



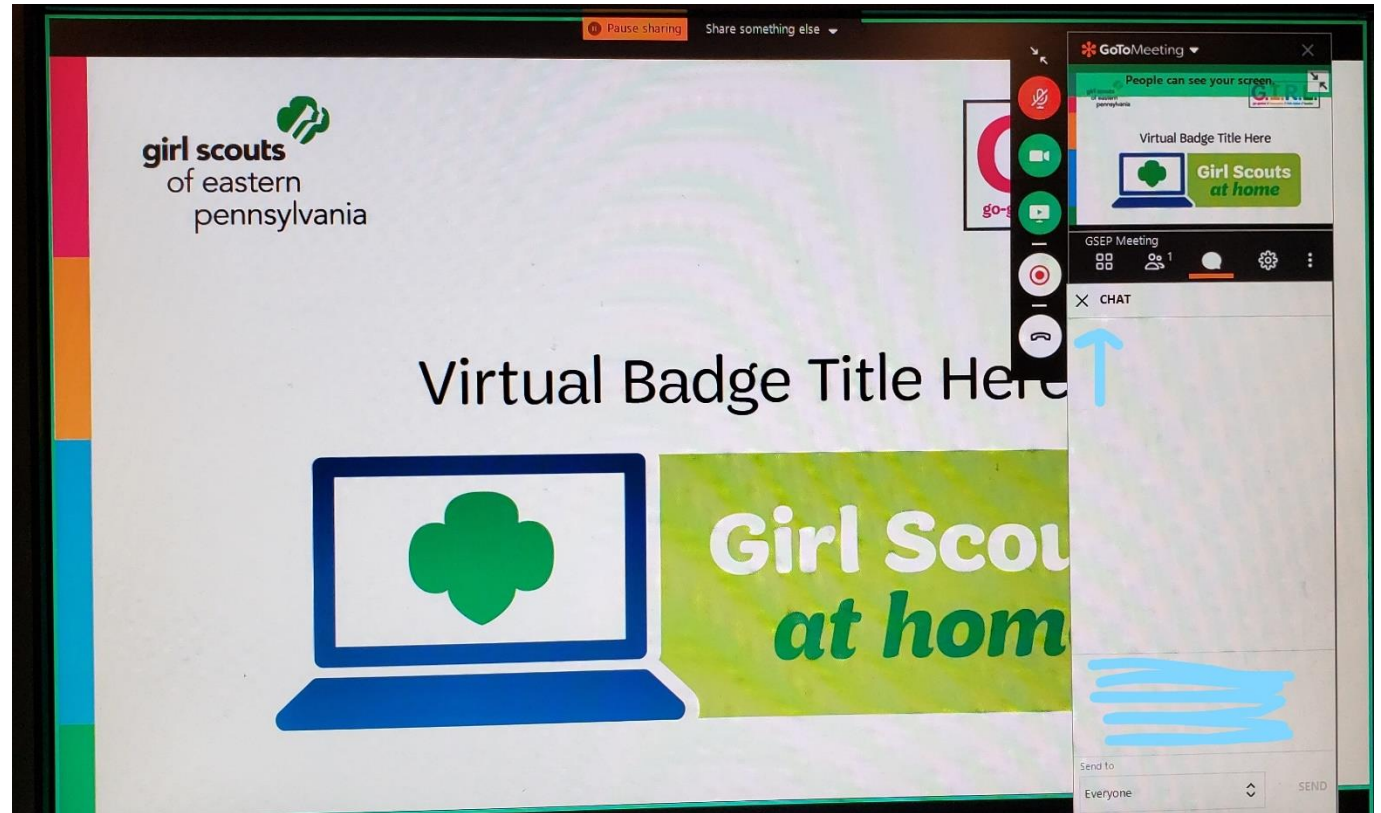
SPACE SCIENCE INVESTIGATOR



Girl Scouts
at home

How will this Virtual Troop Meeting Work?

- On the right side of your screen, there is a control panel. You should see a microphone, a video camera and a chat bubble.
- When we sing together, you will want to click on your microphone so it is green. Then everyone will be able to hear you.
- If you have a webcam, clicking on it will let everyone else in the meeting see you too.
- The Chat Log looks like a cartoon thought bubble...see it underlined in red? You can type questions or comments into the chat log and everyone will be able to see what you write!



Meeting Norms:


-Staying muted unless asked to unmute by the presenter

-Only using the chat log for VTM related messages

-Use of appropriate language during VTMs

-Behavior modelling the GS Promise and Law





Junior Badge – Space Science Investigator

- Badge Objective:
- When girls earn this badge, they'll understand that the Earth orbits the Sun, and how far away the Sun, Moon, planets and stars are from our home planet, Earth.

- 5 Steps to Earn this Badge:
- Model the Solar System
- Circle the Sun
- Discover the stars
- Use tools to explore
- Share their sky

The Girl Scout Promise

On my honor, I will try:

