

RANDOM QUIZ STUDY GUIDE

8TH GRADE

The Earth's Motions

1. The geocentric theory states that the earth is at the center of our solar system.
2. The heliocentric theory states that the sun is at the center of our solar system.
3. The tendency of matter to keep moving in the same direction is called inertia.
4. The earth rotates on its axis, causing day and night, and revolves around the sun, causing seasons.
5. The earth's axis is always tilted at $23\frac{1}{2}$ degrees.

The Glory of the Stars

6. A gnomon was an instrument that would cast shadows in sunlight to tell time.
7. A knowledge of the heavens gave guidance to early travelers and allowed them to make accurate calendars.
8. Galileo Galilei was the first astronomer to build a telescope for viewing the heavens.
9. A refracting telescope uses lens; a reflecting telescope uses mirrors, and a composite telescope uses both lenses and mirrors.
10. There are 88 modern constellations.
11. An area in the sky with imaginary boundaries running north, south, east, and west is a constellation.
12. The magnitude of a star is a measure of its brightness.
13. A light year is the distance light travels in one year; about 6 trillion miles.
14. Clouds of dust and gas are called nebulae.

The Sun: The Greater Light

15. The sun is 109 times wider than the earth and is 93 million miles away.
16. Most of the sun's energy is emitted in the form of electromagnetic waves.
17. The sun is made up of mostly hydrogen and helium.
18. The photosphere is the visible surface of the sun.
19. Severe storms on the sun are called solar flares.
20. The two parts of the sun's atmosphere is the chromosphere and the corona.

The Moon: To Rule the Night

21. The moon's gravity is 1/6 the gravity of the earth.
22. Weight refers to the gravitational pull on an object, while mass refers to the amount of matter in an object.
23. The line dividing the lighted side of the moon from the dark side is the terminator.
24. Maria are dark, lowland plains found on the moon's surface.
25. Phases in the moon are periodic changes in its shape.
26. The term eclipse means "cutting off the light of one celestial body by another."

Exploration of Space

27. Robert H. Goddard is known as the "father of the modern rocket."
28. A satellite orbits a heavenly body, while probes explore space without going into orbit.
29. America's first manned space flights were called Project Mercury.
30. The first man in space was Yuri Gagarin of the Soviet Union.
31. Project Apollo's goal was to land a man on the moon.
32. The first two men to walk on the moon were Neil Armstrong and Edwin "Buzz" Aldrin.
33. The first space shuttle flight was in 1981 with *Columbia*.

Introduction to Meteorology

34. The atmosphere is the envelope of gases surrounding our planet.
35. Air is a mixture of 21% oxygen, 78% nitrogen, and 1% other gases.
36. The four layers of earth's atmosphere are troposphere, stratosphere, mesosphere, and the thermosphere.
37. The indirect warming of the air is known as the greenhouse effect.
38. The weight of the gases in our atmosphere is known as atmospheric pressure.
39. The ratio of the amount of water the air *does* hold to the amount of water it *can* hold at that temperature is called relative humidity.
40. The most common form of precipitation is rain.
41. Five factors used to describe weather are temperature, atmospheric pressure, humidity, wind speed and direction, and precipitation.

Introduction to Geology

42. Geology is the study of the earth's structure and processes.
43. The three major layers of the earth are the crust, mantle, and core.
44. Carbon-14 dating helps determine the age of an organism by measuring the amount of carbon it contains.

Rocks and Fossils

45. Layers of rock are called strata.
46. Sedimentary rocks were made of particles that bonded together by natural cements/solids that settled from water.
47. A fossil is any trace or remains of a living organism that has been preserved by natural means.
48. Igneous rocks are rocks that have been molten.
49. Magma is rock below the earth's surface while lava is magma that flows out onto the surface.
50. Rocks that have changed due to intense heat and pressure are called metamorphic rock.

Earthquakes and Volcanoes

51. Seismologists are scientists that study earthquakes.
52. The Richter scale measures the magnitude, or energy, of an earthquake.
53. The center of an earthquake's activity is the focus, while the epicenter is the spot directly above the focus on the earth's surface.
54. The three types of faults are normal, reverse (thrust), and strike-slip.
55. Volcanoes that emit mostly lava are called shield volcanoes.
56. Cinder cone volcanoes emit solid debris like ashes, cinders, and bombs.
57. Composite volcanoes emit lava and solid debris.
58. A dormant volcano has not erupted in the last 50 years, while an active one has.
59. Geothermal energy utilizes the heated steam below the surface of the earth to provide power.

Intro to Physical Science

60. Physical properties can be determined without changing it into a different substance.
61. The ability to be dissolved is solubility.
62. Density is the mass of a substance divided by the volume.
63. The result of a chemical change is a new substance.
64. The smallest particles of matter are called atoms.
65. An element is the simplest type of substance and cannot be broken down into anything else.
66. A compound is a new substance formed from the chemical union of two or more elements.
67. Protons have a positive charge, electrons are negative, and neutrons have no charge.
68. Two or more atoms that are chemically united form a molecule.
69. Atomic mass equals the # of protons and the # of neutrons.
70. The periodic table of elements is arranged by increasing atomic number.

71. A mixture consists of two or more substances that retain their physical/chemical properties when mixed together.
72. An ion is an electrically charged atom, either positive or negative.
73. Energy is the ability to do work.
74. Work is done when a force –a push or a pull—moves an object.
75. Kinetic energy is energy of motion, while potential energy is energy of position.
76. The first law of thermodynamics states that the total amount of matter and energy in the universe is constant.

Forensics

77. Fingerprints can be classified as arches, loops, and whorls.
78. The FBI considers DNA to be the most valuable type of evidence in solving a crime.
79. The process of separating a mixture into its individual components is chromatography.
80. Water is the universal solvent.
81. The study of firearms and ammunition is ballistics.
82. Evidence that is formed as an object leaves a “mark” on another one, such as tire marks, toolmarks, or bitemarks.
83. Luminol is used by investigators to detect the presence of blood.
84. The study of insects is entymology.
85. The type of animal that is often used to simulate a human body in a forensic entomological experiment is a pig.
86. The postmortem interval (PMI) is the time between the death and the discovery of a body.
87. A fire started deliberately is arson.
88. The three elements of the fire triangle are heat, fuel, and oxygen.