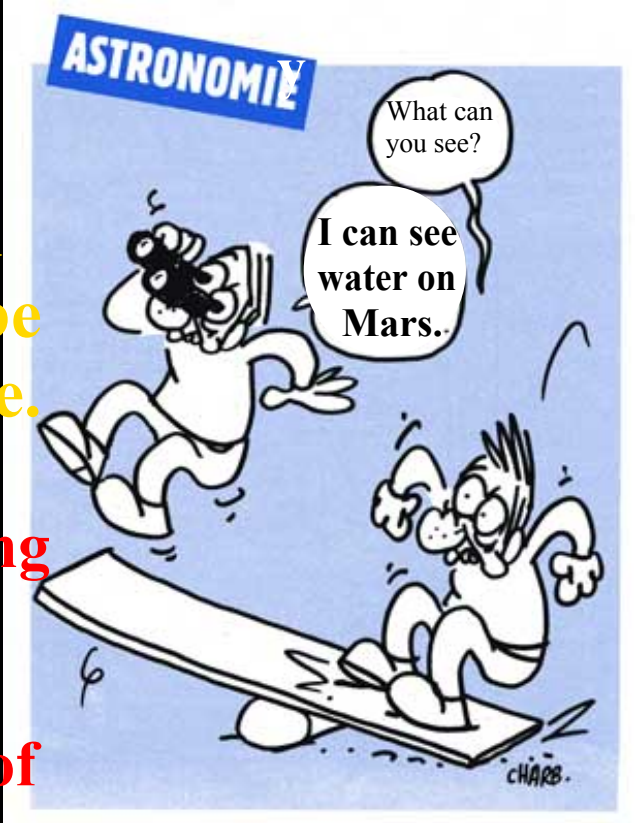
Warm Up

Think about our night sky.In your notebooks write 5 things you know that are in the night sky.

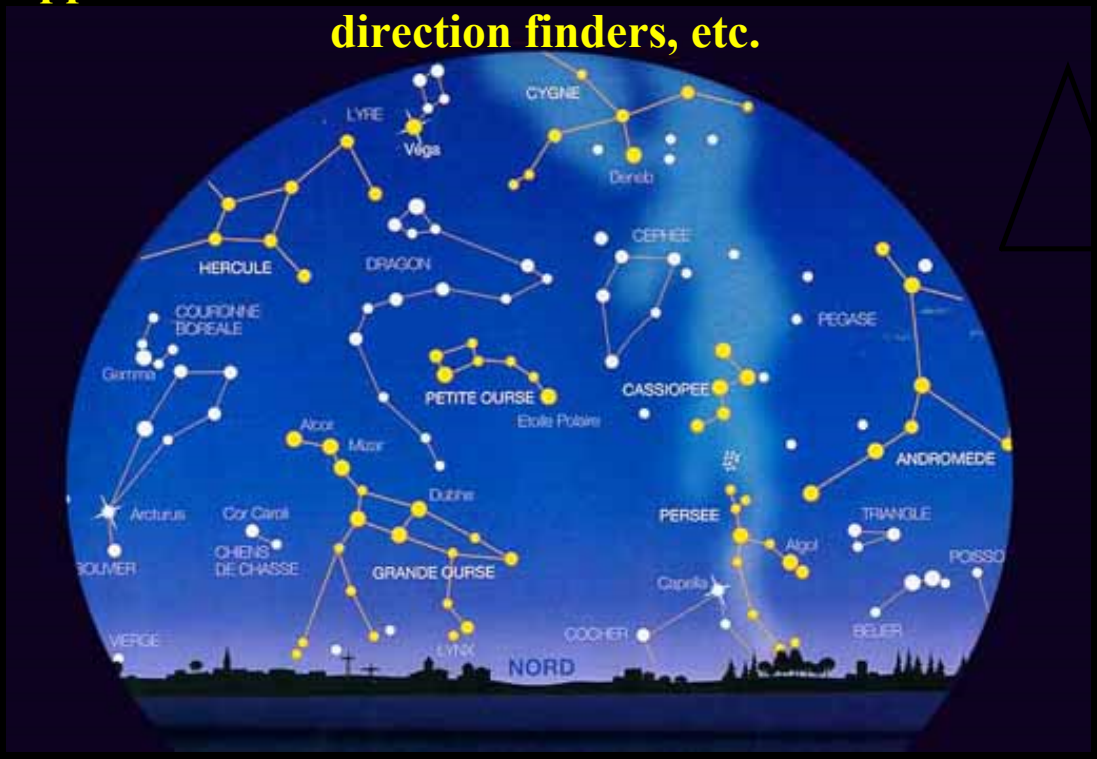
What can we see in the sky

In the night sky there are many patterns and systems that may not be apparent at first glance.