**To serve God and my country,
To help people at all times,
And to live by the Girl Scout Law.**

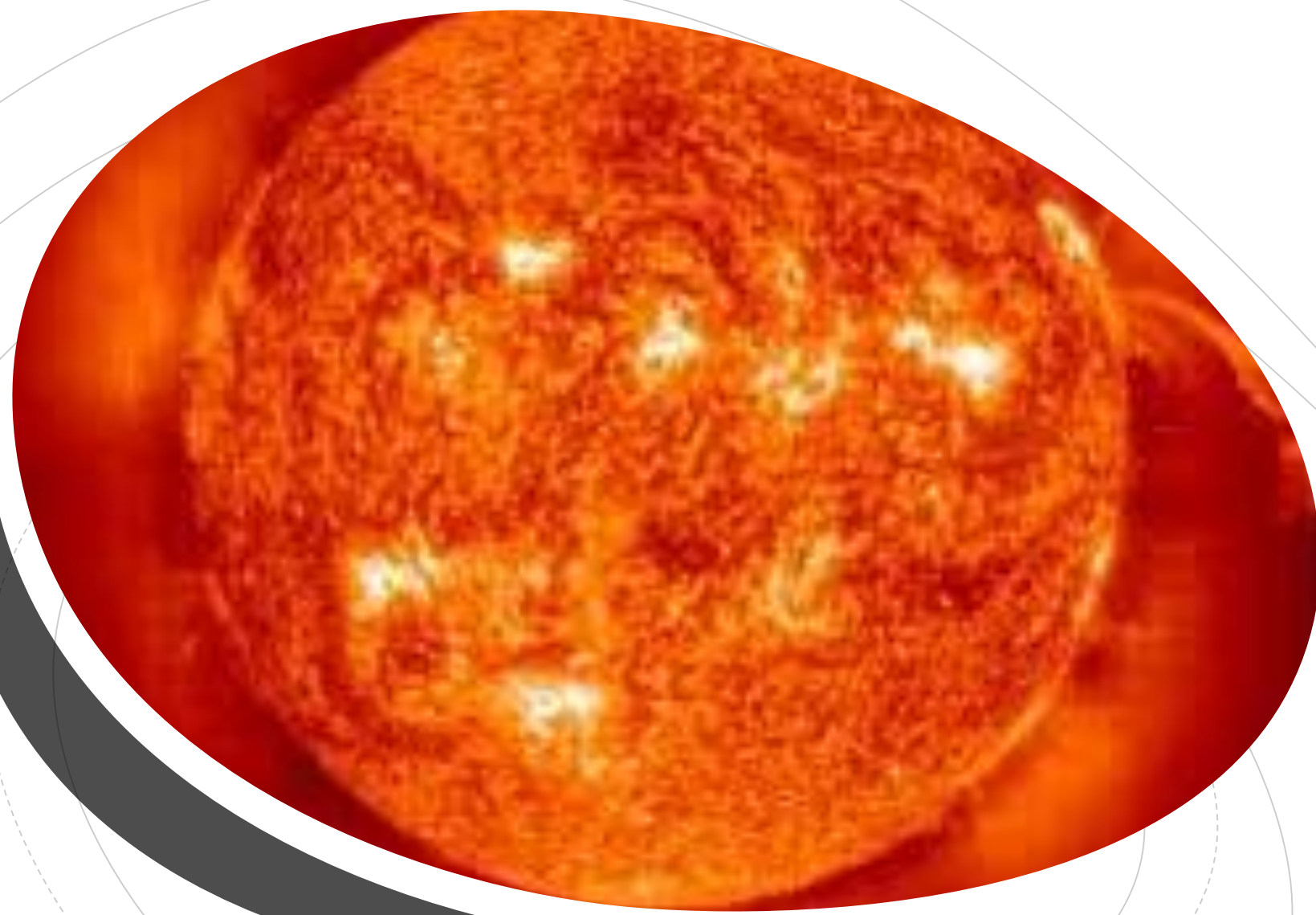
The Girl Scout Law

I will do my best to be

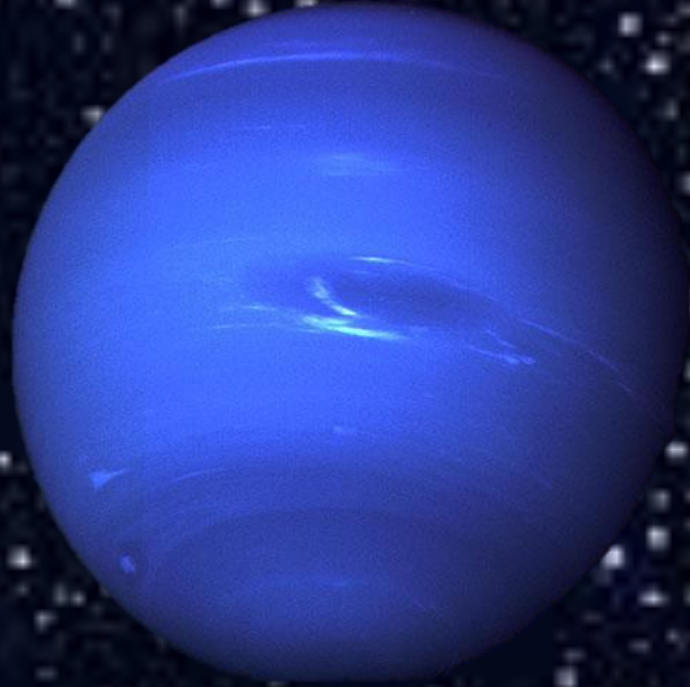
**honest and fair,
friendly and helpful,
considerate and caring,
courageous and strong, and
responsible for what I say and do,
and to**

**respect myself and others,
respect authority,
use resources wisely,
make the world a better place, and
be a sister to every Girl Scout.**

A Solar System Game



Put your answer into the chat.



**Ice Giant – Icy mix with a rocky or metal core.
Atmosphere is made of H₂, He and CH₄**

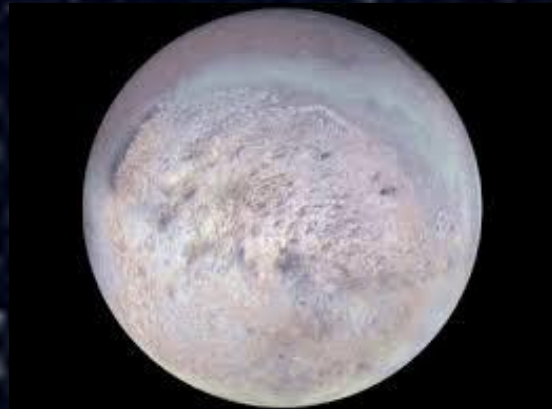
Cannot be viewed by the naked eye

Takes 4 hours for sunlight to reach it.

