

Name: _____

Date: _____

Period: _____



The Universe: How Big, How Far, How Fast

Video link: <https://www.youtube.com/watch?v=Nlyl2mSZOtg>



Objective: Students will understand the scale of size, distance between objects in the universe.

Before watching....

1. Write two things that you already know about the universe (please use complete sentences).

- a. _____

- b. _____

During the video....

1. In the observable part of the universe, there are how many galaxies?

- | | |
|------------------------|------------------------|
| a. One million | c. One billion |
| b. One hundred million | d. One hundred billion |

2. How fast is the Earth orbiting the Sun?

- | | |
|--------------|----------------|
| a. 660 mph | c. 66,000 mph |
| b. 6,600 mph | d. 660,000 mph |

3. Numbers like millions, billions, and trillions are hard for people to understand.

b. 5,000,000

d. 5,000,000,000

11. How long would it take a passenger jet to circle fully VY Canis Majoris once?

a. 120 years

c. 12,000 years

b. 1,200 years

d. 120,000 years.

12. If the Earth were the size of a basketball and the moon the size of a tennis ball, how far would it be from the basketball?

a. 6 feet

c. 16 feet

b. 11 feet

d. 21 feet

If the Sun were the size of a bowling ball, how far away would the following planets be from the Sun?

_____ 13. Mercury

A. 484 feet

_____ 14. Earth

B. 142 feet

_____ 15. Mars

C. 36 feet

_____ 16. Jupiter

D. 2,798 feet

_____ 17. Neptune

E. 93 feet

18. If light were bouncing between LA and NY, it could do 38 bounces in one second.

a. True

b. False

19. **How fast is the Sun going around the galaxy?**

- a. 4,830 mph
- b. 48,300 mph
- c. 483,000 mph
- d. 4,830,000 mph

20. **The distance to the Andromeda Galaxy is...**

- a. 250,000 light years
- b. 2,500,000 light years
- c. 250,000,000 light years
- d. 250,000,000,000 light years

21. **If the Milky Way were in Los Angeles, one hundred miles across, where would the Andromeda Galaxy be?**

- a. Boston
- b. Chicago
- c. New York
- d. Washington, D.C.

22. **The Milky Way and Andromeda galaxies will eventually collide.**

- a. True
- b. False

After watching....

1. Write two new things you have learned after watching this documentary (please use complete sentences).

- a. _____

- b. _____