The universe is everything that exists, including all matter and energy everywhere. The study of what is beyond the Earth is called astronomy.



Stars can take the form of Gods, animals, etc. Groups of stars that seem to form shapes or patterns are called constellations. These stars are far from one another, however by the naked eye they appear close. Constellations have been used as calendars, direction finders, etc.



Constellations

Vocabulary

- ***Astronomer*** **- a person who studies the sky**
- ***Hemisphere*** **- half of the Earth**
- ***Light-year*** **- the distance light travels in one year (9,458,000,000,000 kilometers)**
- ***Magnitude*** **- a number that describes how bright a star appears. Smaller numbers mean brighter stars.**

What Our Ancestors Saw

Objects in the sky have fascinated humans throughout time. The explanations of how these celestial objects came to be are even more fascinating. Ancients developed their ideas of what was happening in the sky and explained it with their frame of reference. The constellations were patterns that seemed to tell stories about people. Stars are not always in the sky at the same time, but change positions over time - giving rise to the creation of calendars. The Sun and the Moon have their own pattern or rising and setting - the Moon also has phases. Mercury, Venus, Mars, Jupiter, and Saturn were special 'stars' called planets - meaning 'wanderer'.

Myths, folklore and legends were used to explain what ancient people observed in the night sky.

First Nations people of the Pacific Northwest - believed the night sky was a pattern on a great blanket overhead, which was held up by a spinning 'world pole' resting on the chest of a woman named Stone Ribs.

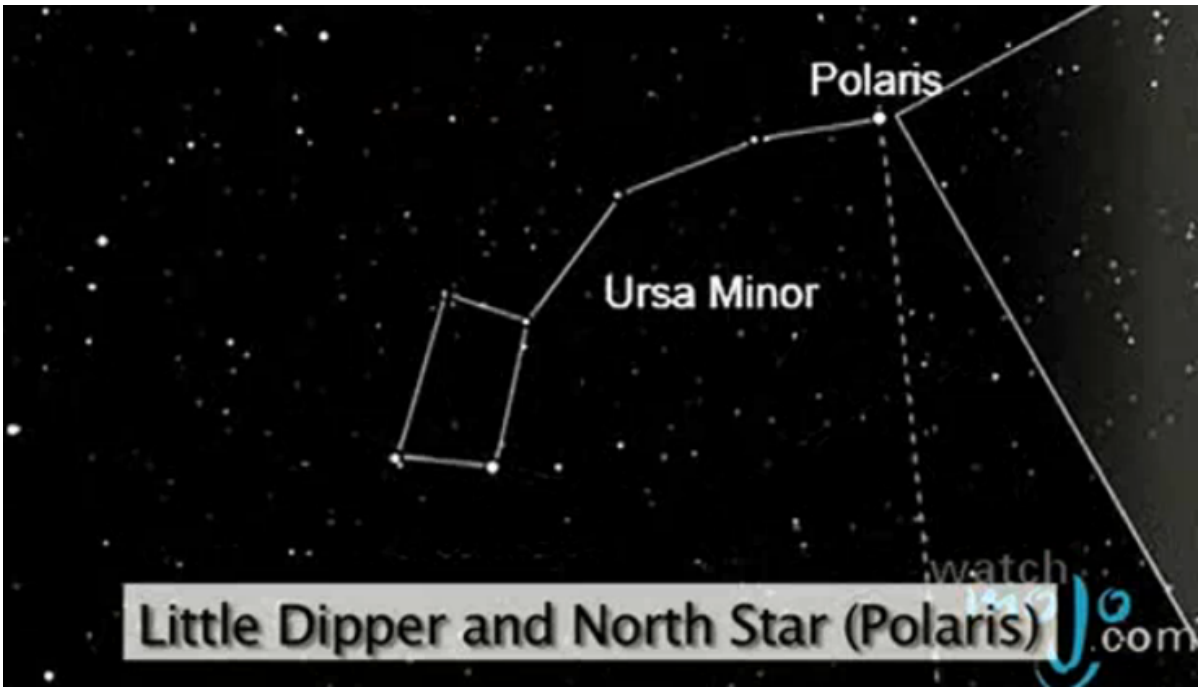
Aboriginal tribes - Algonquins believed the constellation Ursa Major was a bear running from hunters.