Known as the windiest planet. Winds can reach 1200 miles per hour.

Named after Roman god of the sea.

Has 14 moons, 5 rings





**Terrestrial – core of iron, nickel and sulfur.
Atmosphere is made of CO₂, AR and N₂
Plus small amounts of O₂ and H₂O vapor.**

**Dusty cold desert world with canyons,
volcanos and a polar ice cap.**

Takes 13 minutes for sunlight to reach it.

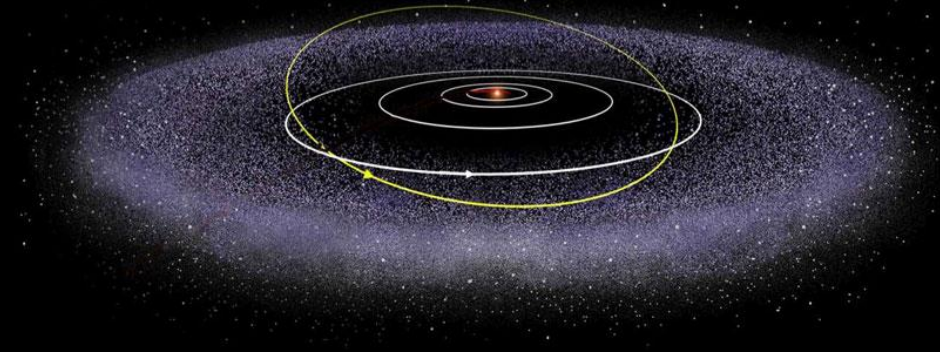
Named after Roman god of the war.

Half the size of the earth with an elliptical orbit.

Has 2 moons named Phobos and Deimos.



A doughnut-shaped ring of icy objects.



Contains bits of rock, ice, comets, and dwarf planets.

Named after a scientist named had the idea that a belt of icy bodies might have existed beyond Neptune. He was trying to explain where comets with small orbits came from.





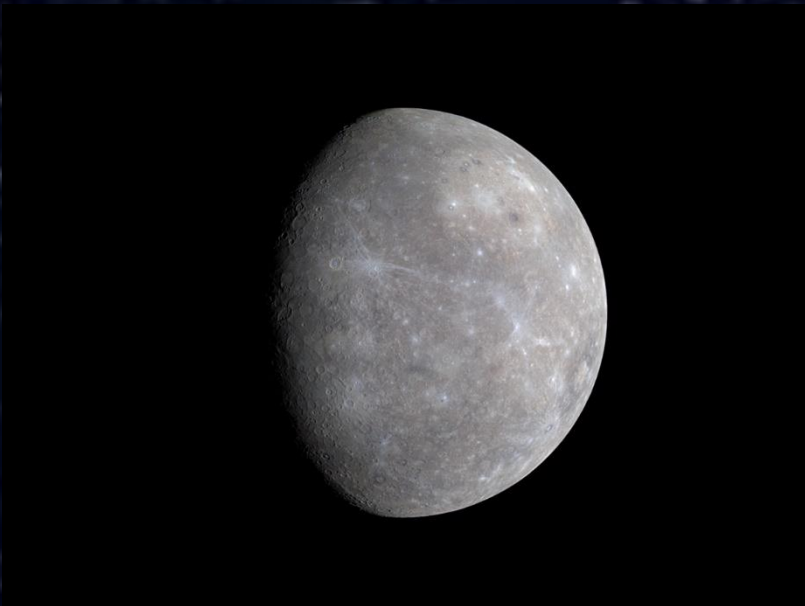
**Terrestrial – solid rocky surface.
Atmosphere is made of O₂, NA, H₂ He and K
Considered the swiftest planet.**

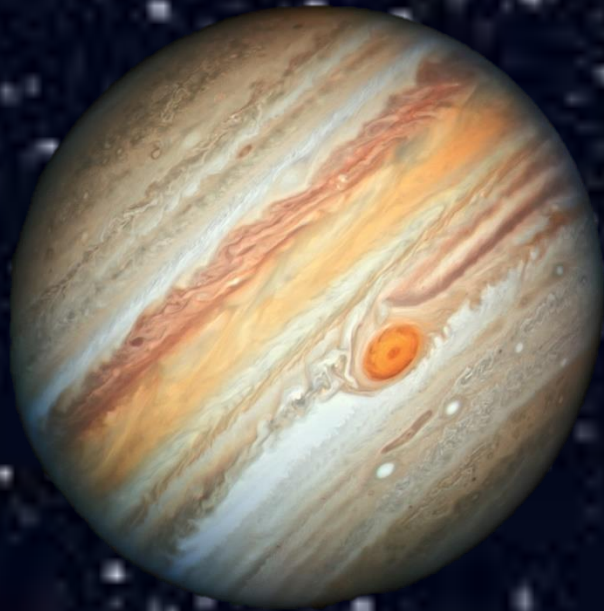
Takes 3 minutes for sunlight to reach it.

Holds the largest ocean in the Solar System.

Named after the messenger of the Roman gods.

Has no moons.





**Gas Giant – Clouds of Ammonia and H₂O
Atmosphere is made of H₂, He and NH₃**

Has storms that are over 100 years old.

