

FLASH TIME OF THE BIG BANG

Play with the Big Bang Time Machine for a few minutes to become familiar with its movements.

Go to the bottom of the screen and find "The Story of Atoms (11-14 year olds)". Click on this.

Read through these exercises and fill in the blanks on this answer sheet with the choices you choose for each question.

QUESTION:

1. _____
2. _____
3. A _____ B _____ C _____ I _____
II _____ III _____ IV _____ V _____
3. _____
5. electron _____ proton _____ neutron _____
6. _____
7. _____
8. _____

9. _____

10. _____

11. quark A B proton A B lepton A B

electron A B neutrons A B atom A B

12. quark A B proton A B lepton A B

electron A B neutrons A B atom A B

13. _____

14. _____

Now return to the Time Machine.

1. What is the earliest time that Modern Physics is able to describe? _____ Temp. _____

2. When do quarks form? _____ Temp. _____

3. When does the expansion period end? _____ Temp. _____

4. Protons and neutrons form when? _____ What forms them? _____
Temp. _____

5. Electrons form at what time? _____ Temp. _____
 6. Hydrogen and Helium nuclei form at what time? _____ Temp. _____
 7. When do atoms form? _____ Temp. _____
- Electromagnetic Radiation (EM) causes the universe to now be what? _____
8. When do stars and galaxies start to form? _____ Temp. _____
 9. When are galaxies fully formed? _____ Temp. _____
 10. How long before heavier elements are formed? _____ Temp. _____
 11. When did the sun and the Earth form? _____ Temp. _____
 12. When does the earliest life appear on Earth? _____ Temp. _____
 13. Mammals appear at what time? _____ Temp. _____
 14. When is the extinction of the dinosaurs? _____ Temp. _____
 15. Homosapiens appear at what point in time? _____ Temp. _____
 16. What is the present temperature of the universe? _____
 17. What trend has the temperature shown since the Big Bang occurred?