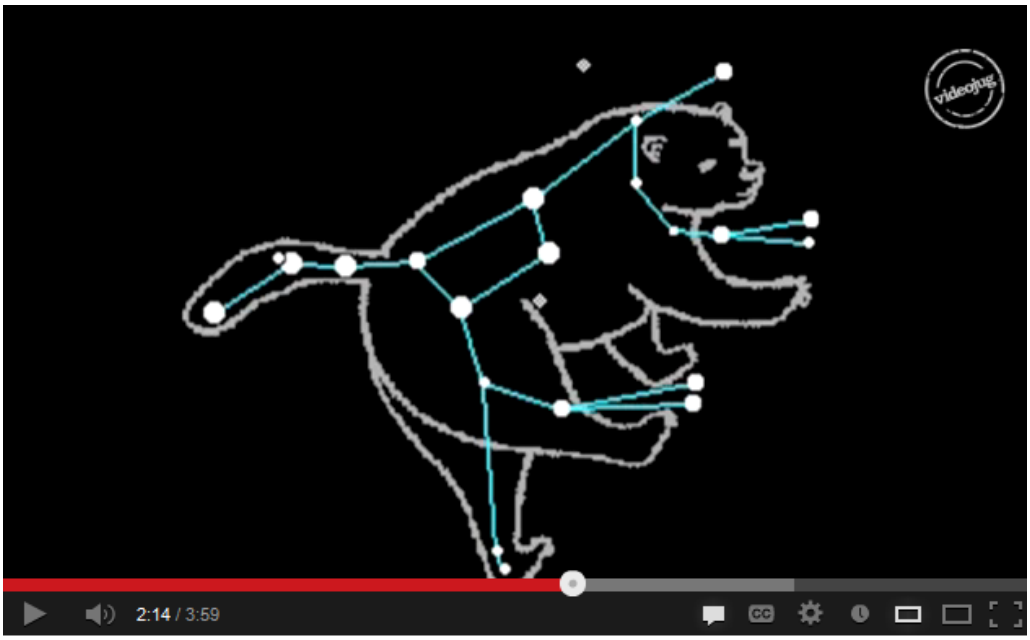
Inuit in the high Arctic - used a mitt to determine when seal pups would be born, by holding the mitt at arm's length at the horizon.

Ancient Egyptians - The Sun God - Ra - was carried in a sacred boat across the sky every day.

Constellations

http://www.5min.com/Video/Stars-and-Constellations-93889705





A Guide To Learn About The Constellation
http://www.youtube.com/watch?v=drXBtWrLxwQ

