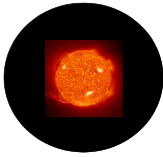


The Solar System

The hottest chapter yet



Sun Size

The sun is a MEDIUM sized star
The diameter of the sun is approximately

- 1.39×10^6 km
- OR 8.6×10^5 miles
- OR 109 times bigger than the earth

Wow! Hard to imagine that is *smaller* than a lot of other stars!



Sun Location

The sun is located near the **edge** of our galaxy

- It is 9.3×10^6 miles from Earth
- If you flew on a jet at 600 mph from the sun to the Earth, it would take you 18 years to get there.
- If you drove it would take 152 years



The sun is many **thousands** of times CLOSER to the Earth than any other star.

Our Galaxy

A GALAXY is a large system of stars, gases, dust and possibly other bodies.

Ours is called the "Milky Way"

It is shaped like a spiral disk
Scientists believe that there are **billions** of galaxies in the universe

Scientists believe that there are **billions** of stars in each galaxy



Light

Light from the sun reaches the earth in a few minutes (about 8)

For the next closest star, it takes **years**

Light travels at a speed of 300,000 km per second (186,400 miles per second)

The distance light travels in a year is called a LIGHT YEAR

- It is so far that we need a unit bigger than miles or km to measure it

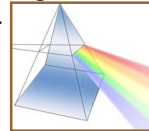


Light

The Sun loses energy when it emits light

Only a tiny fraction of the light actually reaches Earth

Light that we see from the Sun is called "white light", but it is made up of many different colors of light blended together.



Light

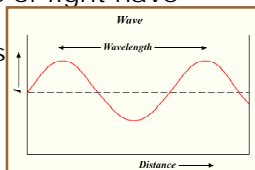
There is also light that reaches Earth that we cannot see

Infrared

Untraviolet

Light travels in waves

All the types of light have different wavelengths



Sun Temperature

- The Sun's average temperature is 6000 Kelvin, which is 10,340.33 °F
- Some portions of the Sun are hotter than others

The Sun gets its energy by continuous explosions



Planet – Basic Definition

An object in space that reflects light from a nearby star around which it revolves.



Pluto

- Why is Pluto no longer considered a planet?
- What is it?
- What about it's moon?

Did you know the temperature on Pluto is at least -379°F!



Extra Credit Opportunity

Inner Planets (Terrestrial)

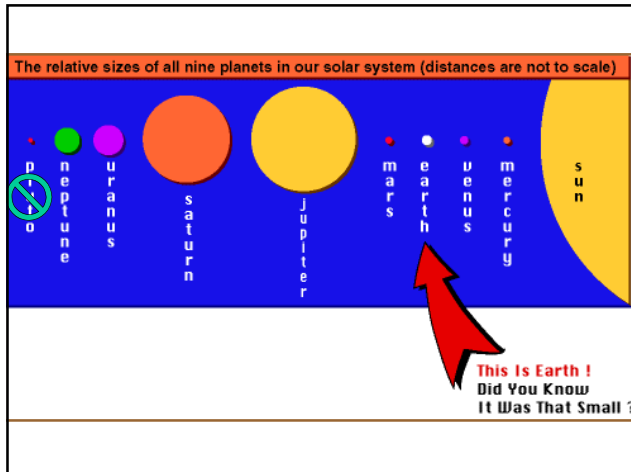
Mercury
Venus
Earth
Mars



Outer Planets (Gaseous)

Jupiter
Saturn
Uranus
Neptune





Moon

Any large naturally occurring object which is in orbit around a planet.

- Mercury: 0
- Venus: 0
- Earth: 1
- Mars: 2
- Jupiter: 63
- Saturn: 47
- Uranus: 27
- Neptune: 13



Meteor & Meteorite

A **Meteor** is a lump of rock or metal that enters the Earth's atmosphere and burns

A Meteoride is a meteor that is outside the earth's atmosphere

A Meteorite is a meteor that reaches the ground without burning up completely in the Earth's atmosphere.

Craters are made when a meteorite hits the surface of a planet or moon



- Barringer Meteor Crater in Winslow, Arizona.



Asteroid

An Asteroid is a small body orbiting the sun, mostly between Mars and Jupiter.

- also called a planetoid or a minor planet
- Often irregular in shape
- 1 to 480 miles in diameter

Some asteroids have hit the Earth with a large enough impact to change the Earth's climate (volcanoes can do this too)



- This happens because the large amount of dust sent into the air blocks the sun's rays for a period of time

Vocab & Question List

1. The sun is a _____-sized star.
2. The diameter of the sun is _____ times bigger than the earth.
3. The sun is located near the _____ of our galaxy.
4. The sun is many _____ of times closer to the earth than any other star.
5. The name of our galaxy is the _____.
6. Our galaxy is shaped like a _____.
7. Scientists believe there are _____ of galaxies in the universe.
8. Scientists believe that there are _____ of stars in each galaxy.
9. How long does it take light from the sun to reach the earth?
10. How long does it take light from the next closest star to reach the earth?
11. What is the speed of light in km/s?
12. What happens to the sun's energy when it gives off light?
13. How much light from the sun reaches the earth?
14. What do we call light that we see from the sun and what is it made up of?
15. Name two types of light from the sun that we cannot see
16. How does light travel?
17. What makes different types of light different?
18. How does the sun get its energy?
19. What are the inner planets and what is another name for them?
20. What are the outer planets and what is another name for them?
21. Galaxy
22. Light Year
23. Planet
24. Moon
25. Meteor
26. Meteorite
27. Asteroid

C-Layer Options

Flash Cards
 Bill Nye Video
 Children's Book
 Song/Rap/Poem
 Board Game
 Poster
 Interview
 Skit
 Newscast