The Hopeless Hunter

The Hopeless Hunter

THE HOPELESS HUNTER

MARITHA SNYMAN

LONG AGO, THE SKY GOD had seven beautiful daughters that shone brightly in the dark sky at night.

They are today called the Pleiades.

They were all married to a handsome, but hopeless, hunter, called Aldebaran.

"You are so useless," they mocked him. "You can't kill anything. You won't even be able to kill those three glittering zebras standing over there," they teased, showing him the three stars of Orion's belt.

"I'll show you," the hopeless hunter retorted angrily. In his anger he forgot all about Betelgeuse, the fierce red lion star that guarded the zebras.

The hunter grabbed his bow and arrows and took off into the dark night. Carefully he aimed and pulled the string of the bow. The arrow sped through the sky and … missed the zebras completely.

There is a group of stars called the Pleiades. They are all the same distance away from the earth. Although we can only see six or seven of them, there are actually hundreds of stars in this cluster. For thousands of years Africans, from KwaZulu-Natal in South Africa to Mali in West Africa, knew that it was time to begin planting their crops when the Pleiades appeared. In Setswana these stars are called Selemela (meaning the digging stars).

The hopeless hunter sat down, feeling like a pathetic fool.

Betelgeuse roared with laughter. "You missed again!" He roared again, still laughing: "Come fetch your arrow. I am waiting."

But the hunter was not brave enough to do this. He looked up in fear and misery. He was too scared to pass Betelgeuse who would surely kill him. He was also reluctant to go home to the never-ending mockery of his wives.

Today his arrow, known as the sword stars of Orion, is still stuck in the blackness of the sky behind the three glittering zebras.

Questions

- Who had seven beautiful daughters?
- What were they called?
- Whom did they marry?
- Was he a good hunter? Why do you think so?
- Whom did his wives want him to kill?
- What did the hopeless hunter do?
- Who guarded the zebras?
- Did the hopeless hunter kill the zebras? Why?
- How did the hopeless hunter feel?
- Who roared with laughter?
- What did Betelgeuse say to the hunter?
- What did the hunter do?
- Why did the hunter not want to fight Betelgeuse
- Where is the sword to this day?

Educator Content – Constellations

- Constellations are a group of stars that form a picture or pattern.
- There are 88 official star constellations
- Each constellation is a collection of stars distributed in space in three dimensions.
- Cultures all over the world have made pictures with the same stars.
- In some cases the constellations have ceremonial or religious significance and in others it helps mark the passage of time between planting and harvesting.

- ***Orion*** is one the most popular of all constellation. It is totally different from the Greek Orion Legend.
- **The *Southern Cross*** and the pointers are exclusively a Southern Hemisphere constellation. It is used to give direction and time keeping in the Southern Hemisphere.
- ***Carina or Argo*** has lots of myths associated with it. Canopus is the second brightest star in the sky and the Xhosa speaking people call the month of May according to the star.
- ***Taurus*** is the raging bull. It is a zodiac constellation with emphasis on the cluster called the seven sisters or Pleiades. This is called Isillimela and similar names across Africa.
- A minor constellation, which is bird like is called ***Pavo.***

Educator Notes

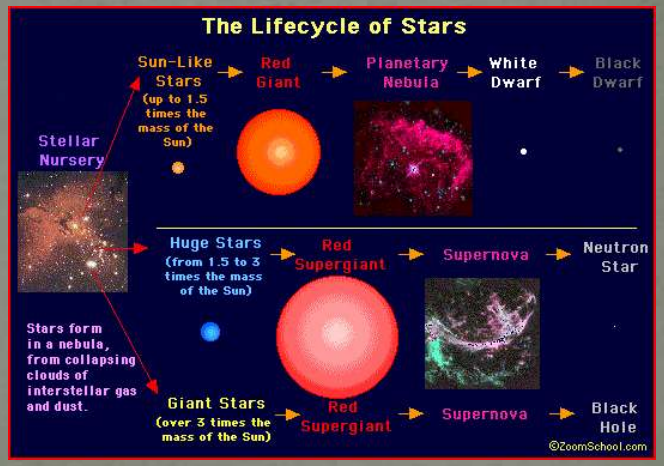
- Stars are first formed as clouds of dust and gas.
- A star is a huge sphere of hot glowing gases.
- Stars produce their own light and energy by a process called nuclear fusion.
- Stars give off a tremendous energy in the form of light and heat.
- Most stars are between 1 billion and 10 billion years.
- The hottest stars give off a bluish light and while the cooler stars give off a reddish light.