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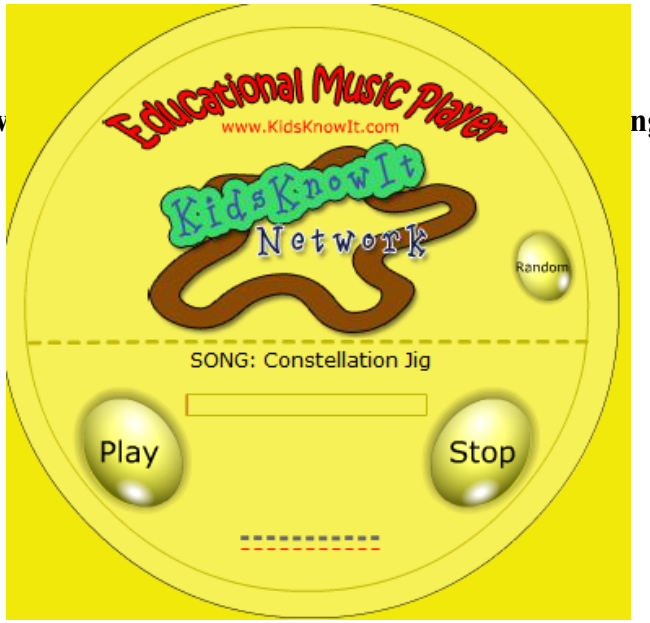
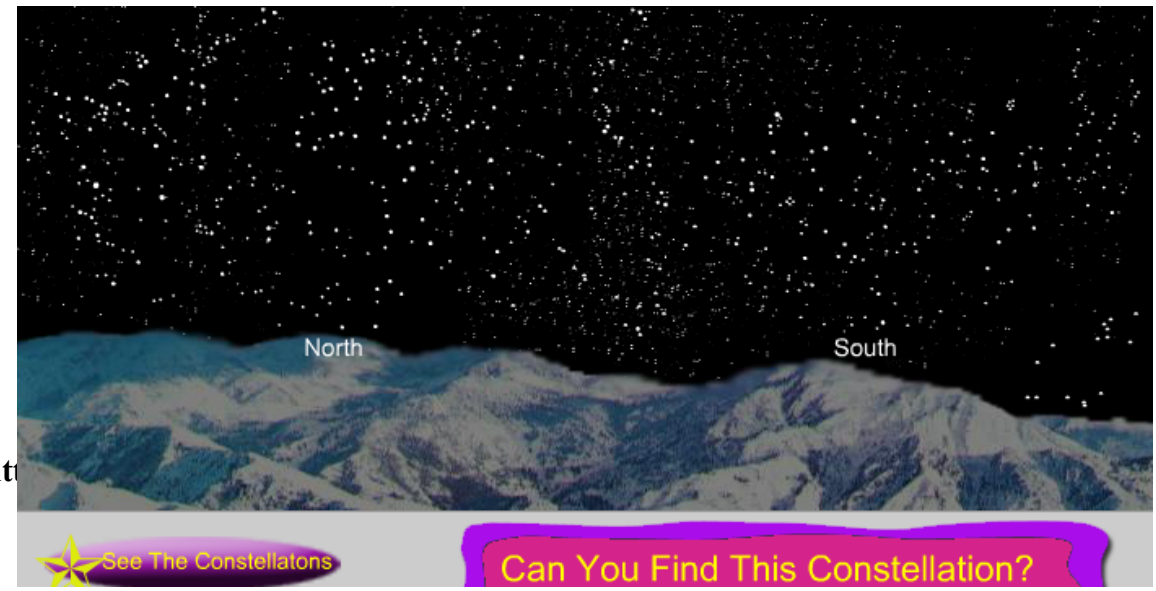
The Universe: The Constellations

http://www.kidsknow  ng.php?song=Constellatic
20Jig

Song

Game


North
South
See The Constellatons
Can You Find This Constellation?

Homework:

- Determine that constellation that is associated with your birthday.
- What is it shaped like?
- Describe what it looks like and the brief story behind it.

http://www.enchantedlearning.com/subjects/astronomy/stars/constellations.shtml

The Night Sky

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Description

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What's New in Version 1.9.2

Thank you for using The Night Sky, and making it one of the most successful apps on the App Store.

Screenshots

iPhone | iPad ime, a great review

BEST for sky aiming in App Store! ★★★★★

by JOHAN SOSA

If you want the best app for figuring out what a particular star is by aiming at it with your phone or iPad there is simply NO BETTER app than this one! I was used to SkyMap and SkyWalk until a month back when I tried this. I only decided to try this one and others because the other two have confusing UIs for sky aiming (sky walk for example has way too much graphics on screen and though those can be disabled somewhat it doesn't move smoothly or randomly goes in an out of aim mode). Unlike the other apps, NightSky lacks in depth information about a particular star .. Which in my opinion is no big deal because wikipedia has anything you'd wanna know. This app is sky aimer focussed so it's not meant for looking at past or future skies (lots of other apps and the internet has that stuff. The only change I would ever make to NightSky is an on screen magnitude slider. I really hope the author avoids the temptation of adding all sorts of bells and whistles (aside from the visible magnitude slider). because right now this app is a sky aimer's dream come true.

