



Astronomy Scavenger Hunt

Distances

1. What is the distance between the Sun and the Earth?
2. What is the distance between the Sun and edge of our Solar System?
3. What is a light year?
4. How many miles is the equivalent of a light year?
5. What is the speed of light?
6. How many light years is the equivalent of a Parsec?
7. What is the distance between the Sun and the next nearest star?
8. What is the distance between the Sun and the star in Orion named Betelgeuse?
9. What is the distance across the Milky Way Galaxy?
10. What is the distance between the center of the Milky Way and the center of the neighboring galaxy named Andromeda?
11. What is the distance between the Milky Way and a group of galaxies known as the Virgo Cluster?
12. What is the distance between the Milky Way and the furthest object that can be seen by the Hubble Space Telescope?

Sizes

13. What is the approximate diameter of the Earth?
14. What is the approximate diameter of the Sun?
15. What do we think is the approximate diameter of a neutron star?
16. Does a neutron star have a mass that is closer to the mass of the Earth or the mass of the Sun?
17. How can a neutron star be so small yet be so heavy?
18. What might be the mass of a black hole?
19. What might be the mass of the black hole that is at the center of the Milky Way Galaxy?

Light

20. What is the definition of "wavelength?"

21. Light travels as waves, and one property of waves is their wavelength. What is a typical wavelength for radio waves?
22. What is a typical wavelength for microwaves?
23. What is a typical wavelength for infrared waves?
24. What is a typical wavelength for visible light waves?
25. What is a typical wavelength for ultraviolet waves?
26. What is a typical wavelength for X-rays waves?
27. What is a typical wavelength for gamma rays?

Objects and Events

28. What is a supernova?
29. What is a gamma ray burst?
30. What is a pulsar?
31. What is an “inspiral?”
32. What is a black hole?
33. If we can't see black holes, what makes astronomers think that they exist?

Challenges

34. What is “time dilation?”
35. What is gravitational lensing and why is it important to astronomers?
36. What is “dark matter?”
37. What is “dark energy?”

Albert Einstein

38. Where was Einstein born?
39. Is it true that Einstein flunked math in high school?
40. What job did Einstein hold at the time he published the theory of special relativity?
41. In what year did Einstein move to the U.S.?
42. Did Einstein win a Nobel Prize in physics?
43. In what year did Einstein die?