- Stars seem to twinkle because their light travels through the earth's atmosphere and the turbulence in the atmosphere affects the way stars are seen.
- Stars come in a variety of sizes and colours .
- An average size star is the Sun, which is a yellowish star.
- Stars which are smaller than the Sun are reddish and larger stars are blue.
- The closest star to us is Proxima Centauri. It lies a distance of about 4.3 light years.

Educator Notes

Life Cycle of Stars

- Like people stars are born, grow old and die.
- The birth place s are huge cold clouds of gas and dust, know as “nebulas”.
- Most stars are born in groups called star clusters like Pleiades.
- These young stars undergo further changes, forming main sequence stars.
- Stars expand as they grow old.
- As the core runs of out hydrogen and then helium , the core contact expands and then cool and becomes less bright.
- It will eventually collapse and explode.
- The faith of the star is determined by the original mass of the star, which will either become a black dwarf , neutron star, or a black hole.



Educator Notes

Types Of Stars

- A dwarf stars are relatively small stars but up to 20 times larger than our Sun and up to 20000 times brighter.
- Our Sun is a dwarf star.
- A red giant is a relatively old star. The diameter is 100 times bigger than it originally was and had becomes cooler.
- Betelgeuse is a red giant star.
- A blue giant is a huge , very hot young star.
- A super giant is the largest know type of star, some are as large as the entire solar system. When super giants die they supernova and become black holes.

Galaxies

- Nearly all the stars belong to a gigantic group know as the galaxies.
- The Sun is one of at least 100 billion stars in our Milky Way.
- Galaxies are different shape and sizes.
- Some have a bar of stars across the centre, with arms attached at either end.
- The largest galaxies look like squash balls.
- They contain 10 million stars and have very little gas or dust.
- Nearly all the galaxies have a super massive black hole in the centre.

Learner Activities

Dotting the constellations

- Use the templates and join the dots of the famous constellations in the southern hemisphere. Please note the constellations are not drawn to scale.

Paper Cup Constellations

- Use a paper cup. Turn the paper cup over . Learners use a toothpick and poke holes into the bottom of the paper cup to create a constellation of their choice. Use the constellation charts .

Picturesque Constellations

- Learners create their own constellations by arranging or drawing stars as they wish and connecting the dots to create a picture to tell a story.

Star Master Viewer

- Learners use the template to create the star viewer and the constellations. See templates below. Learners first draw the constellation with a pencil on the card. Thereafter using a toothpick they poke small holes into the constellation. Attach a ice cream stick once the constellation is complete. Thereafter place the card in front of the star view (paper towel tube) and indentify the constellation.

Star Scope

- Learners use a black refuse bag. Cut the bag in to an A5 size sheet/s. Place a sheet of plastic at the end of a paper towel holder and fasten with a rubber band. Poke small holes with a pin in to the plastic sheet and let the learners take turns looking at the sky.

Learner Activities

Twinkling Stars

- Fill a glass bowl with 3/4 tap water. Cut a piece of cardboard and place under the bowl. Cut stars out of aluminium foil and place around the cardboard. Darken the room and shine the torch into the water. Tap the bowl slightly while flashing the light. See what happens to the stars when the water moves

Life Cycle of the Stars

- Draw a mind map of the lifecycle of the stars.

Create A Galaxy

- Use the pictures from the internet and create a galaxy of your choice and write a short description.

