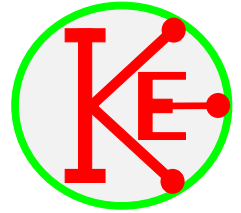


12 Night Sky



EQUIPMENT

- Planisphere template
- Pritt-Stik type glue
- Scissors

RISKS

Paper cuts.

Scissor cuts.

SESSION

- 1). Show picture of south, winter night sky - orion.jpg.
<https://www.spacetelescope.org/static/archives/images/original/heic0516d.tif>
What can be seen? Discuss what ancient peoples would have made of the patterns.
Discuss that ancient peoples would not have had their view of the stars limited by light pollution.
- 2). Patterns of stars called Constellations.
The pattern of the stars is called Orion. Show and discuss origin.
- 3). With orion.jpg identify Sirius. Relate to the constellation of Canis major (Great dog).
- 4). Show picture of north, winter sky - plough2.jpg
<https://cdn.spacetelescope.org/archives/images/screen/opo0602b.jpg>
What can be seen? Identify the Plough (Big dipper)
This constellation part of Ursa major (Great Bear).
- 5). Constellation names.
Constellation information from <https://www.dkfindout.com/us/space/constellations>
- 6). Identify the Pole Star.
Discuss how North is directed to the Pole Star.
Discuss the earth rotating so that the stars appear to rotate around the Pole Star.
Show picture. Show on picture the Plough and how to find the Pole Star.
http://ikes.16mb.com/pict/physics/astronomy/znight_sky.jpg
- 7). Discuss words associated with space - students note what they mean.
- 8). Construction of Planarium/Planisphere.
<http://www.jodrellbank.net/wp-content/uploads/2014/10/Make-a-planisphere.pdf>

Orion

Orion is one of the most easily identified constellations in the sky.

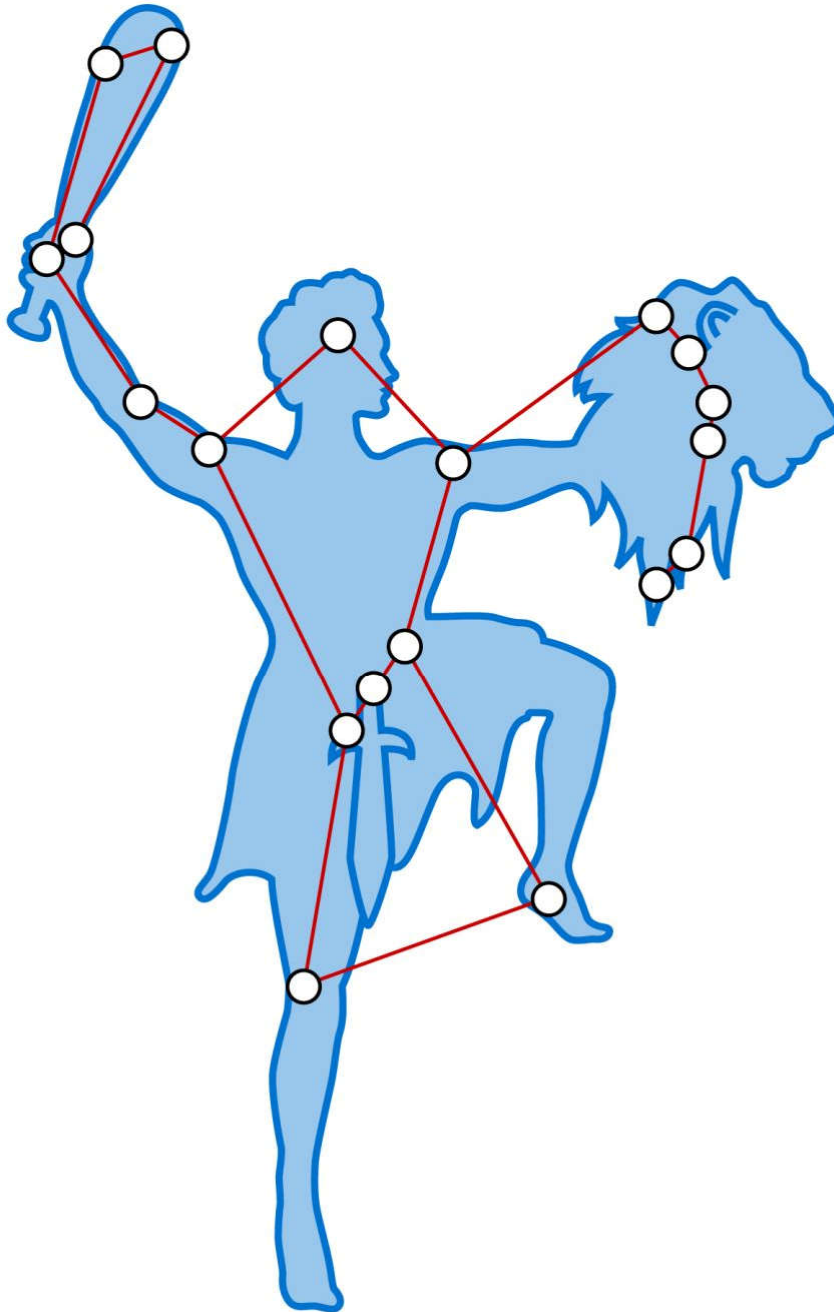
It represents a giant hunter of Greek mythology.

