

NAME \_\_\_\_\_ DATE: \_\_\_\_\_ PERIOD: \_\_\_\_\_

## Video: Through the Wormhole: Beyond the Darkness – Form 1

Please answer the following questions:

1. What is the title of the video and how many forces does the program investigate?
2. The astronomer \_\_\_\_\_ studied galaxies during the 1960's.
3. What did astronomers believe about stars and planets?
4. The greater the orbit of a planet then the \_\_\_\_\_.
5. How fast are moving all the stars in the Andromeda Galaxy?
6. What was the only explanation for all the stars in a galaxy to move at the same speed?
7. Who decided in England to study dark matter?
8. What Carlos Frenk wanted to create by using a network of supercomputers?
9. What did Mr. Frenk add to his equation to create a galaxy?
10. Conclusion: \_\_\_\_\_ only form when they are filled with \_\_\_\_\_.
11. Who discovered the technique known as gravitational lensing?
12. If space is bent, then light also will \_\_\_\_\_.
13. Richard Massey concluded that dark matter is \_\_\_\_\_ more abundant than \_\_\_\_\_.
14. Conclusion: Dark matter made possible the formation of \_\_\_\_\_ on Earth.
15. Scientists have found that dark matter does not interact with \_\_\_\_\_.
16. What name was given to the combined two galaxies that collided 4 billion light years away?

17. All matter is made from approximately how many subatomic particles?
18. What name was given to the dark matter particle?
19. Where is Dan Bauer looking for wimps?
20. Why scientists need to work deep underground to look for wimps?
21. How many wimps are passing through our bodies every second?
22. Who is considered to be one of the top astronomers in the 20th century?
23. What did Edwin Hubble deduce about the galaxies?
24. When the sun dies, what kind of star it will become?
25. In a period of 5 years, how many supernovas were discovered by Saul Perlmutter and his team?
26. What big discovery was made by Saul Perlmutter about the universe?
27. \_\_\_\_\_ is responsible for the acceleration of the expansion of the universe.
28. What probe was sent to space in 2001 to study dark energy?
29. Who is David Spergel?
30. What percents of the universe are regular matter, dark matter, and dark energy?
31. For how long will the dark energy camera take pictures of space?
32. What important discovery Brenna Flaugher made about dark energy?
33. Dark matter \_\_\_\_\_ regular matter and allows \_\_\_\_\_ to form.
34. What is one name scientists call dark energy?
35. What do scientists call the big rip?