

Answer Sheet for Test Booklet to *101 Things Everyone Should Know About Science* (2nd edition)

The following answers correspond to the Test Booklet questions. Please note that the questions vary slightly in the different editions of *101 Things Everyone Should Know About Science*. This Answer Sheet corresponds to the second edition of the book.

Biology Answers

1. Bacteria, Archaea, and Eukarya.

2. b) Charles Darwin.

3.

Monkey	Amphibian
Iguana	Bird
Pigeon	Mammal
Spider	Insect
Crab	Reptile
Frog	Crustacean
Ladybug	Arachnid

4. All mammals have backbones, are warm-blooded, have hair or fur, and drink their mother's milk when they are born.

5. Mother's milk.

6. Hibernation.

7. The blue whale.

8. The bat.

9. Metamorphosis.

10. Plants.

11. Water, animals, and wind.

12. Sap.

13. Six.

14. Fleas, mosquitoes, ticks, leeches, mites, lice, tapeworms, chiggers, and heartworms.

15. Blood, sweat, saliva (or spit), tears, breastmilk, semen, urine, mucus, lymph, plasma, serum, and digestive juices.

16. Veins and arteries.

17. It is 98.6°F, or 37°C.

18. a) hypothermia.

19. a) pasteurization

20. c) viruses.

21. Habitat destruction.

22. Nutrition, disease prevention, education, and epidemiology.

Chemistry Answers

23. Liquid, solid, and gas.
24. Hydrogen and oxygen.
25. Low altitudes.
26. The sugar dissolves.
27. Salt.
28. b) add more salt.
29. Salt lowers the freezing temperature of water.
30. Calcium.
31. The pH scale.
32. Energy.
33. The periodic table.
34. a) carbon.
35. Solid.
36. It expands.
37. Electrons.
38. b) in the ground
39. d) sulfur
40. The average mass of an element's atoms.
41. d) half-life.
42. d) oxygen
43. It rusts.
44. It fizzes.
45. A chemical change is any change to a chemical bond, which is the bond that holds atoms together in a molecule. Physical change rearranges molecules, but it doesn't affect their internal structures.

Physics Answers

46. Reaction force.
47. Kinetic energy.
48. None exist.
49. Cold air.
50. c) Albert Einstein
51. Magnetic, electrical, and gravitational.
52. Gravity.
53. You would see the color white.
54. Ultrasound, electromagnetic radiation, and MRI.
55. By traveling faster than sound.
56. There is very little friction.
57. Sun, wind, wood, fossil fuels, water, natural gas, geothermal activity, and nuclear fission.
58. The electric circuit through the light bulb is closed.

59. Turn the lemon into a battery.
60. Using a light-emitting diode (LED).
61. By conducting electric impulses in a controlled fashion.
62. The Doppler effect.
63. An arch.
64. By submerging them in water.
65. b) in a bucket of ice water.
66. Because you are breaking the surface tension.
67. He felt the vibrations of the music through the floor.

Earth Science Answers

68. Vast amounts of water.
69. a) the sun
70. Shorter.
71. c) star.
72. Eight; Mercury is closest to the sun.
73. The ozone layer.
74. Tides.
75. Longitude, latitude, height, and time.
76. The four major directions are north, south, east, and west; a compass needle points north.
77. The earth's circumference is 24,902 miles (40,075 km). The polar circumference of the earth is 24,860 miles (40,008 km).
78. The North Pole.
79. c) the direction water travels to the sea.
80. a) oceans
81. d) polar ice caps.
82. Northern Hemisphere: June Southern Hemisphere: December
83. The equinoxes, on or near March 21st and September 21st.
84. Because the planet continues losing heat after sunrise.
85. A watch is for something potential; a warning is for verified or imminent conditions.
86. Lightning appears before you hear thunder.
87. Rain, drizzle, hail, freezing rain, sleet, and snow are all different kinds of precipitation.
88. Light and precipitation.
89. A tornado is small and generally forms over land; a hurricane is larger and forms over warm oceans.
90. Richter scale.

General Science Answers

91. "ology" means a field of study or branch of science.
92. A proposed explanation for why something happens.

93. Fahrenheit and Celsius.
94. Half a pound.
95. They weigh the same amount.
96. One.
97. To protect themselves and their clothing.
98. A group relative to which observers can measure change.
99. To eliminate the chance of bias.
100. Curiosity, finding a solution to a problem, fame, wealth, and a desire to help the planet and its inhabitants.
101. Philosophers.

Bonus Answers

Biology: Six percent.

Physics: Half your size.

Chemistry: Mercury.

Earth Science: Water.

General Science: The sun.

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by Dia L. Michels and Nathan Levy

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