In the sky, he is depicted raising his club and shield against a charging bull, Taurus, which forms the neighbouring constellation.

The bright star Betelgeuse marks Orion's right shoulder, and Rigel marks his left foot.

One feature that makes Orion easy to identify is a line of three stars that marks his belt.

From the belt hangs his sword, which contains one of the brightest nebulae (remains of dying stars) in the sky, the Orion Nebula.



Canis Major

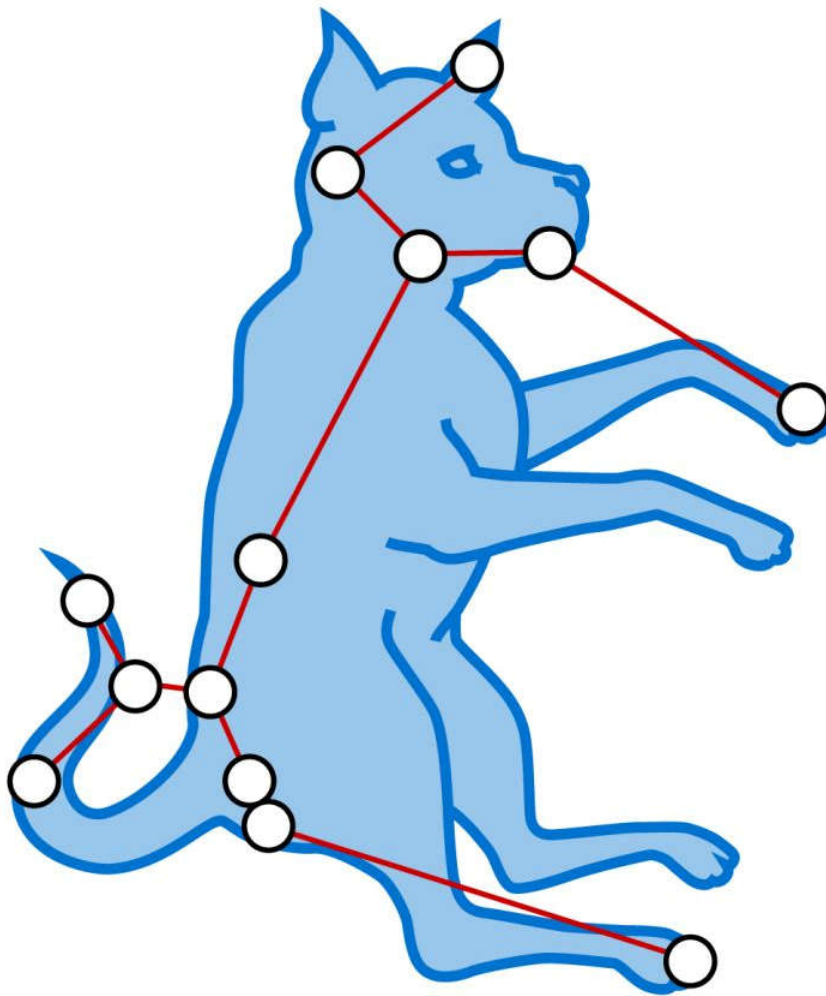
Canis Major can be seen following obediently behind Orion, a hunter in Greek mythology, on his journey across the sky.

