ACTIVITY ANSWER KEY

Chapter 2, Section 3

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



Lesson 11: *Motion*

Momentum and Impulse

1. (b) False
2. (b) False
3. (d) velocity
4. (b) doubles
5. (b) doubles
6. (b) opposite
7. (a) True
8. (a) True
9. force
10. (a) True
11. (c) become cautious
12. "Matter can neither be created nor destroyed, but merely changed in form."
13. "Energy can neither be created nor destroyed but merely change in form."
14. "In a closed system, one in which all matter and energy are contained within that system, the total momentum remains unchanged over time."
15. (a) to show how momentum, impulse and the Third Law of Motion are related to the conservation laws
16. "*F=ma, or Fortitude = Motivation (in times of) Adversity. I=ft, or Integrity = Fortitude * Truth.*"



Lesson 12: *Inventions & Discoveries*

Simple Machines

1. (a) Archimedes
2. (a) True
3. (c) at some other point
4. "The load times distance the load is moved equals effort times the distance the effort is applied."
5. (b) force
6. (a) True
7. (a) True
8. (a) True
9. effort
10. (b) False
11. (c) causes a twisting motion
12. (c) divided by
13. (a) 5
14. (a) allows a person to change the direction of the effort force
15. (b) False
16. (b) False
17. (d) 78 feet
18. (b) False
19. (b) Archimedes demonstrated the principles of simple machines while inventing a range of helpful inventions.
20. "*In a time of drastic change, it is the learners who inherit the future. The learned usually find themselves equipped to live in a world that no longer exists.*"

Lesson 13: *Energy*
Efficiency of Simple Machines

1. (c) less than 1.00
2. (a) True
3. (a) 6.00
4. (a) 6.00
5. (d) 5 divided by 6
6. (a) True
7. (c) those simple machines with 100 percent efficiency
8. distance
9. (c) zero
10. F * d
11. (c) work
12. meter
13. (c) work
14. (a) foot-pound
15. (b) steam engine
16. (d) very inefficient
17. (d) 33,000 ft-lbs/min
18. (a) work per time interval
19. work
20. (a) 1/4 horsepower
21. (b) False
22. time
23. newton
24. distance
25. joule
26. time
27. watt
28. (d) how much time it took
29. "*Teamwork divides the effort and multiplies the effect.*"

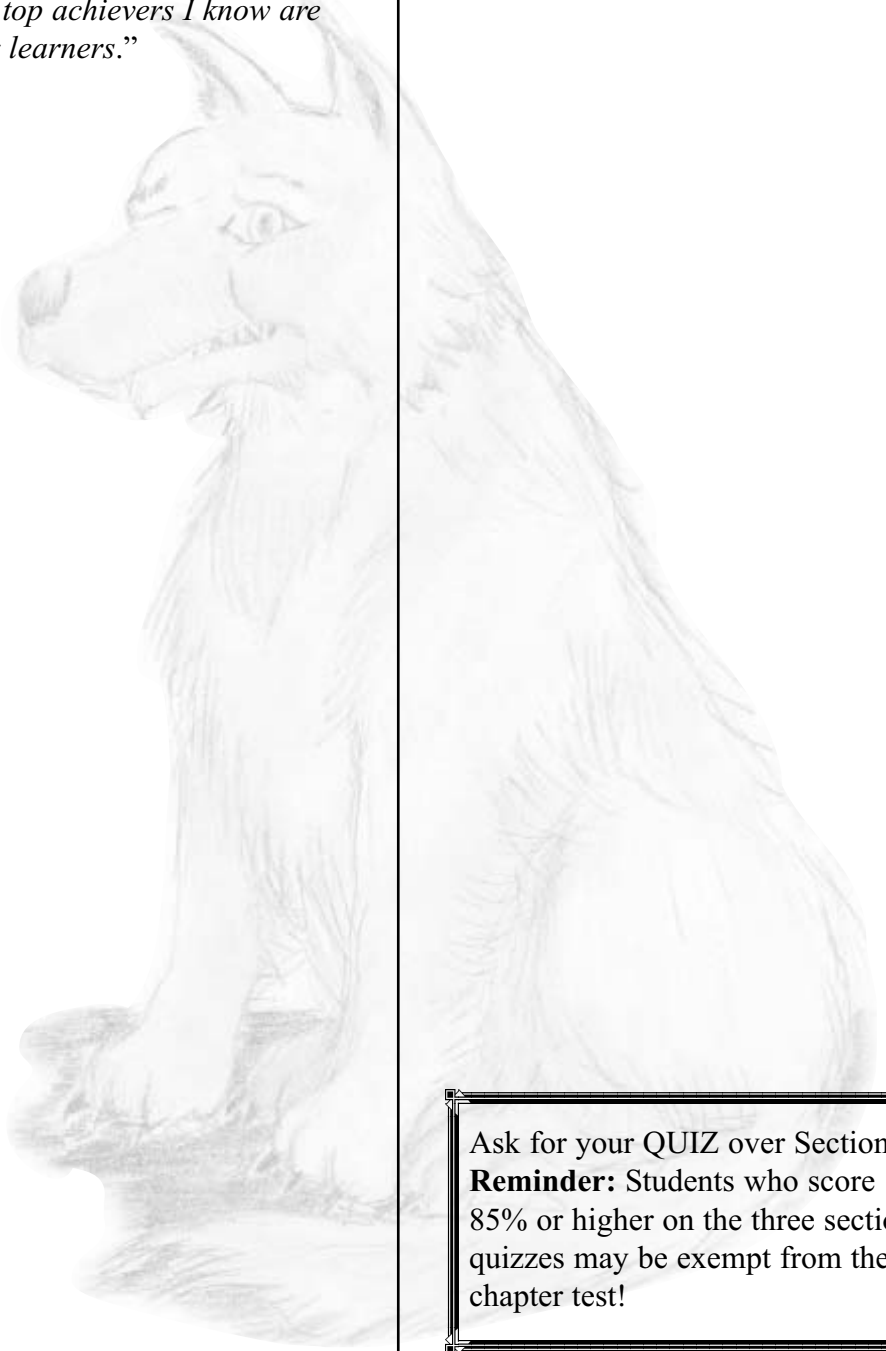
Lesson 14: *Energy*
Kinetic and Potential Energy

1. (a) True
2. (a) True
3. work
4. joule
5. foot-pound
6. (c) transferred from one object to another
7. (d) potential
8. (b) motion
9. ½ mv^2
10. (a) mass
11. (b) ten
12. (b) velocity
13. (b) velocity
14. (a) True
15. (d) nine
16. (d) high velocity
17. (a) True
18. (a) True
19. height
20. (b) doubles
21. (b) the acceleration due to gravity is less
22. (a) to describe potential and kinetic energy while showing their relationship to work
23. "*How great is your Potential Energy? It depends on how high you are Motivated to Go*."

Lesson 15: *Energy*
Mechanical and Heat Energy

1. (c) mechanical energy
2. (a) True
3. (b) thermometers
4. (a) warmer
5. pound
6. (b) False
7. (a) True
8. (a) True
9. (c) atoms and molecules
10. (c) becomes heat
11. $E=mc^2$
12. (b) False

13. "Energy can neither be created nor destroyed by ordinary chemical means."
14. (b) *modern*
15. (a) classical
16. (b) adapts to new information
17. (d) to explain the relationship between heat and energy
18. "*All of the top achievers I know are life-long learners*."



Ask for your QUIZ over Section 3.
Reminder: Students who score 85% or higher on the three section quizzes may be exempt from the chapter test!