

THE UNIVERSE: BEYOND THE BIG BANG

1. Why is the “big bang” not a good name for the theory of the beginning of the universe?
2. How does the sun make energy?
3. How many stars might there be in the Milky Way?
4. How many galaxies are there in the visible universe?
5. What happens to the ancient calendar during the winter and summer solstices?
6. The Greeks noticed that some stars were larger and moved haphazardly. What were these stars?
7. Describe heliocentrism.
8. Why did Copernicus not tell anyone about his theory until his deathbed?
9. What happens as planets approach the sun?
10. What did Galileo see with his telescope?
11. No matter what their weight is, falling objects always do what?
12. What keeps Earth and other planets from flying off into outer space?
13. What is a consequence of Einstein’s theory of relativity?
14. Relativity tells us that the universe is _____.
15. What did Lemaitre propose about the universe? Describe his reasoning.

16. What did Hubble realize about the movement of galaxies?
17. How old did Hubble estimate that the universe was?
18. Why was Hubble's age of the universe wrong?
19. Describe the steady state theory.
20. Everything after helium in the periodic table was made by _____.
21. Existing Hydrogen makes up _____% of the detectable universe.
22. What is cosmic background radiation?
23. What did the discovery of radiation from the Big Bang do to Hoyle's theory of the steady state universe?
24. Describe the temperature of the universe.
25. Describe the inflation theory.
26. What happened less than 1 billionth of a second after the Big Bang?
27. What happened 380,000 years after the Big Bang?
28. What happened 1 billion years after the Big Bang?
29. How big is our universe?
30. When will the sun run out of fuel?
31. Do we know everything about the universe right now? Explain.