Big Bang Quiz Review

Name_____ Period _____

1. **Draw and label the parts of a wave (crest, trough, amplitude, wavelength)**

2. **What is the order of colors in the visible spectrum (from lowest energy to highest energy)?**

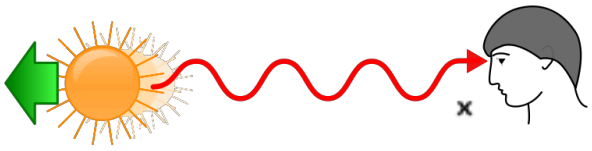
3. **Does RED light or BLUE light have a longer wavelength?**

4. **Why does a car horn sound different as it passes you? Tell how the sound changes and why.**

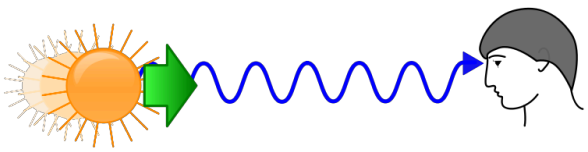
5. **In your own words, explain RED SHIFT.**
   BIG POINT QUESTION (so make sure you answer in detail)

6. **Which elements were formed in the Big Bang?**

7-8: Label each of these pictures as red shift or blue shift.



X



Y

9. T or F: A star farthest from the Earth will be traveling with the greatest speed, therefore having the greatest red shift.

10. What is Cosmic Microwave Background Radiation and how does it support the Big Bang theory?

11. What is a theory? Be SPECIFIC for credit.

12. Why do scientists accept the Big Bang theory?

13. How does light from stars support the Big Bang Theory?

14. Can a red shift and a blue shift exist on the same object at the same time? Give me an example.

15. According to scientific theory, what has been happening to the matter in the universe since the Big Bang occurred?

16. How is the "Big Bang" like a balloon filled with confetti?

18-22:

Read the principle of science on the left hand side. Describe how figures in science have demonstrated these basic principles.	
Principle of Science	**Applications to the Development of the Big Bang Theory**
Science uses experimentation and observation to understand the universe	1. Galileo uses careful observation of the phases of Venus' moons, to support a sun-centered solar system model 2.
As technology advances scientists are able to obtain new, and more accurate evidence	1. Construction of the first telescope by Galileo results in more accurate observation about the universe like the sun-centered solar system model 2. 3.
Science is reproducible, because nature usually behaves in a predictable manner	1. 2.

23. T or F: All matter in the universe burst from a tiny point, this was the beginning of the "Big Bang".

25. Most human cultures have explanations for the origin of the universe. How is the scientific explanation different?

26. How has our modern understanding of the nature of the universe changed because of technology?