Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hr \_\_\_\_\_\_\_\_\_\_

**Earth, Moon and Sun Model**

**Directions:** Set the model so the sun and moon are aligned with the indicated positions set the sun first and then the moon, then answer the questions. Remember YOU are always in Gallup, NM. When the Question is, “What time is it?” Write the time for Gallup. If it asks for another location, you must write the time for that location. There are 8 phases of the moon, you will write one when the phases are required. Questions about where the sun or moon are, answer as seen from Gallup, NM, ***write zenith, east or west horizon, ascending, descending or can’t see (below horizon).***

**SUN POSITION MOON POSITION QUESTIONS ANSWERS**

1. What time is it? 1. ­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gallup Gallup 2. What phase is it? 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 3. Where is the sun? 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 4. What phase is the moon? 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gallup India 5. Can YOU see the moon? 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 6. Can Japan see the moon? 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 7. What phase is the moon? 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gallup Alaska 8. Can YOU see the moon? 8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 9. What day and time is it in 9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Japan?

 10. What time is it? 10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

England Japan 11. What phase is it? 11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 12. Where is the sun? 12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 13. What time is it? 13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

India Prime Meridian 14. What phase is it? 14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 15. Can New York see the moon? 15. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 16. What is the phase? 16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

International Hawaii 17. Where is the moon? 17. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date Line 18. What day and time is it in 18. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 England?

 19. What phase? 19. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Saudi Arabia Japan 20. Where is the moon? 20. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 21. Can you see the sun? 21. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 22. What country is closest 22. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 to sunrise?

 23. What time is it? 23. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Japan New York 24. Can YOU see the moon? 24. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 25. What day and time in Japan? 25. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 26 What day and time in Hawaii? 26. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 27. What time is it? 27. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hawaii Greenland 28. What phase is it? 28. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 29. Where is the moon?` 29. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 30.Can Japan see the moon? 30. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SUN POSITION MOON POSITION QUESTIONS ANSWERS**

 31. What time is it? 32. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Japan India 32. Can you see the sun? 33. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 33. What phase is it? 34. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 34. Can you see the moon? 35. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 35. What time is it? 35. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Alaska New York 36. What phase is it? 36. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 37. Can you see the moon? 37. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 38. Where is the moon? 38. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 39. Where is the sun? 39. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 40. What phase is it? 40. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

England Gallup 41. What time is it? 41. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 42. What time is it in NY? 42. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 43. What day is it in Japan? 43. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

44. What time of day is a waxing crescent moon going to be at the zenith? 44. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

45. What time of day is a full moon going to be at the zenith? 45. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

46. When the full moon is over India, can we see the moon? 46. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

47. Set the model so it represents the time ***right now***. \_\_\_\_\_\_\_\_\_\_

The phase of the moon is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, if we went outside would 47. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 we be able to see it?

48. What country is the moon directly over right now? 48. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

49. What is the force that keeps the sun, earth and moon together? 49. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ How long does it take the earth to revolve once around the sun?

50. \_\_\_\_\_\_\_\_\_\_\_\_ Days 51. \_\_\_\_\_\_\_\_\_\_Weeks 52. \_\_\_\_\_\_\_\_\_\_\_ Years

How long does it take the earth to rotate once on its axis?

 53. \_\_\_\_\_\_\_\_\_\_\_\_ days 54. \_\_\_\_\_\_\_\_\_\_\_hours 55. \_\_\_\_\_\_\_\_\_\_\_minutes

How long does it take the moon to revolve once around the earth?

 56. \_\_\_\_\_\_\_\_\_\_\_days in a sidereal month 57. \_\_\_\_\_\_\_\_\_\_\_\_days in a Synodic month

58. Which phase of the moon can we never see? 58. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

59. During which phase of the moon is it possible for a lunar eclipse to happen? 59. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

60. During which phase of the moon is it possible for a solar eclipse to happen? 60. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

61. Can the sun ever be in the sky for both NM and India at the same time? 61. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

62. When the moon is a waxing crescent for us in North America, what phase would

 it be for the people in Europe? 62. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

63. When it is 12 noon for us in NM, what day and time is in in Japan? 63. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

64. What day and time in Saudi Arabia? 64. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

65. What day and time in Hawaii? 65. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

66. What day and time in India 66. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

67. Does the PM symbol mean that it is dark? 67. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

68. Is the moon always out at night and never in the day? 68. ­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Attach your own sheet of paper to this handout and write a **Summary** paragraph and **Response** paragraph to this activity.

This is worth 10 points!