Canis Major is host to Sirius, the brightest star in the entire sky and one of Earth's closest neighbouring stars.

This ancient constellation is depicted as the larger of Orion's two hunting dogs, the other being Canis Minor.

According to another story, Canis Major is Laelaps, a mythical fleet-footed dog, trapped in endless pursuit of its prey, the Teumessian fox (a gigantic fox in Greek mythology).

Ancient Egyptians used the rising of Sirius alongside the sun to predict the timing of the Nile's annual flooding.



Ursa Major

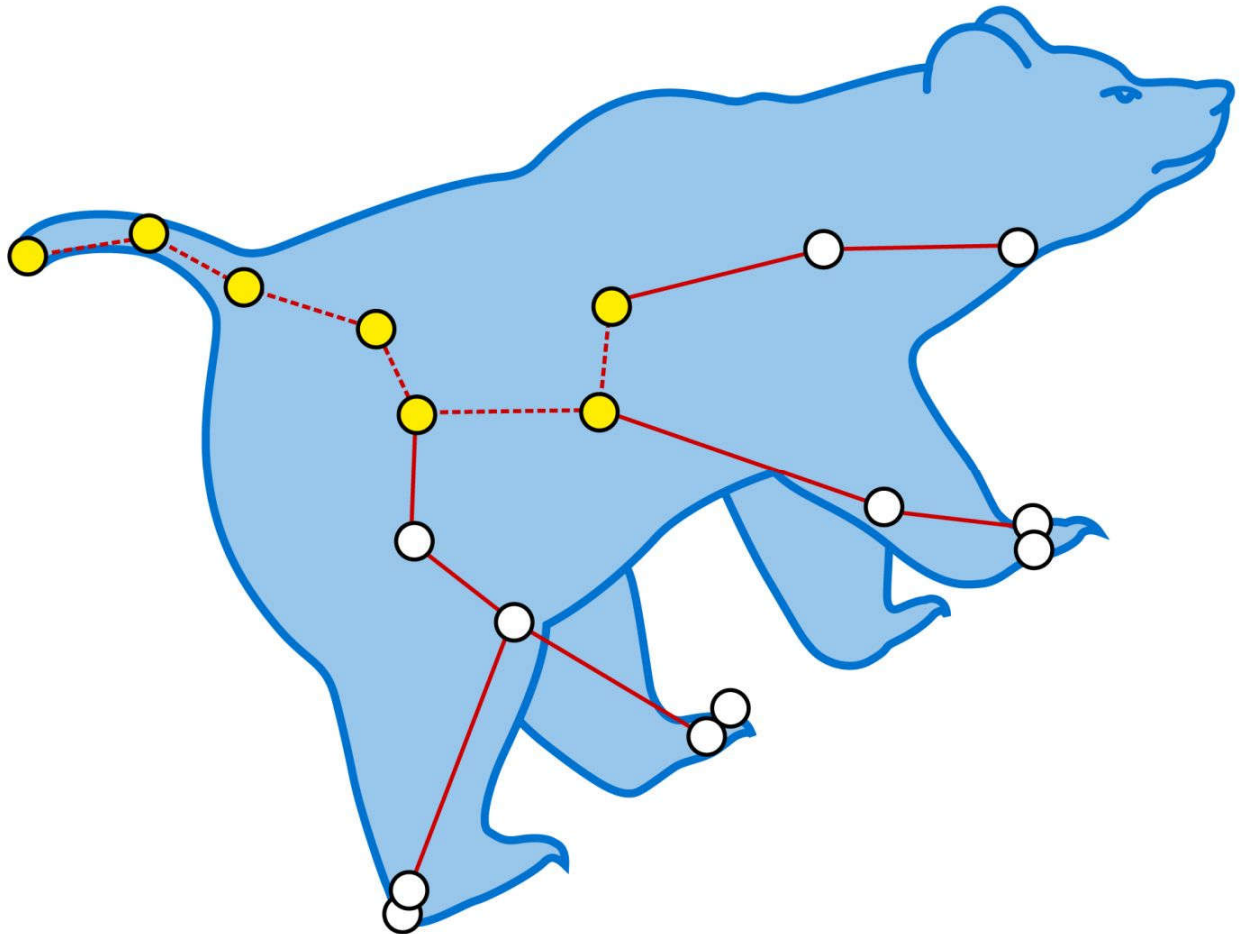
Ursa Major is the third-largest constellation in the sky.