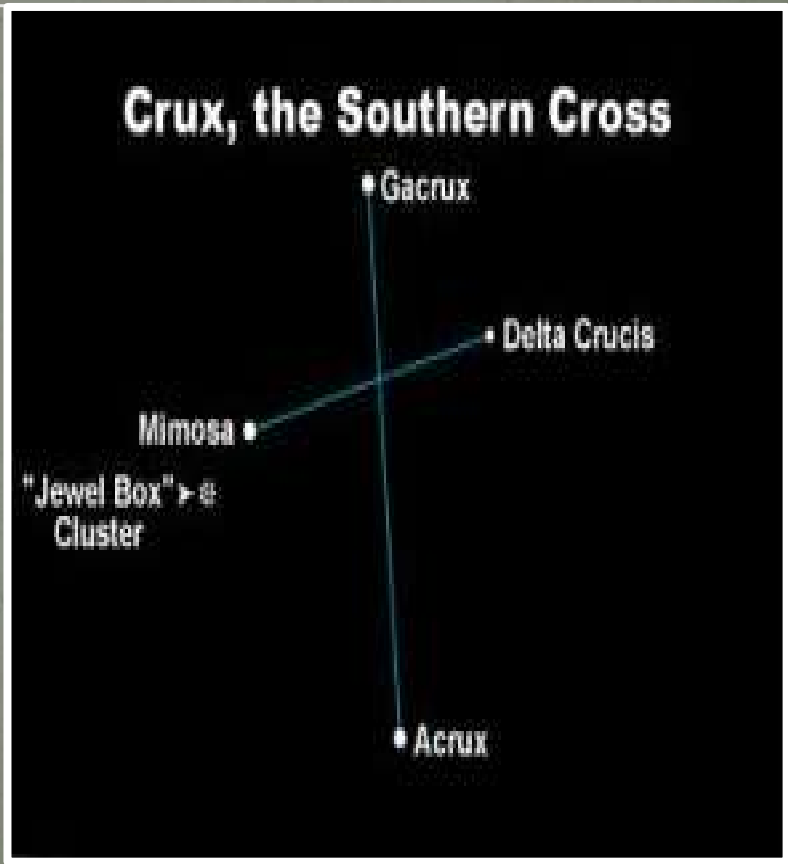
Black Hole

- Draw a circle on the black cardboard. Cut out the circle, careful not to damage the remaining piece of paper that will be used to make the base. Cut a slit from the side to the middle of the circle and cut a little arc in the middle big enough for the marble to go through when the paper is folded. Fold the paper to make slight cone shape and stick in position with cello tape. Fold a tube from the remaining rectangular cardboard and stick with cello tape. Attach the cone to the tube base with cello tape. Roll a marble into the cone and see it disappear.

