ACTIVITY ANSWER KEY

Chapter 10, Section 2

Check your answers from the Answer Key.
Correct all errors, then complete your next goal.

Lesson 6: *Elements*
Subatomic Particles

1. (b) trans-Alaska pipeline
2. (c) gamma rays
3. (a) True
4. three
5. gamma
6. (d) gamma rays
7. (a) helium
8. (a) decrease by 2
9. (b) decrease by 4
10. electrons
11. 100
12. (d) the nucleus of an atom
13. (a) ***gamma ray***
14. (a) electromagnetic waves similar to light
15. Gamma
16. atom
17. unchanged
18. (b) carries away energy
19. (a) True
20. *"Most people talk themselves into success or failure."*

Lesson 7: *Elements*
Half-life and Radiation Sickness

1. carbon-14
2. (c) nitrogen
3. (b) False
4. half
5. (b) False
6. (b) False
7. 1,620
8. (c) ½ kilogram
9. chemical
10. curies
11. (d) second
12. 462
13. burn
14. (c) gamma ray
15. radiation poisoning
16. radiation poisoning
17. anemic (or weakened)
18. (c) white blood cells to fight infection
19. (b) exposure to radiation
20. "*Too many people spend money they haven't earned to buy things they don't want to impress people they don't like."*

Lesson 8: *Energy*
Artificial Radioactivity

1. (a) illness from ***undiagnosed*** radiation poisoning
2. Radiation poisoning
3. (d) Marie Curie
4. (c) Marie Curie
5. 1914
6. (d) radioactivity of radioactive elements
7. (b) nitrogen
8. (b) eight
9. (b) False
10. scientists
11. (a) light like carbon
12. phosphorus
13. tracers

14. (d) Irène and Frédéric Joliot
15. 1934, phosphorous
16. (b) False
17. (a) alpha particle
18. (c) stronger
19. (c) never
20. *"Human felicity [happiness] is produced not so much by great pieces of good fortune that seldom happen, as by little advantages that occur every day."*



Lesson 9: *Energy*
Fission

1. (b) False
2. (a) helium
3. positive
4. (d) proton
5. 21
6. (c) at room temperature
7. (d) thermal neutrons
8. (a) a beta particle
9. uranium
10. (b) False
11. Fascists (or fascism), Nazis (or nazism), Jews
12. (b) False
13. (a) escaped to America
14. (c) Lise Meitner
15. (a) lighter
16. correct
17. (b) Lise Meitner
18. (c) split
19. chain
20. neutrons
21. 1944
22. (d) short of her 90th birthday
23. (c) freedom
24. *"He who has begun is half done. Dare to be wise; begin!"*



Lesson 10: *Energy*
Nuclear Reactor

1. (a) more
2. binding
3. (a) True
4. (d) Enrico Fermi and a friend
5. (c) uranium-235
6. (a) Enrico Fermi's first controlled and sustained nuclear chain reaction
7. (a) True
8. (c) uranium-235
9. critical
10. graphite (or carbon)
11. (d) slow neutrons
12. (b) neutrons
13. cadmium
14. (c) water
15. (a) air
16. (d) by heating water to drive steam turbines
17. (d) prevent the accidental release of radioactive materials
18. (a) 0
19. (b) France
20. (b) False
21. "*We can do anything we want if we stick to it long enough."*

Ask for your QUIZ over Section 2.
Reminder: Students who score 85% or higher on the three section quizzes may be exempt from the chapter test!