Name _____

The Big Bang Theory: Unraveling the Birth of the Universe

Short Answer Key

1. As the universe expanded from the singularity, it cooled down, allowing particles to form. This led to the formation of atoms, galaxies, stars, and planets.
2. The Cosmic Microwave Background (CMB) is a faint radiation that provides evidence for the Big Bang Theory. It is like a "baby picture" of the universe, showing what it looked like about 380,000 years after the Big Bang, and its discovery supports the theory.
3. Gravity played a role in the formation of galaxies by pulling matter together, causing gas and dust clouds to collapse and form stars. Stars, in turn, are the building blocks of galaxies. Planets formed within some of these stars' planetary systems.
4. The abundance of light elements in the universe, such as hydrogen and helium, matches the predictions made by the Big Bang Theory. This provides evidence that the universe began with a hot, dense singularity and expanded as described by the theory.
5. Evidence for the ongoing expansion of the universe includes the observation that galaxies are moving away from us, as indicated by their redshift. This observation aligns with the predictions of the Big Bang Theory.