# ACTIVITY ANSWER KEY

## Chapter 4, Section 1

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



**Lesson 1: *Scientific Laws***
*Properties of Solids: Elasticity*

1. (a) return to its original shape
2. (a) True
3. (c) glass
4. elasticity
5. (a) steel
6. (d) ***plastic***
7. (c) Isaac Newton
8. (b) air pump
9. (b) microscope
10. (a) microscope
11. Robert Boyle, Christopher Wren
12. "The amount a solid is deformed is directly proportional to the force being applied."
13. deforms
14. elastic limit
15. steel springs
16. six
17. elastic limits
18. (a) gravitational attraction
19. (b) solid
20. (b) liquid
21. (c) gas
22. *"If opportunity doesn't knock, build a door."*



**Lesson 2: *Scientific Laws***
*Cohesion and Adhesion*

1. (b) volumes
2. (c) can flow
3. (a) True
4. cohesion
5. (b) static electric charges
6. chemical
7. (b) False
8. (d) an imbalance of cohesive forces
9. (c) sphere
10. (a) surface tension
11. (a) ***adhesion***
12. (a) True
13. (d) ***capillary action***
14. cohesive
15. weak
16. *"I believe that science and peace will triumph over ignorance and war."*



**Lesson 3: *Scientific Laws***
*Density and Pressure*

1. (b) Lead is denser than feathers.
2. (c) density
3. mass/volume
4. Osmium
5. (a) decreases
6. (b) decreases
7. (a) True
8. (b) ***pressure***
9. force/area or weight/area

10. (a) divide 800 pounds by 25 square inches
11. (b) False
12. (d) to the surface of the liquid
13. density * depth
14. depth
15. (a) at the bottom of a deep lake
16. (d) resist a greater pressure from the water
17. (a) True
18. (a) mercury
19. (b) False
20. *"Admonish your friends privately, but praise them openly."*



**Lesson 4: *Energy***
*Hydrostatics*

1. (a) at the earth's surface
2. (b) False
3. (d) pressure
4. (b) False
5. (a) True
6. (c) balloon
7. (b) metal shot
8. (a) True
9. Hydrostatics
10. motion
11. (d) study geometry
12. (b) mechanical
13. (b) one of his brothers-in-law
14. (a) Pierre de Fermat
15. (b) False
16. (b) False
17. "Fluids in a container transmit pressure equally in all directions."
18. (a) True
19. (b) False
20. (area of load piston)/(area of effort piston)
21. liquid
22. *"If God does not exist, one will lose nothing by believing in Him, while if He does exist, one will lose everything by not believing."*



**Lesson 5: *Scientific Laws***
*Buoyancy*

1. (b) cannot be compressed
2. (d) bottom
3. upward
4. (c) ***buoyancy***
5. lose
6. (a) buoyancy
7. (d) made of pure gold
8. "The lifting force acting on a solid object immersed in a fluid is equal to the weight of the fluid displaced by the object."
9. less
10. (a) True
11. 17 grams
12. (b) sink
13. (a) True
14. (a) density of a liquid
15. *"Everyone has limits. You just have to learn what your own limits are and deal with them accordingly."*

Ask for your QUIZ over Section 1.
**Reminder:** Students who score 85% or higher on the three section quizzes may be exempt from the chapter test!