

Item #: \_\_\_\_\_

Sizing Up the Universe

Name: \_\_\_\_\_

Intro video.

- 1) Our Earth: \_\_\_\_\_ Diameter of object picked: \_\_\_\_\_
- 2) Actual Earth = \_\_\_\_\_
- 3) How big is our moon compared to our Earth? (object) \_\_\_\_\_; diameter \_\_\_\_\_
- 4) The moon is about \_\_\_\_\_ size of Earth.
- 5) Actual Moon = \_\_\_\_\_

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- 6) What is the actual distance between the Earth and the Moon? \_\_\_\_\_
  - 7) On our scale the moon would be orbiting \_\_\_\_\_.

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Your Mission:

Answer: \_\_\_\_\_ How do you know; evidence?

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- 8) How big is your Sun on your scale model? \_\_\_\_\_ (object); \_\_\_\_\_ (diameter)
  - 9) What is the diameter of the Sun?
  - 10) How much bigger is the Sun compared to the Earth?

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- 11) How far away is the Sun from Earth?

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- 12) Sun is now at Bailey Middle School and Earth would be orbiting all the way in \_\_\_\_\_!
  - 13) Earth is known as the “\_\_\_\_\_” planet. Why?

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Your Mission:

Answer (nearest minute is fine!): \_\_\_\_\_ Show your work/set-up here:

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- 14) What is your model-size Pluto?
  - 15) How big is Pluto compared to Earth?
  - 16) How many Plutos could fit within the United States of America?
  - 17) How long does it take Pluto to orbit the Sun?

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- 18) Our Sun is about one of \_\_\_\_\_ stars in our \_\_\_\_\_.
  - 19) Besides our Sun, what is our next closest star?

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- 20) Where would Proxima Centauri be located?

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- 21) How far away would the closest star be? Answer: \_\_\_\_\_

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- 22) What is the distance across our solar system?
  - 23) What is the distance across our Milky Way Galaxy?

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24) Our solar system size: \_\_\_\_\_

25) What would your galaxy size be?

26) How small would our Sun be in this scale? \_\_\_\_\_

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27) What is the nearest galaxy?

28) Can two galaxies ever collide?

Watch visualization.

29) What would happen if galaxies collide?

30) Generally, galaxies are moving away from each other. What does that tell us?

31) How old is our universe?

32) REFLECTION: What did you find the most fascinating about our “journey” today? Explain.