Information relating to all 88 constellations

http://www.dibonsmith.com/constel.htm

Each constellation has a Greek myth associated with it

Orion - is made up of 7 stars
- two for his feet, two for his shoulders, and three for his belt

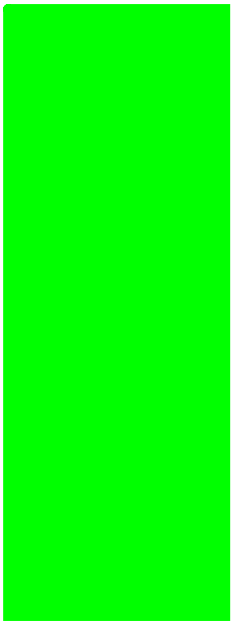
http://www.fcps.k12.va.us/DIS/OHSICS/planet/constell/constell.htm

Orion
The Hunter

There are two different versions of the Orion myth, depending on the identity of his parents. The first of these identifies the sea-god Neptune as Orion's father and the great huntress Queen Euryale of the Amazons as his mother. Orion inherited her talent, and became the greatest hunter in the world. Unfortunately for him, with his immense strength came an immense ego, and he said that he could beat any animal on earth. In response to his vanity, a single small scorpion stung him and killed him.

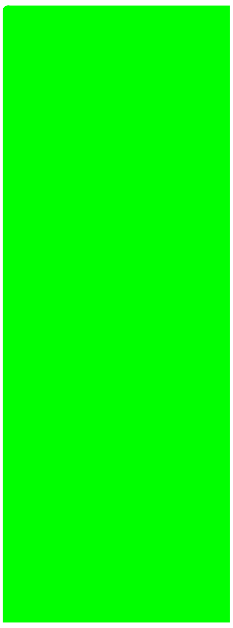
Starting with the sun, can you list the planets?

My
Very
Excited
Mother
Just
Served
Us
Nachos

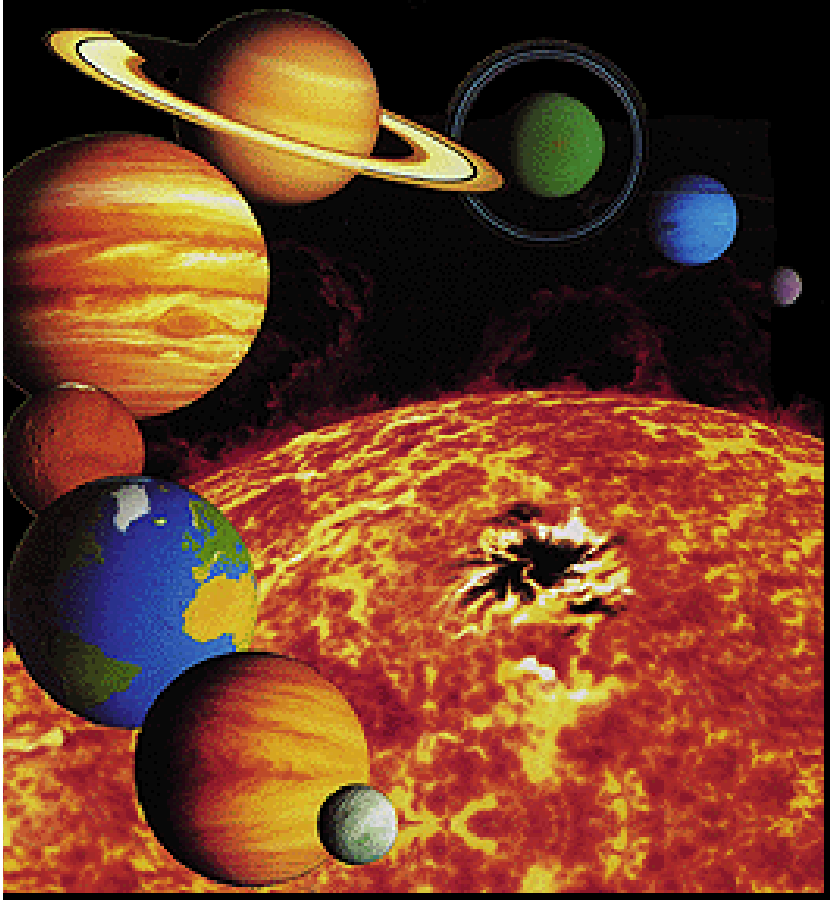


Sun

Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune



Our solar system consists of the sun and everything that travels around it.