Takes 43 minutes for sunlight to reach it.

Holds the largest ocean in the Solar System.

Named after the King of the Roman gods.

Has 4 large moons, 53 small moons and dust rings.





Enter planet's atmosphere at high speed and burn up.

Is a particle broken off of an asteroid or comet orbiting the Sun

They include any space debris bigger than a molecule and smaller than about 330 feet



Can be made of rock or iron-nickel or a combination of both.



**Terrestrial – rock core, mantle and crust.
Atmosphere is made of O₂, N₂, AR and CO₂**

Has 2,218 satellites in orbit.

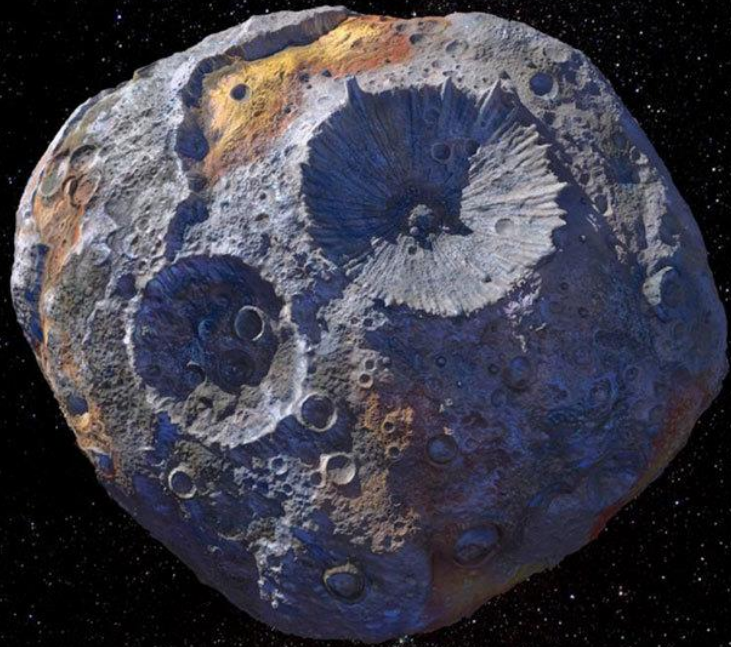
Takes 8 minutes for sunlight to reach it.

Mostly liquid on the surface.

**Not named after a Roman or Greek god.
Name is Germanic and means ground.**

Has one moon.





Small, rocky objects.

Jagged and irregular shaped.

Some are solid bodies, while others are smaller piles of rubble bound together by gravity.

There are 958,017 recorded.





**Ice Giant – rocky core and icy mix of H₂O, NH₃ and CH₄
Atmosphere is made of H₂, He and CH₄.**

**Known as the sideways planet because of its rotation.
Has an East West rotation and is at a 90 degree angle.**

Takes 2 hours and 40 min for sunlight to reach it.

Blue green color caused by methane absorbing reds.

Named after the Roman of the sky..

Has 27 moons and 13 rings.





Survives the entry into a planet's atmosphere.

Is a particle broken off an asteroid or comet orbiting the Sun.

They include any space debris bigger than a molecule and smaller than about 330 feet.

Can be made of rock or iron-nickel or a combination of both.





**Terrestrial – rock core, mantle and crust.
Atmosphere is made of CO₂ and Sulfuric Acid**

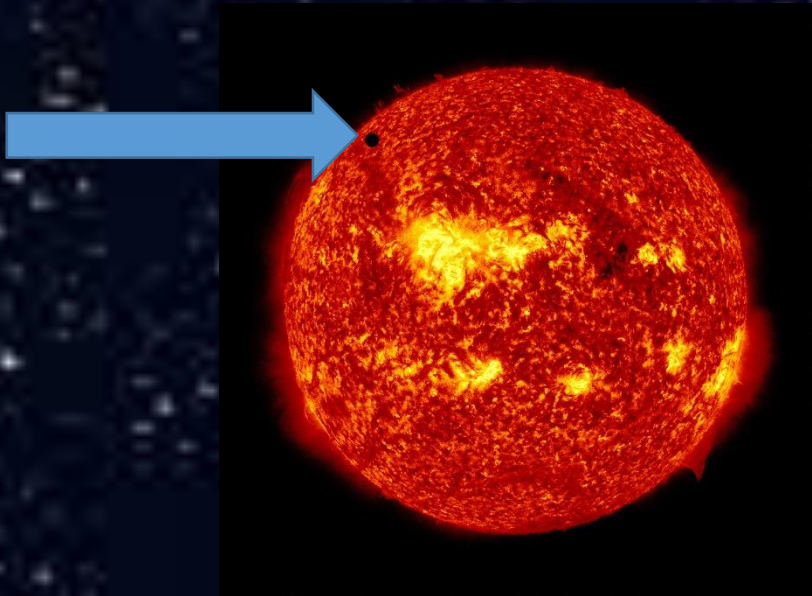
Has East West rotation and no tilt. So no seasons.

