Name: _____

Date: _____ Grade: _____

Natural Science Mysteries

CHAPTER 3 TEST

Congratulations on completing this chapter! ***Answer the following questions to test your understanding of the material. When you finish, hand in your test to your teacher for a final grade. Each answer is worth 1.8 points.***

Matching: Choose the correct answer.

1. _____ refraction	(a) bitter tasting, soapy feeling, turns red litmus blue
2. _____ reflection	(b) heat transfer by means of electromagnetic waves
3. _____ diffraction	(c) transfer of heat by direct contact
4. _____ conduction	(d) light rays bouncing off from an object
5. _____ convection	(e) compacted remains of ancient plant and animal life; coal, petroleum, natural gas
6. _____ radiation	(f) spreading out of light rays
7. _____ acid	(g) one or more metals compounded with another to make a stronger substance
8. _____ base	(h) sour tasting, corrodes metal, turns blue litmus red
9. _____ alloy	(i) bending of light when it enters a new medium
10. _____ fossil fuels	(j) movement of heat by air currents

True of False: Write the correct answer.

11. _____ Most metals are heat insulators.
12. _____ Earth is the only planet with water in all three states (liquid, solid, gas).
13. _____ Farsighted people have trouble seeing distant objects.
14. _____ Earth is the only planet uniquely designed to support life.
15. _____ To nearsighted people, objects at close range are blurry.
16. _____ Most nonmetals are good heat conductors.
17. _____ All magnets have north and south poles and attract iron.

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Matching: Choose the correct answer.

18. _____ atom	(a) neutral part of an atom's nucleus
19. _____ atomic number	(b) total number of protons and neutrons in the nucleus of an atom
20. _____ proton	(c) cannot be created or destroyed by human means, smallest part of a thing that can retain its identity
21. _____ neutron	(d) number of protons in an atom or element, always a whole number
22. _____ electron	(e) positively charged portion of each atom's nucleus
23. _____ atomic weight/mass	(f) subatomic particle that orbits outside the nucleus of an atom

Fill in the blank: Choose the correct word from the WORD BANK. (Two words are used more than once.)

WORD BANK

atmosphere	concave	lithosphere	compound	muscles
mixture	electricity	power	chemical	active
inert	neutralize	silver	physical	mercury
elements	pitch	convex	sunlight	atomic

24. The frequency of a sound is its _____.

25. A _____ lens is thicker in the middle and is also known as a reading lens, magnifying glass or "burning" glass.

26. The ultimate energy source is _____.

27. Most _____ is produced by batteries and generators.

28. When acids and bases combine, they _____ each other.

29. Electricity can be generated from sunlight, friction or _____ means.

30. Light, mechanical motion, heat and magnetism are all produced by _____.

31. Batteries produce electricity by _____ means.

32. Only chemically _____ elements form compounds.

33. _____ is the only metal that is a liquid at room temperature.

34. A _____ is a physical combination of elements that retain their individual properties.

35. A _____ is a new chemical substance in which elements lose their individual properties.

36. Vertical families of _____ on the Periodic Table are grouped according to their chemical properties.

37. Oxygen is one of the most active elements, forms compounds with most other elements and is the most abundant element in the _____ as well as the hydrosphere.

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Matching: Choose the correct answer.

38. _____ Roger Bacon
39. _____ Hans Lipperhey
40. _____ Dmitri Mendeleev
41. _____ Galileo
42. _____ Isaac Newton
43. _____ Louis Daguerre
44. _____ Thomas Edison

(a) Italian scientist, invented refracting telescope in 1609 to study the heavens

(b) Russian scientist, invented Periodic Table of the Elements in mid 1800s

(c) British scientist, invented reflecting telescope in 1669, scientifically verified various things in the Bible

(d) Dutch spectacle maker, made first telescope

(e) American inventor of the incandescent light bulb for household use in 1879

(f) French co-inventor of photography in early 1800s

(g) British scientist, invented first reading lenses in 1200s

Matching: Choose the correct answer.

45. _____ topographical maps
46. _____ nautical charts
47. _____ meteorological maps
48. _____ atmosphere
49. _____ hydrosphere
50. _____ lithosphere
51. _____ troposphere

(a) includes all forms of water on Earth

(b) deal with wind speeds, temperature, humidity, air pressure—used in weather forecasting

(c) lowest level of atmosphere, where most weather conditions occur

(d) deal with large bodies of water; location of islands, underwater hazards, lighthouses and channel markers

(e) composed of gases—mostly nitrogen and oxygen

(f) Earth's crust

(g) shows elevation, land shapes, small bodies of water

Write the letter of the statement which gives the best meaning of each Life Principle.

52. *"Wise people strive to be efficient and 'worth their salt'."* _____
    (a) Wise people make sure they have enough salt.
    (b) Wise people work hard to be worthy of the wages they are paid.
    (c) People who are worthy of their salt deserve what they get.

53. *"It is better to light a candle than to curse the darkness."* _____
    (a) Giving people light helps them not to stumble and curse.
    (b) Cursing the darkness does not solve the problem.
    (c) Doing something to correct a problem is better than just complaining about it.

54. *"Your attitude determines your altitude in life."* _____
    (a) Your attitude has a great deal to do with success or failure in life.
    (b) People with good attitudes grow taller.
    (c) Altitude is defined as how far you can go in life.

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55. *"Whoever has searched the heavens with a telescope and found no God would not have found the human mind if he had searched the brain with a microscope."* _____
    (a) The researcher did not do a thorough job.
    (b) Many invisible things exist (such as love, hope, peace) that we are not able to measure with even our best equipment.
    (c) If an item cannot be seen with either a telescope or microscope, it does not exist.

56. *"A person is known and evaluated by his family name and by the company he keeps."* _____
    (a) Each family has either a good or bad reputation to bring into various relationships.
    (b) A family name is evaluated by the company the family keeps.
    (c) The reputation of your family and the people with whom you associate cause people to form opinions about you before getting to know you personally.

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