**Einstein and Beyond Reading Questions NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Read the article Einstein and Beyond. As you read, answer the following questions on a separate sheet of paper.**

1. According to Einstein’s realm:
   1. Time is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Mass and energy are:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Space can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is Cosmology?
3. According to Alan Dressier general relativity is described as:
4. Describe how Einstein explained the cosmos by incorporating the ideas of speed and light, space and time.
5. Explain the components of E =mc2.
6. How does Einstein define General Relativity? What analogy does he use to help everyone understand his model?
7. In 1919, what did British astronomers actually measure?
8. With the new insight into gravity, what were scientist able to do?
9. How did Newton’s idea of space and relativity compare?
10. What was Einstein’s cosmological constant and why did he include it in his idea on general relativity?
11. What discovery did Hubble make and how did it shake up Einstein’s idea of the universe?
12. What contribution did Lemaitre make to the idea of the universe?
13. What contribution did Alan Guth make to add to the Big Bang Theory?
14. What age did Freedman say that the universe was?
15. What contribution did Chandrasekhar add to our idea of the universe?
16. What is gravitational lensing?
17. What is Dark Matter and how might its discovery show that Einstein’s biggest blunder look like his greatest success?
18. What is Dark Energy?
19. What are gravitational waves?
20. How are astronomers and physicist today trying to detect these gravity waves?