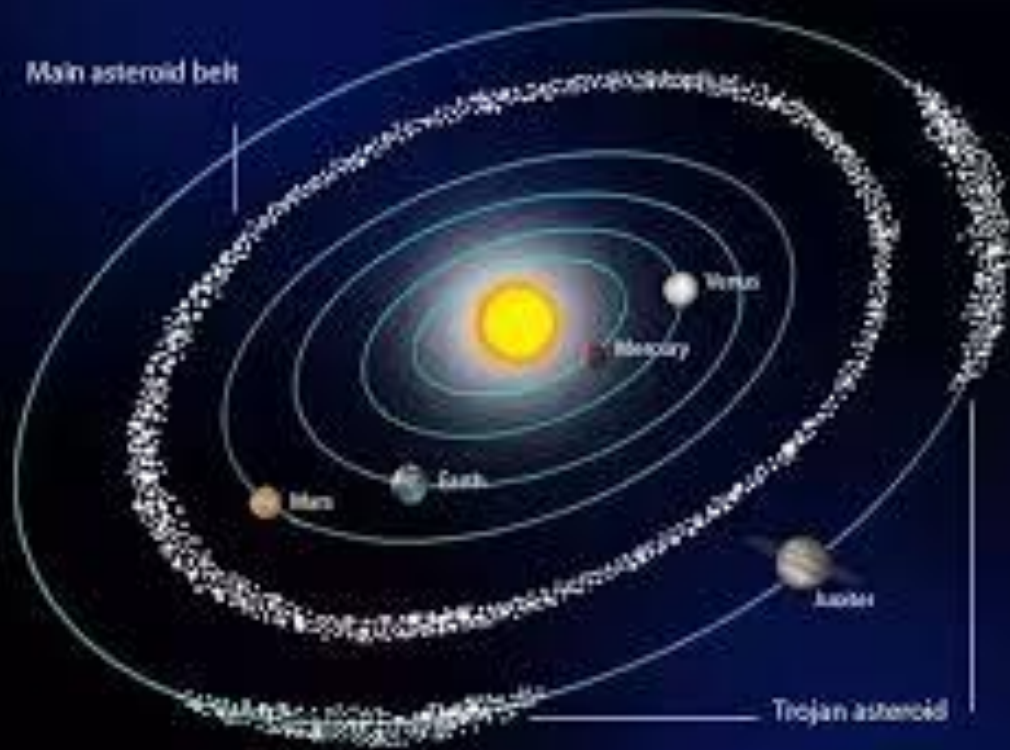
Takes 6 minutes for sunlight to reach it.

863°F with hurricane force winds.

Named after the Roman god of love.

Has no moons or rings.



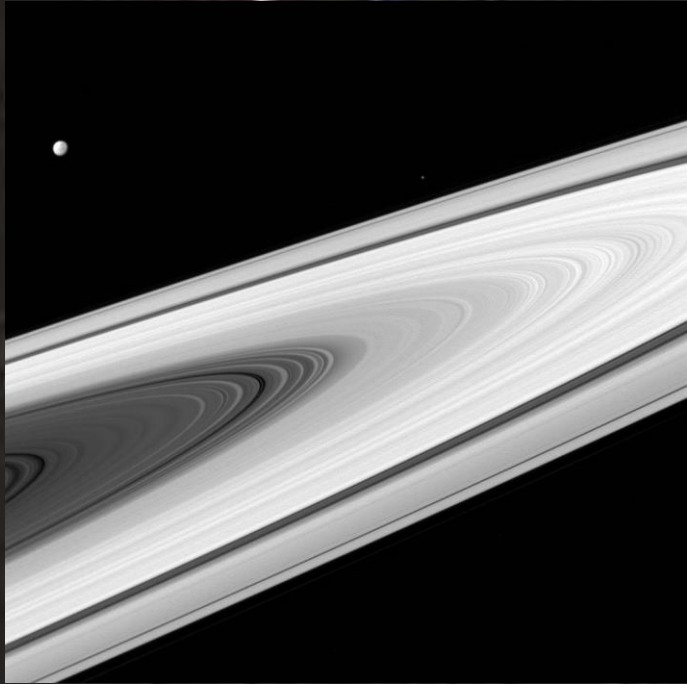
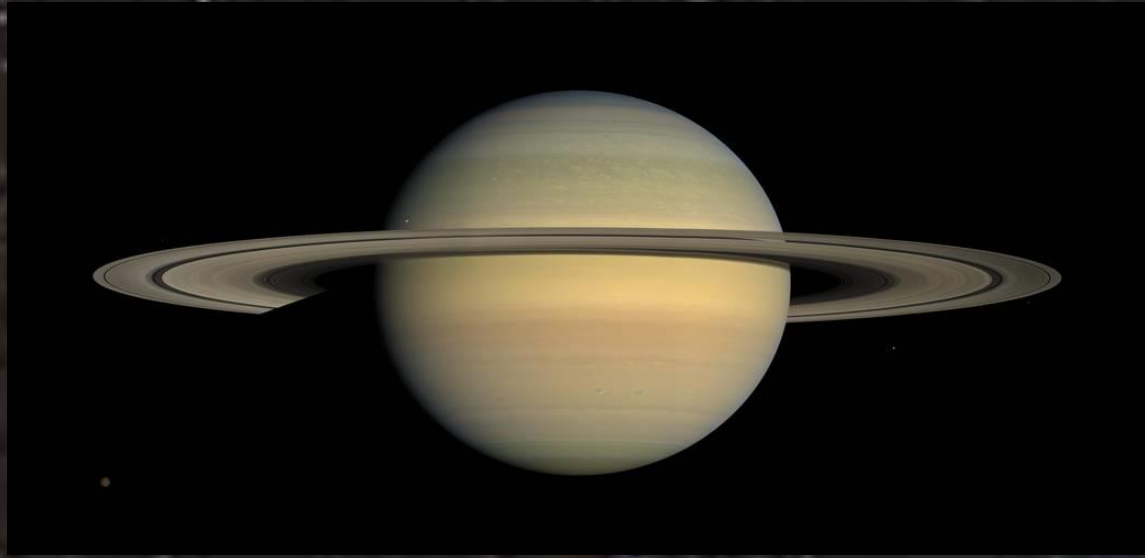


Large group of ancient space rubble found orbiting the sun between Mars and Jupiter

Irregularly shaped, though a few are nearly round, and they are often pitted or cratered.

