ACTIVITY ANSWER KEY

Chapter 1, Section 1

Check your answers from the Answer Key. Answers separated by commas may be in any order. Answers separated by semicolons must be in stated order. Correct all errors, then complete your next goal.



Lesson 1: *The Human Body:* *Organization*

1. _c_ Herophilus
2. _a_ Galen
3. _b_ Vesalius
4. dead body
5. (a) True
6. (d) trillion
7. (c) 15
8. (c) cells
9. (a) tissue
10. _b_ epithelial tissue
11. _d_ connective tissue
12. _e_ nerve tissue
13. _c_ muscle tissue
14. _a_ bone tissue
15. (b) organ
16. (a) True
17. (d) organ systems
18. (b) nervous
19. (c) cell, tissue, organ, system
20. (c) 11
21. _e_ skeletal and muscular systems
22. _i_ nervous system
23. _b_ endocrine system
24. _g_ digestive and respiratory systems
25. _a_ circulatory system
26. _f_ excretory system
27. _h_ reproductive system
28. _c_ integumentary system
29. _d_ immune-lymphatic system
30. reproductive system
31. skeletal, immune, integumentary
32. "*The great thing in this world is not so much where we are, but in what direction we are moving.*"



Lesson 2: *The Human Body:* *Communication and Control*

1. nervous system, endocrine system
2. (d) nerve cell
3. brain
4. (b) False
5. glands
6. (b) puberty; emotional state
7. (b) beneficial (or good); good
8. (a) Toxic; destabelize
9. (b) False
10. (b) receptor
11. homeostasis
12. (b) insulin
13. (b) insulin
14. (d) glucagon
15. (b) glucagon
16. (c) It binds to histamine receptors on the surfaces of target cells.
17. "*A wise man will hear and will increase learning; and a man of understanding shall attain unto wise counsels.*"



Lesson 3: *The Human Body:* *The Endocrine System*

1. physical, emotional
2. gland
3. chemical communication system
4. (b) False
5. (any four) pituitary gland, adrenal glands, thyroid gland, parathyroid gland, pineal gland, thymus, pancreas, testes, ovaries
6. (a) True
7. (d) They exert control over bodily activities.

8. disorder; disease; death
9. (d) all of these
10. (c) physiologist
11. (c) the Hydra's ability to maintain its internal temperature as the temperature of the surrounding water changed
12. (b) Ernest Starling
13. (d) eleven
14. (a) Walter Canon
15. _X_ Organisms have marvelously.
    _X_ Living organisms appear to be... purposeful....
    ___ Living organisms appear to be... evolutionary....
    _X_ The body operates like ....
    _X_ The body automatically corrects imbalances....
16. thermostatically controlled heating and cooling systems
17. "*If there were an eleventh commandment, it would be 'Thou shalt have balance'!*"



Lesson 4: *The Human Body:* *The Endocrine System— Major Organs and Hormones*

1. _X_ pituitary gland
   ___ pineal gland
   ___ thyroid gland
   _X_ adrenal glands
   ___ thymus
   _X_ hypothalamus
2. (b) hypothalamus
3. (c) hypothalamus
4. hypothalamus
5. chemicals (or hormones)
6. chemically, electrically
7. (a) True
8. (d) all of these
9. (c) pituitary
10. (d) pituitary gland
11. (c) over the top of each kidney
12. adreneline (epinephrine), norepinephrine
13. epinephrine; "fight or flight"
14. _X_ increased heart rate
    ___ blood shunted to digestive tract
    _X_ rise in blood pressure
    ___ constricted eye pupils
    _X_ blood shunted to skeletal muscles
15. (c) cortisol
16. (d) aldosterone
17. (a) iodine and tyrosine
18. (a) increases
19. (d) hypothalamus
20. (b) TRH
21. (d) feedback regulation
22. negative feedback
23. (d) luteinizing hormone
24. (c) difficulty controlling blood glucose
25. _X_ (a) calcitonin
    ___ (b) ADH
    _X_ (c) FSH
    _X_ (d) LH
    _X_ (e) prolactin
    ___ (f) glucagon
    _X_ (g) estrogen
    _X_ (h) testosterone
26. (c) oxytocin
27. (a) calcitonin and PTH
28. (c) calcitonin
29. (b) difficulty in conception and maintenance of pregnancy
30. (c) PTH
31. "*Take care of your thoughts and your actions will take care of themselves*."



Lesson 5: The Human Body: *The Endocrine System— The Pancreas*

1. (c) both an endocrine and an exocrine gland
2. exocrine
3. exocrine
4. endocrine
5. (b) islets of Langerhans
6. (c) alpha cells
7. (a) beta cells
8. insulin, glucagon
9. (b) glucagon
10. insulin
11. (a) high blood glucose levels
12. (a) True
13. urine
14. (b) diabetes mellitus

15. _J_ usually occurs before age 20
    _A_ slow-healing cuts and bruises, blurred vision
    _J_ requires daily insulin injection
    _A_ usually affects people over age 40
    _J_ a genetically inherited condition
    _J_ constitutes about 10% of diabetics
    _A_ 90% of the time is a consequence of obesity
    _J_ promotes extreme thirst and hunger
    _A_ tingling or numbness of extremeties
    _A_ can normally be treated with diet and exercise rather than insulin
16. (a) True
17. (b) sugar
18. (b) a three day fast
19. (b) liver
20. cortisol
21. "*Great discoveries in science often result from chance observations.*"