

Name \_\_\_\_\_ Date \_\_\_\_\_ Bell \_\_\_\_\_

## Unit 3: Lesson 4- What are Stars and Galaxies?

### Vocabulary

1. Astronomy (page 144)-

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2. Star (page 144)-

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3. Universe (page 146)-

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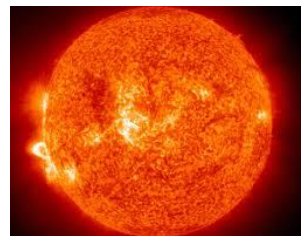
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4. Galaxy (page 147)-

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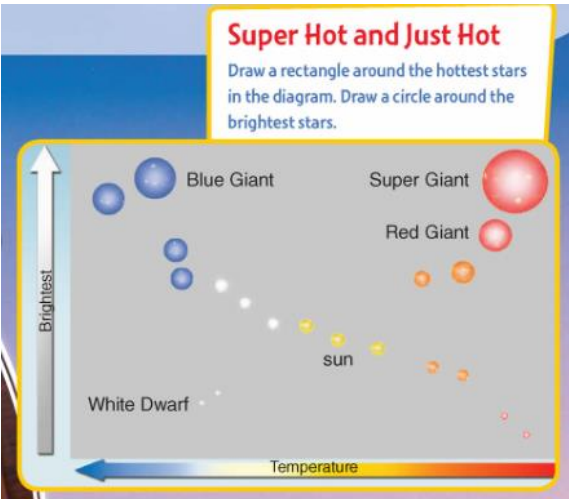
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# Twinkling Stars Page 144-145

1. What is astronomy?  
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2. Who are astronomers?  
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3. What tool does an astronomer use to study space?  
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4. What might astronomers learn about stars by studying them through telescopes?  
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5. What are stars?  
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6. What is an example of a star? \_\_\_\_\_
7. How can distance from Earth affect the way a star looks?  
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8. How does a star form?  
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9. What characteristics do scientists use to classify stars?  
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10. What does the color of a star tell us about them?  
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11. Which stars are the hottest? Which stars are the coolest?  
\_\_\_\_\_
12. What are some examples of different sizes of stars?  
\_\_\_\_\_
13. What kind of star is our sun? \_\_\_\_\_
14. The largest stars are the: \_\_\_\_\_
15. A stars brightness is related to:  
\_\_\_\_\_
16. Why might a diagram be useful in classifying stars?  
\_\_\_\_\_
17. What conclusion can you draw about how size and brightness of stars are related?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
18. What kind of star would be the hottest and brightest?  
\_\_\_\_\_



## Going Galactic Pages 146-147

19. What is the Universe?

20. What are galaxies?

21. What function do you think gravity plays in galaxies?

22. How many galaxies are in the universe?

23. What is the name of our galaxy?

24. Describe the position of the solar system within our galaxy?

25. What is the name of the telescope that NASA uses to look at galaxies in space?

26. Who was Edwin Hubble? What characteristic did he use to classify galaxies?

27. What are Spiral Galaxies?

28. What are Barred Spiral Galaxies?

29. How is a barred spiral galaxy different from a regular spiral galaxy?

30. What kind of galaxy is the Milky Way?



# More Types of Galaxies and Cosmic Crashes Page 148-149

31. What are Irregular Galaxies?

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32. What are Elliptical Galaxies?

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33. What percentage of galaxies are irregular galaxies? \_\_\_\_\_

34. What percentage of galaxies are elliptical galaxies? \_\_\_\_\_

35. What percentage of galaxies are spiral galaxies? \_\_\_\_\_

36. Why do you think elliptical galaxies are brightest toward the center?

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37. How are elliptical galaxies different from irregular galaxies?

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38. Why do galaxies collide?

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39. What are a few things that happen when galaxies collide?

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Galaxies crash and pull galaxies toward each other. When galaxies collide, gas is pressed together, leading to the rapid formation of new stars. The larger galaxy becomes smaller. Galaxies can also collide and form a new galaxy. Astronomers believe that our galaxy, the Milky Way, is in the process of colliding with another galaxy, Andromeda. This collision will result in a new, larger galaxy. The collision will take billions of years to complete. Galaxies can move away from each other or toward each other.

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