ACTIVITY ANSWER KEY

Chapter 2, Section 1

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



Lesson 1: *Inventions & Discoveries*

Galileo and the Pendulum

1. (b) False
2. (c) more than 2,000 years ago
3. (b) observation
4. (b) ***philosophy***
5. (d) Doctor of Philosophy
6. (b) False
7. (a) True
8. (a) True
9. summarize
10. (b) tutor
11. (b) False
12. (a) Greeks
13. (a) Dark Ages
14. (a) True
15. (a) True
16. (b) used the telescope to study the heavens
17. (a) True
18. (a) is free to swing
19. (a) True
20. (c) make a complete ***arc***
21. directly
22. (b) False
23. (b) trace the history of ideas up to Galileo's discovery and research of the Principle of the Pendulum
24. "*Life is too short to waste. Dreams are fulfilled only through action, not through endless planning to take action.*"



Lesson 2: *Motion*

Galileo and Motion: Speed

1. (b) False
2. (d) taught in school
3. (b) only true for some objects
4. (c) ten times as fast
5. (a) True
6. (b) ***independent*** of one another
7. (c) independent of one another
8. (b) False
9. (b) False
10. (a) a force such as friction acted upon it
11. (a) speed
12. (a) 100 yards divided by 8 seconds
13. time
14. (a) unit of speed
15. (c) allow balls to roll more slowly
16. (a) ***average speed***
17. (b) instantaneous speed
18. (b) instantaneous speed
19. (b) illustrate Galileo's contributions to science in the motion of earthly bodies
20. "*Nothing happens unless first a dream*."



Lesson 3: *Motion*

Galileo and Motion: Acceleration

1. time
2. (a) ft/sec
3. direction
4. (b) False

5. (d) continue to roll at a constant speed in a straight line
6. gravity
7. time
8. (a) True
9. (c) change in time
10. (b) False
11. (a) 32 ft/sec^2
12. (d) The feather, the bowling ball, and the concrete block will fall at the same rate
13. (b) False
14. (b) 9.80 m/sec^2
15. (a) True
16. (b) False
17. (b) parabolic path
18. (d) a cannon pointing up at 45^o
19. (d) Galileo's experiments helps us to understand the nature of acceleration.
20. "*Mathematics is the language with which God wrote the universe*."



Lesson 4: *Light & Sound*
Galileo, Roemer and the Speed of Light

1. (a) True
2. (a) finite
3. distance/time
4. (a) light
5. (b) False
6. (d) human reaction time
7. (a) "extraordinarily rapid"
8. (c) first accurate clock
9. (a) True
10. (b) False
11. (c) the finite speed of light
12. (b) the distance across the earth's orbit was not accurately known
13. (a) speed = distance/time
14. (b) False
15. (b) False
16. 186,000 mi/sec
17. 300,000,000 m/sec
18. (d) Many experiments had to be performed to understand and arrive at the correct speed of light.
19. *"If you want to achieve excellence, you can get there today. As of this very second, quit doing less-than-excellent work."*



Lesson 5: *Planets*
Brahe, Kepler and Copernicus: Motion in the Heavens

1. (d) obseved an eclipse of the sun
2. (a) True
3. (b) Sun
4. (b) on a private island owned by the king of Denmark
5. (b) False
6. (b) False
7. (a) circles or combinations of circles
8. (c) Prague
9. (b) John Kepler
10. (d) it made his calculations easier
11. (d) it made his calculations easier
12. (a) Mars changes in brightness
13. (b) he feared going to prison
14. (b) False
15. (b) False
16. (b) John Kepler
17. (b) years of data
18. (d) six years
19. (c) an ellipse
20. (b) John Kepler
21. elliptical
22. (a) with Jupiter at one focus
23. (a) Kepler formulated the Laws of Planetary Motion using the work of Tycho Brahe and Copernicus.
24. *"Know what you do best; do best what you know, and know when to let others do what they do best."*