Made of clay and silicate, iron-nickel or a combination of both.





**Gas Giant – gases make up the bulk of this giant.
Atmosphere is made of H₂ and HE**

One day is 10 hours long.

Takes 80 minutes for sunlight to reach it.

Density is less than water so it would float in a tub. If there was a tub that large.

Named after Roman god of agriculture and wealth. The father of Jupiter.

Has 53 known moons and 29 or more being researched. Has 7 rings.



Snowballs of frozen gas, rock and dust that orbit the Sun.

Dust and gases form a tail.

There are 3,626 currently known.

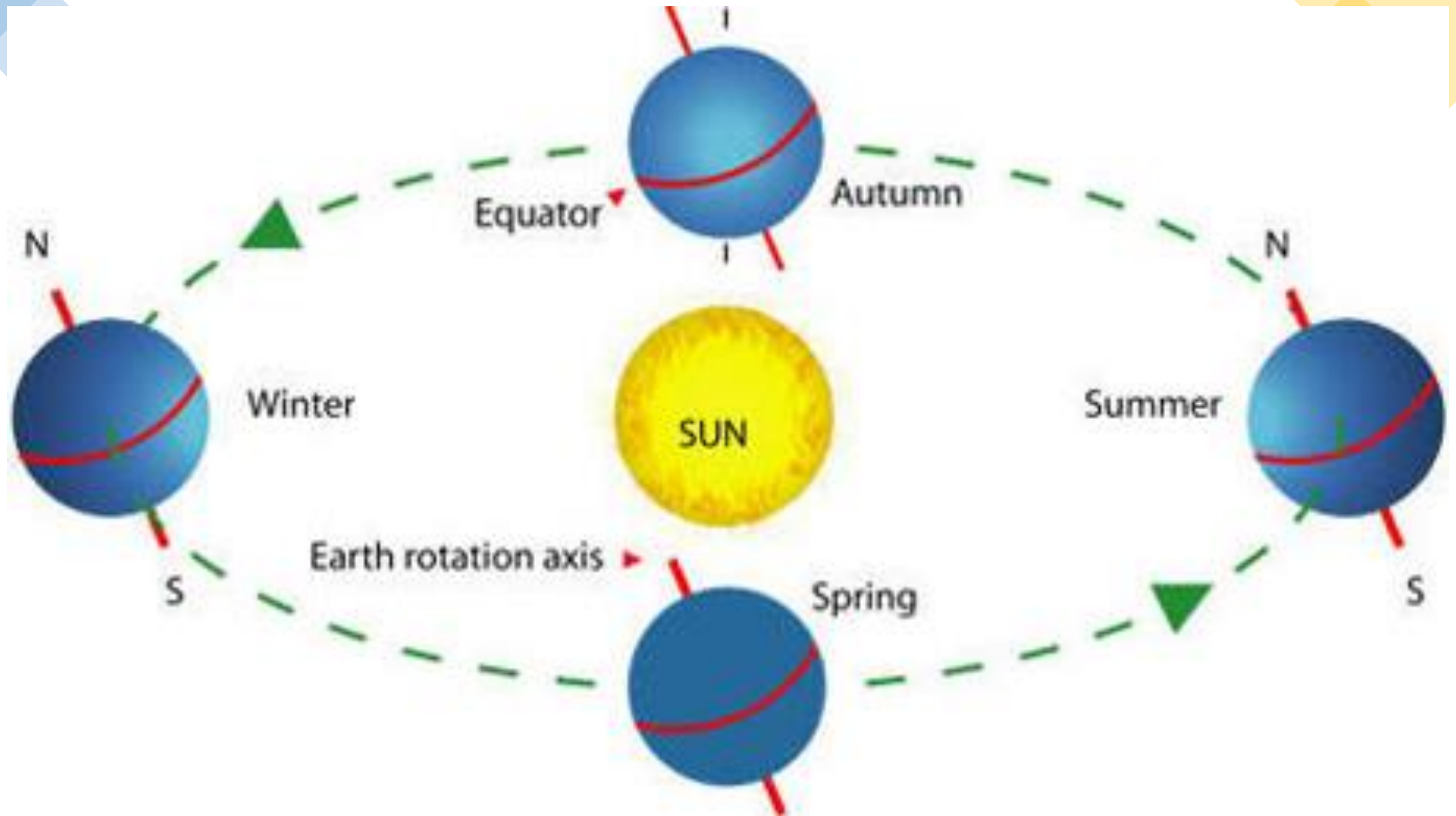
Most travel a safe distance from the Sun but some, called sungrazers, crash straight into the Sun or get so close that they break up and evaporate.