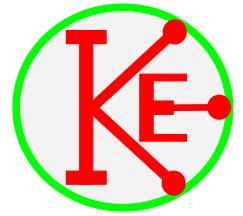
It was regarded by many ancient civilizations as a bear.

In fact, its name is Latin for “great bear.”

As the story goes, the beautiful Callisto was transformed into a bear by the goddess Artemis.

Ursa Major’s seven brightest stars form a saucer shape, popularly known as the Big Dipper (or Plough). This is one of the best-known features of the sky.





12 Night sky

Making the Planisphere.

- 1). Using scissors, CAREFULLY cut around the outside of planisphere.
- 2). Using scissors, CAREFULLY cut out the white inner oval to make a hole in the middle.
(It helps to make a hole in the middle of the white oval and then keep making the hole bigger).
- 3). Fold the grey area on the dotted lines backwards to form a pocket.
(A little bit of glue on the corner of the bottom can be used to hold the folded pieces in place.)
- 4). Using scissors, CAREFULLY cut around the outside of the star map.
- 5). Place the star map in the planisphere pocket

Using the Planisphere.

- 1). Identify where North /South is outside.
You can use a compass or remember that the sun rises in the east and sets in the west.
- 2). Identify where North and South are on the planisphere.
- 3). Turn the star map around to line up the date and the time to the day you are outside.
(Remember in the summer to subtract 1 hour from the time to convert to GMT.)
- 4). Stand facing South, looking down at the planisphere so that North is at the top facing away from you.
- 5). Lift the planisphere above your head and the white disk area will show you the stars in the night sky.
Use your planisphere as a guide to find the brightest stars and the constellations.














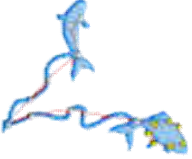






The stars of Orion are probably the easiest to find when looking south.
The stars of the Plough are the easiest to find when looking North.

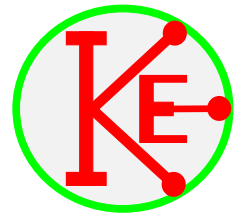
- 6). Note. Your planisphere only works in the Northern hemisphere of the world.
In Australia, you would see different stars at different times of the year.

Constellations

The table below shows 20 of the more common Constellations.
(There are around 88 constellations in total.)

Use your planisphere to identify where the different constellations are located.

			
Aquarius	Aries	Cancer	Canis Major
			
Capricornus	Cassiopeia	Draco	Gemini
			
Hydra	Leo	Libra	Orion
			
Pegasus	Pisces	Sagittarius	Scorpius
			
Taurus	Ursa Major	Ursa Minor	Virgo



NAME:

12 Night sky - words

Star

Planet

Moon

Solar system

Galaxy

Milky Way

Universe

Complete the diagram below to show the structure of the Universe.

