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Activities

Searching for the Big Bang

Name: _____ Date: _____

The universe was born 14 billion years ago with a massive explosion known as the Big Bang. In recent years, new satellite views of the "baby" universe have added new evidence of the explosion. You'll take a closer look in this Planet Diary activity.

Directions

- Radiation left over from the Big Bang offers clues to astronomers about the early universe. Check out this view of cosmic microwave background radiation, or CMB. Here's another view of CMB. Read *Seven Year Microwave Sky* to the right of the picture, then answer Workspace questions 1 and 2.
- NASA's Cosmic Background Explorer or COBE satellite measures CMB. Here's a view of the early development of the universe. Use the information to answer Workspace questions 3 and 4.
- Find out how the Hubble Space Telescope sees back in time. Read the text, then click *View graphic*. Use the info to answer the last two questions.
- Go to NASA's Universe 101 to learn more about how CMB is linked to the Big Bang.

Workspace

1. What do the color differences on the map show?

2. What did these "seeds" grow into?

3. How many years after the Big Bang did radiation shown on the COBE sky map occur?

4. When did the light from the first galaxies appear?

5. What are the "dark ages" of the early universe?

6. Explain why Hubble is looking back in time when it spots distant galaxies.

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