**Universe Webquest**

**Use the website above each section to answer the questions.**

<http://www.universeadventure.org/fundamentals/cosmol-beginning.htm>

1. What is cosmology?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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2. What four forces hold together all matter in the Universe?

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3. How did skepticism lead Copernicus to develop the current model of the solar system?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4. Light is composed of tiny particles called \_\_\_\_\_\_\_\_\_\_\_\_. What is the approximate speed of light? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5**.** How does light from space allow us to see the universe as it existed a very long time ago? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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6. How can scientists use the brightness of a star to help determine its distance from Earth?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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7. All objects give off electromagnetic radiation. How does the wavelength of radiation relate to an object’s temperature ?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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8. What force is responsible for the formation of the planets, stars, and galaxies?  
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Skip to the section called “The Cosmological Principle.”

9. What did Edwin Hubble discover that led him to believe the Universe is expanding?

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10. Why do light waves from distant objects appear to be stretched?

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11. Play the animation. Toward which end of the spectrum does light from distant galaxies move? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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12. What color of visible light has the highest frequency? \_\_\_\_\_\_\_\_\_\_ the lowest? \_\_\_\_\_\_\_\_

13. What are some objects that are not redshifted? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. Astronomers have discovered that all distant galaxies are moving \_\_\_\_\_\_\_\_\_\_\_\_ from us and that the farther away they are, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ they are moving.

Click the link below to explore the size and scale of the universe.

<http://htwins.net/scale2/>