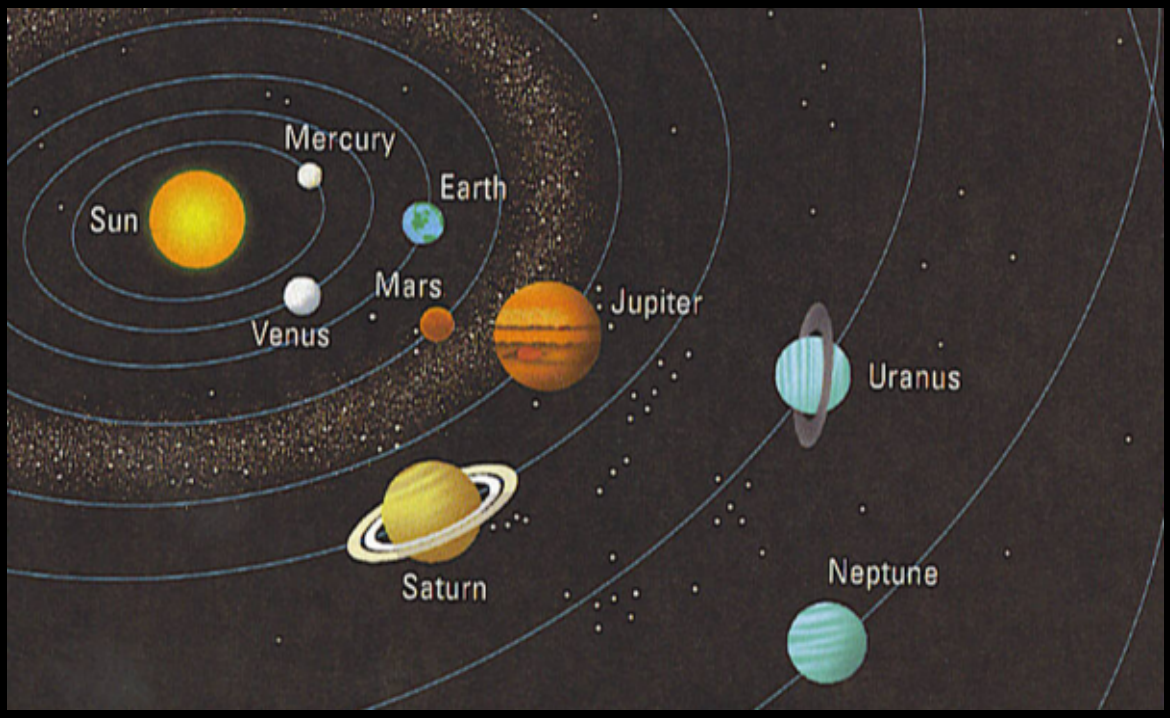


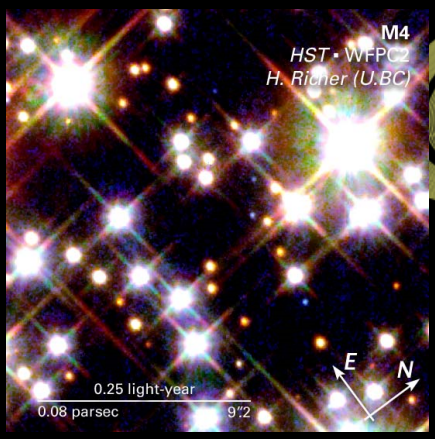
Planets and moons do not emit their own light. They are nonluminous. We can see them because light from the sun reflects off them.

FUN NOTE: Everything in the solar system is much closer to earth than the stars.

How come we can't see all the planets

The sun is very bright, so objects close to it get hidden in the daytime glare.
So when Mercury comes close to the sun it becomes difficult to see from Earth.





A star is matter that emits huge amounts of energy.

A planet is matter that revolves around a star.

Table 1 **Comparing Planets and Stars**

Feature	Planet	Star
location	in the solar system	far beyond the solar system
distance from Earth	fairly near	very far
real size	smaller than most stars	usually larger than planets
reason we see object	reflects light from the Sun	emits its own light
surface temperature	usually cool or very cold	very hot
what object is made of	usually rocks or gases	gases under high pressure and temperature
observable feature	does not appear to twinkle	appears to twinkle
long-term observable feature	very slowly wanders through constellations	appears to move through sky as part of a constellation

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