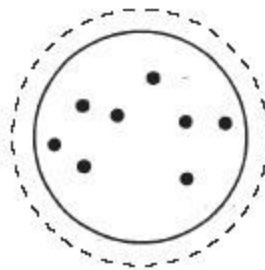
CASSIOPEIA,  
the Queen



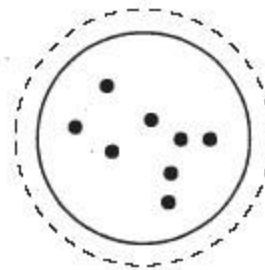
PISCES,  
the Fishes



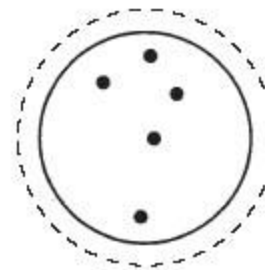
LEO,  
the Lion



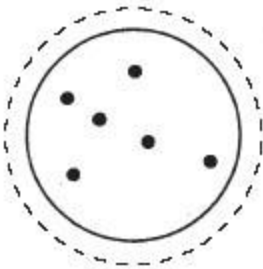
SAGITTARIUS,  
the Archer



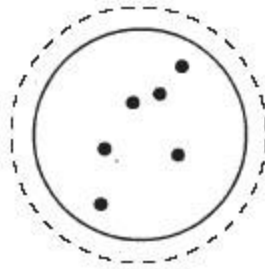
GEMINI,  
the Twins



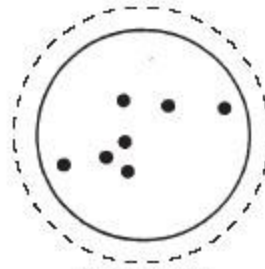
BOOTES,  
the Herdsman



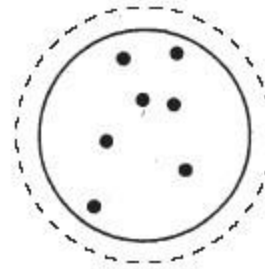
CYGNUS,  
the Swan



PERSEUS



CANIS MAJOR,  
the Big Dog



HERCULES

Sources:

<http://www.giftofcuriosity.com/constellation-craft-for-kids/>

<http://www.ducksters.com/science/physics/constellations.php>

<https://explorable.com/egyptian-astronomy>