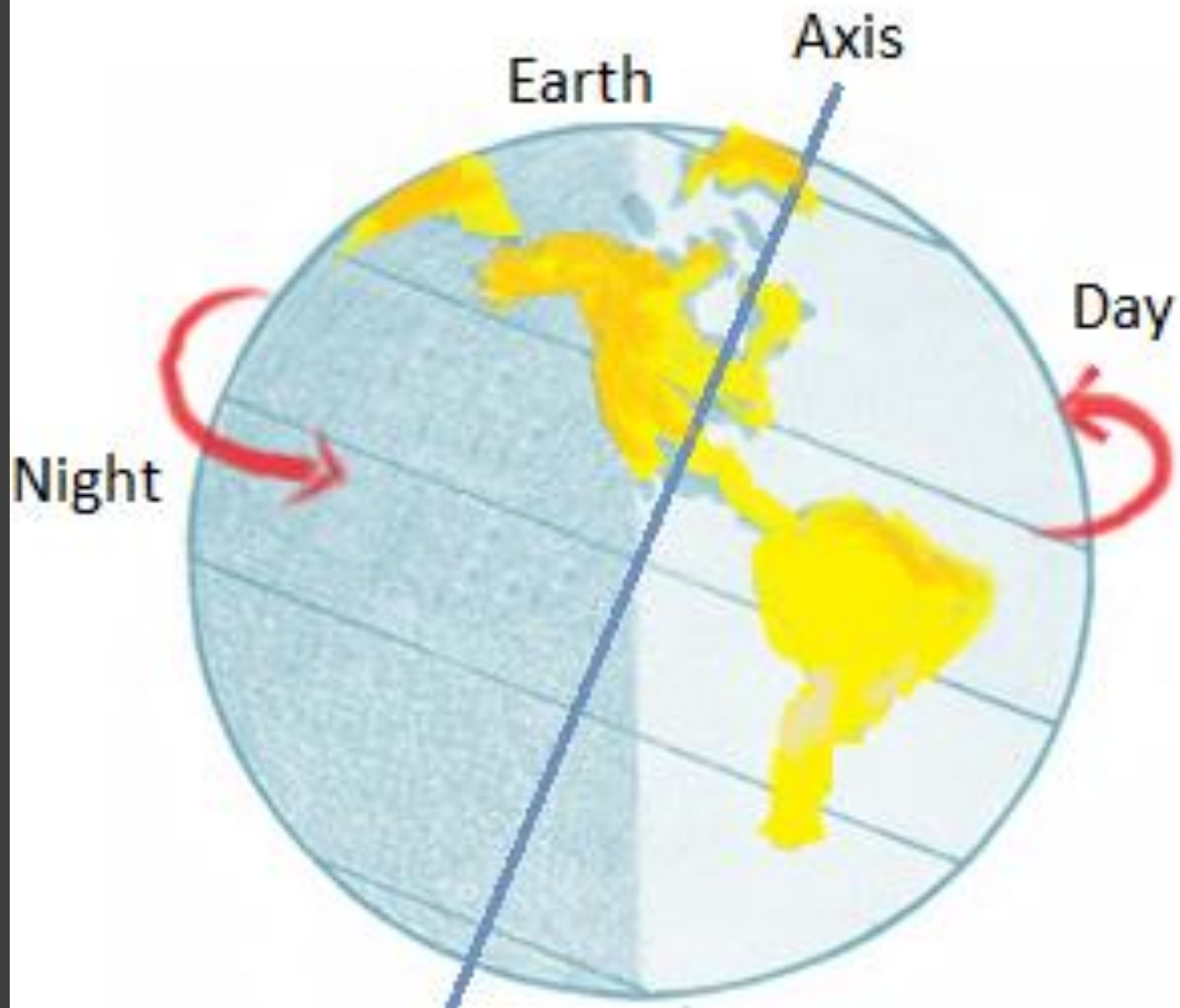




Step 2: Circle the Sun


Why do Planets move around the sun??





Let's Look at
Saturn..

