ACTIVITY ANSWER KEY

Chapter 5, Section 1

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

Lesson 1: *Energy*
Static Electricity

1. Thales of Miletus
2. amber
3. William Gilbert
4. (c) rubbed with wool
5. (b) False
6. south pole
7. Charles Du Fay
8. (a) attract
9. same
10. (c) ***Electrons***
11. (c) Electrons
12. positive
13. "Electric charge cannot be created nor destroyed but can be moved from one place to another."
14. Benjamin Franklin
15. (b) False
16. (b) repel one another
17. (d) attract one another
18. Otto von Guericke
19. (d) rubbing together two dissimilar substances
20. Leyden jar
21. capacitor
22. *"Lost time is never found again."*

Lesson 2: *Energy*
Electric Charge

1. (a) is electrically ***neutral***
2. electrons
3. (a) True
4. (c) positive
5. (d) a negative charge
6. same
7. grounded
8. (c) positive
9. (a) True
10. induction
11. spherical
12. William Gilbert
13. negative
14. move
15. positive
16. (c) unlike charges
17. (d) capacitor
18. electrical charge
19. Benjamin Franklin
20. *"We all have ability. The difference is how we use it."*

Lesson 3: *Energy*
Lightning—A Key Experiment

1. before
2. dangerous
3. (a) compare it to static electricity
4. (b) False
5. (c) 13
6. (b) False

7. Benjamin Franklin
8. (b) Franklin stove
9. inventor
10. conductor
11. (d) drain away static electricity before lightning formed
12. (c) induction
13. equalize
14. (b) False
15. (d) Declaration of Independence
16. Benjamin Franklin
17. 1776
18. Charles Coulomb
19. "the force between two charged bodies is directly proportional to the product of their charge and inversely proportional to the square of the distance separating them."
20. *"If you would not be forgotten, as soon as you are gone, either write things worth reading, or do things worth the writing."*



Lesson 4: *Energy*
Electric Potential

1. newton
2. $$F = k \frac{Q_1 * Q_2}{r^2}$$
   with *F* the force, *k* the proportional constant, Q_1 the first charge, Q_2 the second charge and *r* the distance between them
3. directly
4. square
5. (b) gravity
6. Robert Van de Graaff
7. pointed
8. (a) on its outer surface
9. electrical potential energy
10. zero
11. (b) electric potential
12. (d) ***volts***
13. (c) electron
14. strong force
15. (b) False
16. (a) True
17. static
18. (c) Luigi Galvani
19. Alessandro Volta
20. (d) Alessandro Volta
21. reaction
22. *"The things of highest value sometimes come hard. The gold that has the greatest value lies deepest in the earth, as do the diamonds."*



Lesson 5: *Energy*
Electric Current

1. Alessandro Volta
2. (c) series
3. positive
4. (d) Volta
5. anode, cathode, electrolyte
6. anode
7. (a) True
8. negative
9. (b) False
10. (a) electrons
11. (b) opened
12. motion
13. (b) False
14. electrons
15. (c) time
16. (b) current
17. (a) amps
18. An ampere is the flow of one coulomb of charge in one second.
19. (d) 6.25×10^{18}
20. *"It is not enough to be busy. The question is: what are we busy about?"*

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!