

Middle School Physical Science

Space Introduction – Grade 6-7



TeachWithFergy

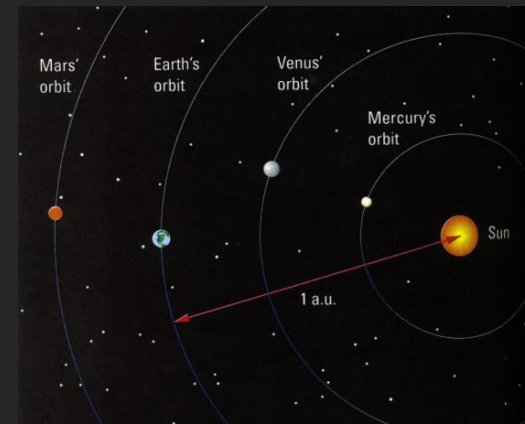
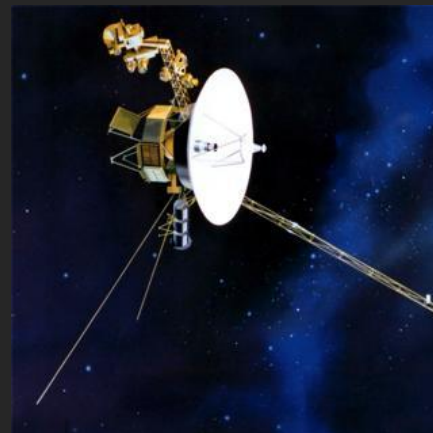
Preview File

Please enjoy this preview of your Student Version of the lesson. I've created this PDF for ease of viewing and to decrease the file size but of course, your lesson will be in PowerPoint format.

- Some slides appear blank because they have been removed.
- Student versions have portions of the text removed which is given in the teacher version and appear as _____
- Other slides may have on them, this represents writing that has been removed.

Space

- Space is HUGE!
- Distances in Space
 - Light Years
- The vast number of stars
- Space facts
- Voyager 1
- Space travel



The Universe

- The universe is everything that exists, including all matter and energy everywhere. _____

Space is Huge!

Measuring Distance in Space

- Space is so vast we cannot measure the distance using normal means (km, miles, etc.)

-

- _____

Light Year

- In space the distances are gigantic. For example, the closest star to Earth (besides our sun) is close to

A Light Year

-

- A light year is the distance that light can travel in a year or:

This slide has been removed

1 light year = 9,460,800,000,000 km

Distance from Earth to

-
= 2,700,000,000 miles = 4,300,000,000 km
= 28.67 A.U. = 0.000455 light years
- Alpha Centauri (nearest star) → _____
- → _____
- Andromeda, nearest large galaxy → _____
- Furthest galaxies seen in the universe →
15,000,000,000 light years
 - If we were still using km, the distance to the furthest galaxies seen would be 145,000,000,000,000,000,000,000 km away!!

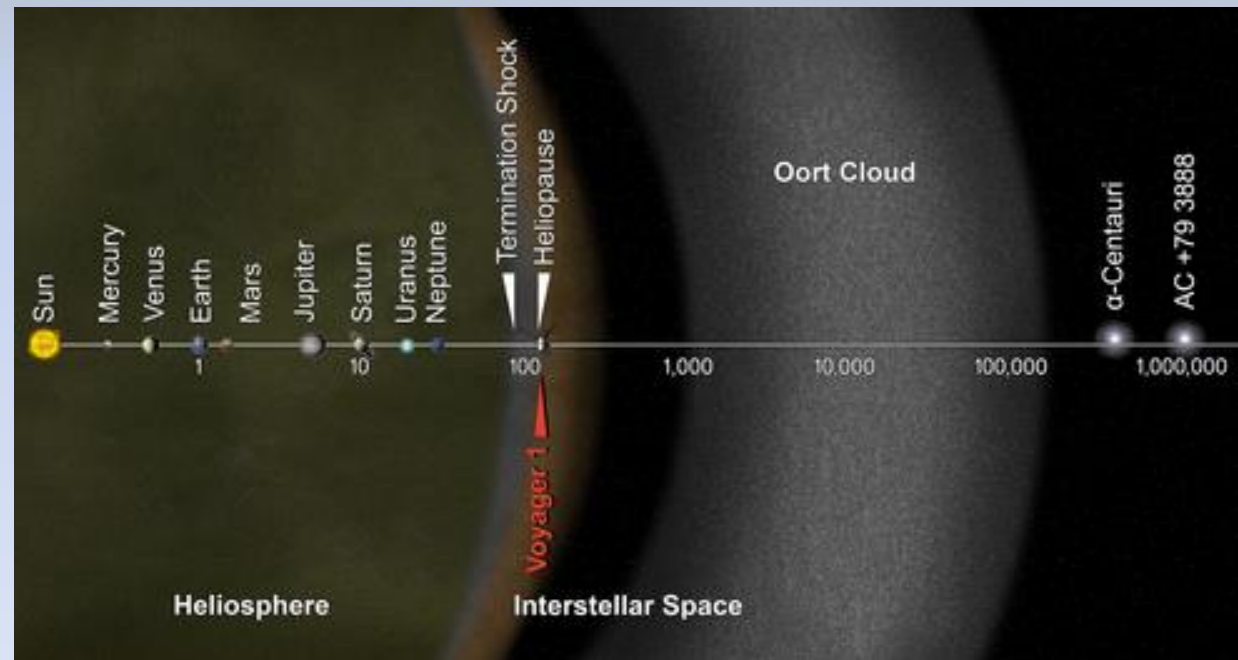
However, we don't travel even close to the speed of light

- The Voyager 1 spacecraft is heading out of our Solar System at 62,000 km per hour but even at that speed, it would take it 77,000 years to reach the nearest star.
-



Voyager 1

A space probe launched in 1977 to explore the outer Solar System.



Click here to see where Voyager is now: <http://voyager.jpl.nasa.gov/where/>

Space Travel

-
- For space exploration to be possible outside of our solar system, we need a faster way to travel