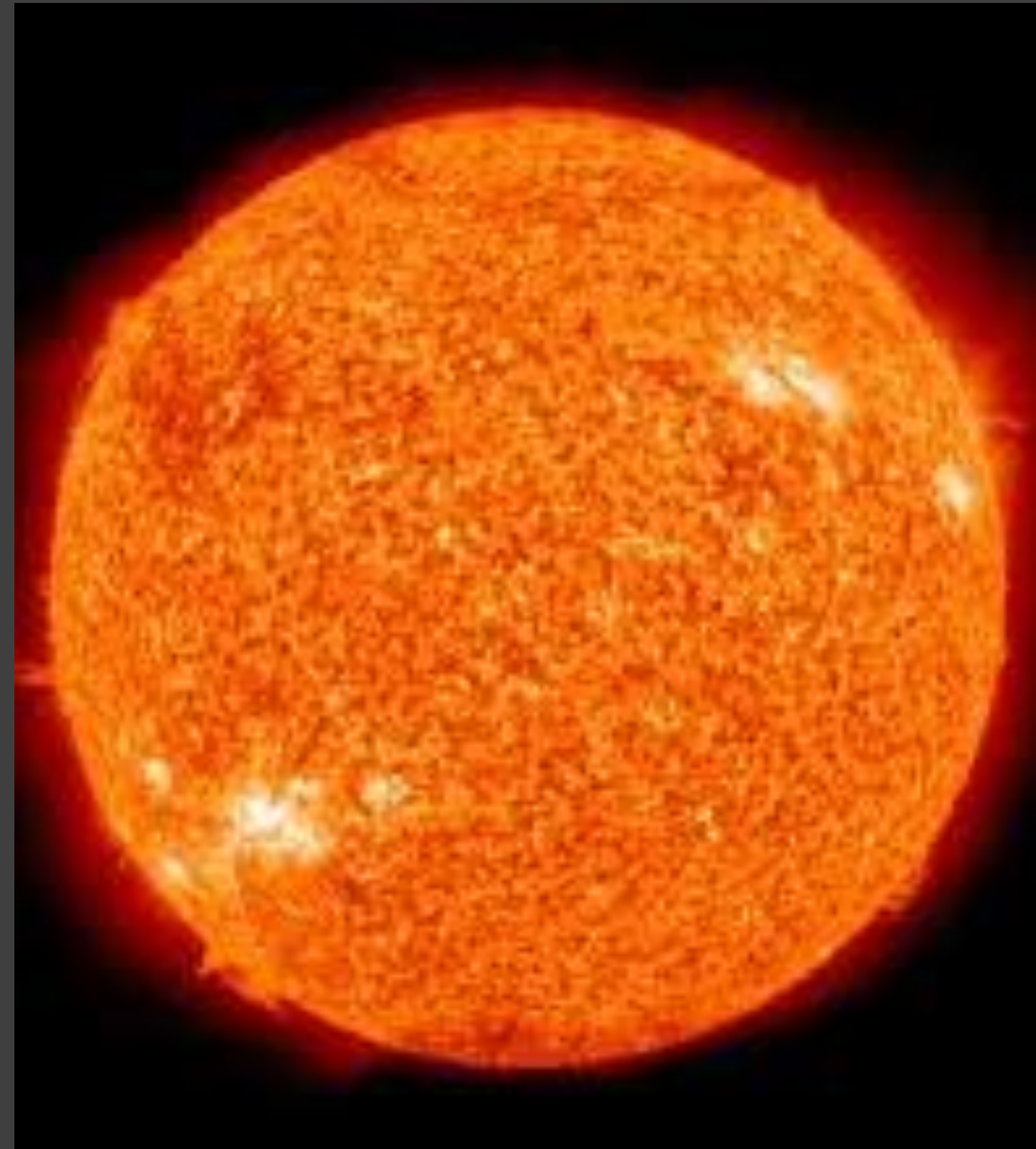




Do you want to
learn more??

- Cool website to check out:
- Calculate your age on other planets – visit www.girlscouts.org/SpaceSciencePlanetAges
- If you were born on 4/20/2008 – 12 years old
 - Mercury – 49.8 years old – your next birthday – 5/5/2020
 - Venus – 19.5 years old – your next birthday – 8/9/2020
 - Mars – 6.3 years old – your next birthday – 6/19/2021

Step 3: Discover the Stars





Orion – The Hunter

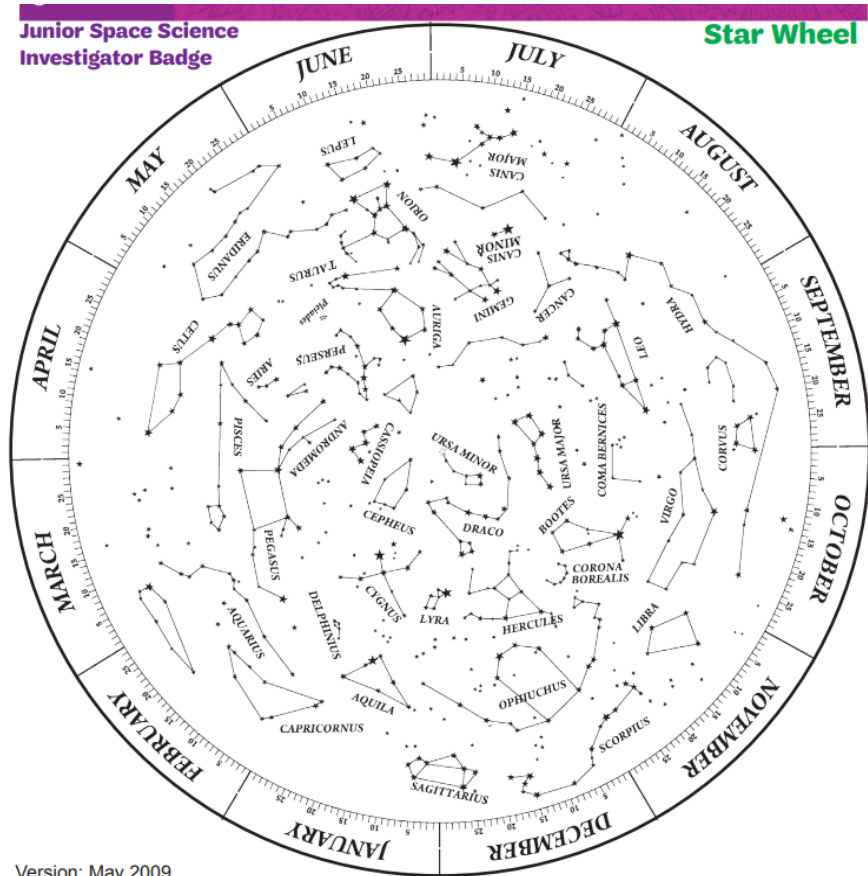


Rigel



Betelgeuse

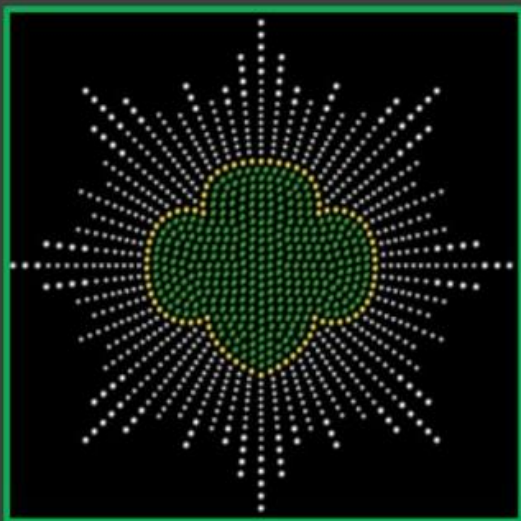
Step 4: Use Tools to Explore – Star Wheel



INSTRUCTIONS FOR ASSEMBLING UNCLE AL'S STAR WHEELS

- Pictured is “Uncle Al’s Star Wheel”.
- Instructions for completing this project can be found on <http://lhs.berkeley.edu/pass/AS T110&111&121.html>

YOUR NEXT STEPS



Check out resources in post meeting email



Continue to work on your observation scrapbook



Share what you've learned