

Name _____

Cosmic Beginning: How Did the Universe Begin and How Do We Know?

Short Answer Key

1. Cosmic microwave background radiation (CMBR) is a faint radiation that fills the universe and serves as an afterglow of the Big Bang. It is significant because it provides direct evidence of the early, hot universe and supports the Big Bang theory.
2. The redshift of galaxies indicates that most galaxies are moving away from us, suggesting an expanding universe. The farther galaxies are, the faster they are moving, which implies that the universe had a definite starting point.
3. Light elements, such as hydrogen and helium, are important because their abundance in the universe matches the predictions of the Big Bang theory. They were created in the early moments of the universe's expansion.
4. Edwin Hubble was an astronomer who discovered the redshift of galaxies, providing strong evidence for the expanding universe. His observations led to the formulation of Hubble's Law.
5. Observations of galaxies and cosmic structures show that matter in the universe clumped together as it expanded and cooled, forming galaxies, stars, and clusters, aligning with the predictions of the Big Bang theory.