Constellations

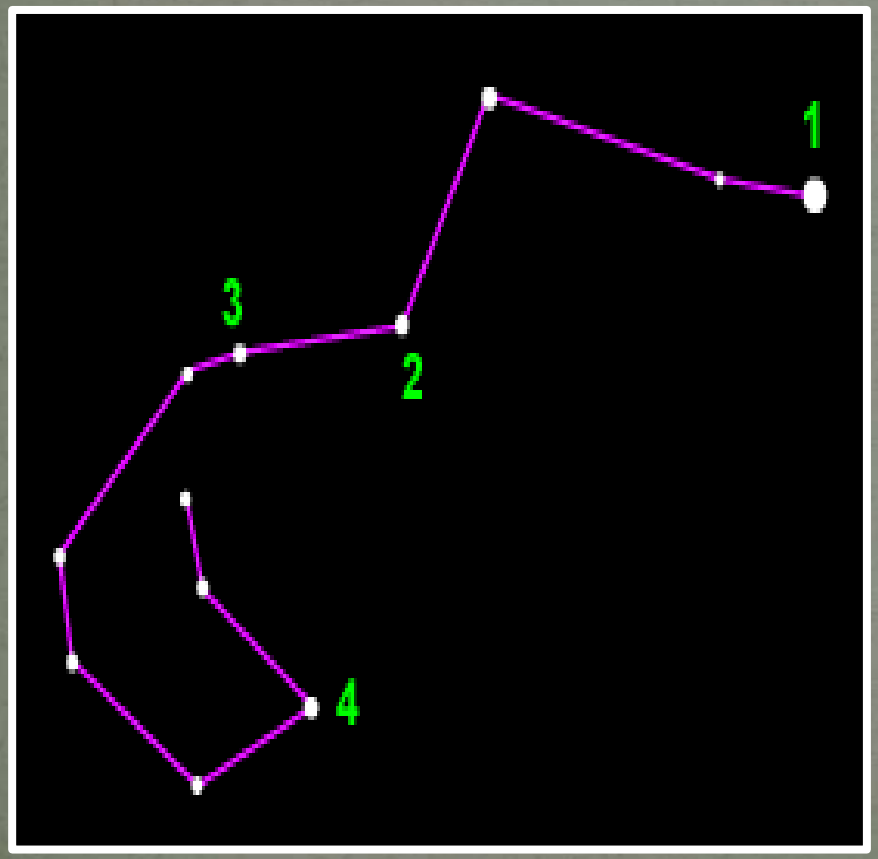
Orion's Belt

Southern Crux

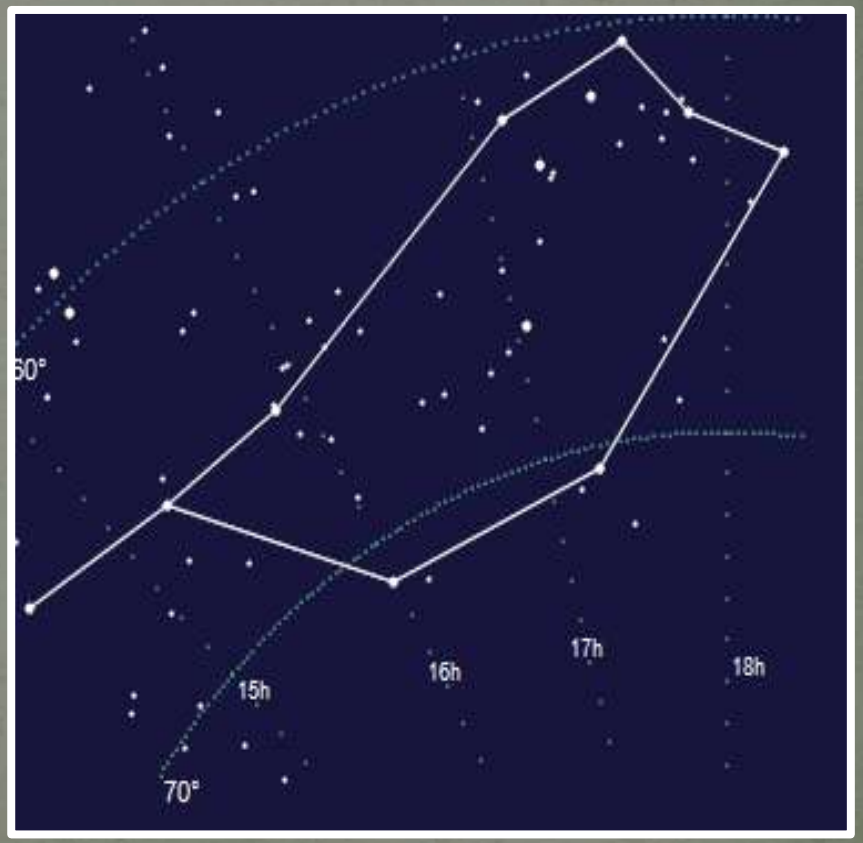


Constellations

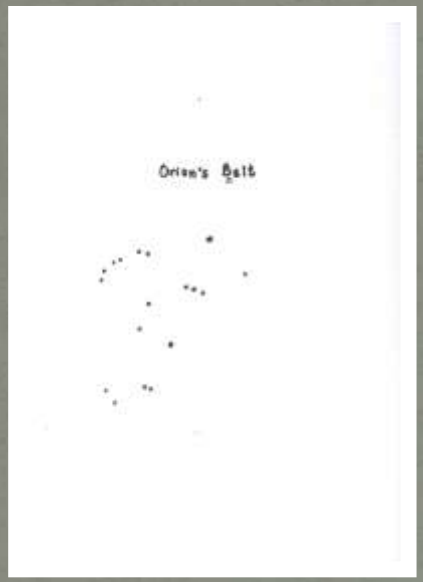
Carina

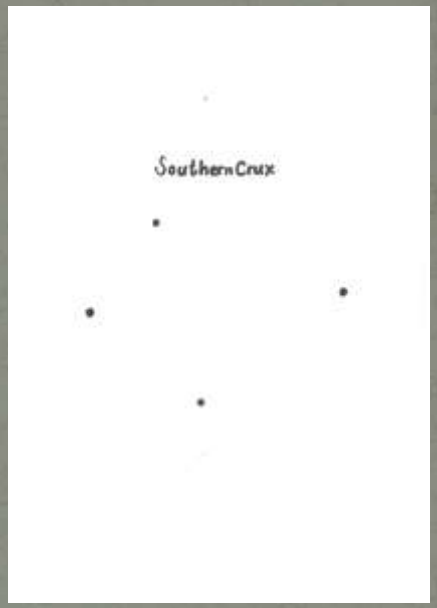


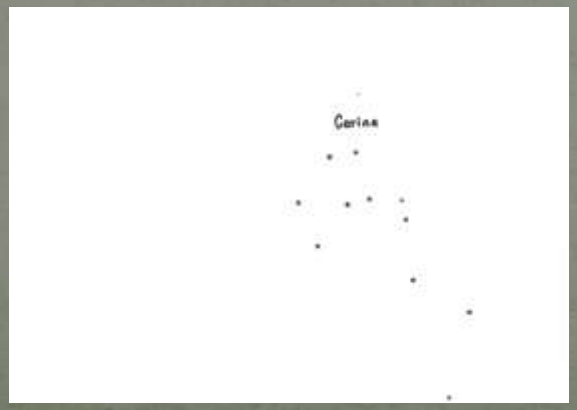
Pavona



Learner Activities







Acknowledgements

I wish to thank the following people for their contributions:

- Sivuyile Manoxyi – South African Astronomical Observatory
- Muneerah Jacobs – Cape Town Science Centre
- Francois Taljaard – Graphics
- SAASTA – Stories of the Southern Skies

The following websites were used:

NASA

Lunar Planetary Institute

Gryphon House