

Biology Study Guide

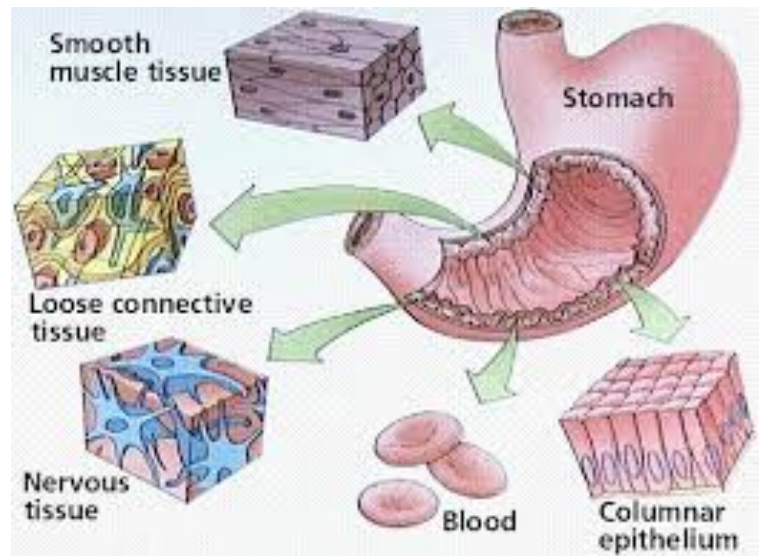
Cycle 3: Weeks 1 & 2

All living organisms are but leaves on the same tree of life. The various functions of plants and animals and their specialized organs are manifestations of the same living matter. This adapts itself to different jobs and circumstances, but operates on the same basic principles. Muscle contraction is only one of these adaptations. In principle it would not matter whether we studied nerve, kidney or muscle to understand the basic principles of life. In practice, however, it matters a great deal.

— Albert Szent-Gyorgyi

Overview and Objectives

In this cycle of study we will build on our knowledge and understanding of cells and cellular structures. We will examine how cells, together, make larger structures called tissues. These tissues make up larger structures called organs that then make up organ systems. We will examine these levels of organization and relate their structure to their function. Organs and organ systems function together to provide homeostasis in organisms. The functioning of organs depends upon multiple organ systems. (USOE Std. 3.1-2)



Essential Question: How do the processes that happen at a cellular level influence the structure, functions, and behavior at the tissue, organ, organ system, and organism level?

Week 1: DUE Friday, January 22

- _____ 1. Read the quotes and overview with the class and mark them up.
- _____ 2. Choose your organ for your 3-D model and presentation (my organ: _____). This model and presentation is due FEB 8. You will present over the following several weeks as we cover the related organ systems.
- _____ 3. Receive your rubric for your 3-D model and begin brainstorming ideas for and researching the structure and function of your organ.
- _____ 4. Participate in and take notes on the lesson: Levels of Organization
- _____ 5. Participate in and take notes on the lesson: 4 Tissue Types.
- _____ 6. Complete your graphic organizer on the 4 Tissue Types.
- _____ 7. Complete the assigned reading from the Biology textbook: pp. _____.

Week 2: DUE Friday, January 29

_____ 8. Participate in and take notes on the lesson: Homeostasis: the respiratory, excretory, and endocrine balance.

_____ 9. View the Scientific American video segment titled: Losing it, and discuss, as a class and in writing, your thoughts or opinions.

_____ 10. Complete the Tissue types quiz/worksheet.

_____ 11. Participate in and take notes on the lesson: The 11 Body Systems

_____ 12. Create your life-sized body outline/model.

_____ 13. Participate in and take notes on the lesson: What is the Anatomical Position?

_____ 14. Watch the instructional video: “Anatomical terms of direction and planes of section”

_____ 15. Complete your graphic organizer on anatomical planes of direction.

Self-evaluation--Rate yourself on:

How well you understood the information in the lesson

(1= didn't learn much, 3=learned some, 5=would be able to teach a peer about it)

1. Levels of organization _____
2. 4 Types of Tissues _____
3. Homeostasis _____
4. Body Systems _____
5. Anatomical Position _____

How well you used correct spelling, punctuation, grammar, and neatness

(1= more than 5 errors, 3=between 1-4 errors, 5=no errors)

1. Assignment # _____ score: _____
2. Assignment # _____ score: _____
3. Assignment # _____ score: _____
4. Assignment # _____ score: _____
5. Assignment # _____ score: _____

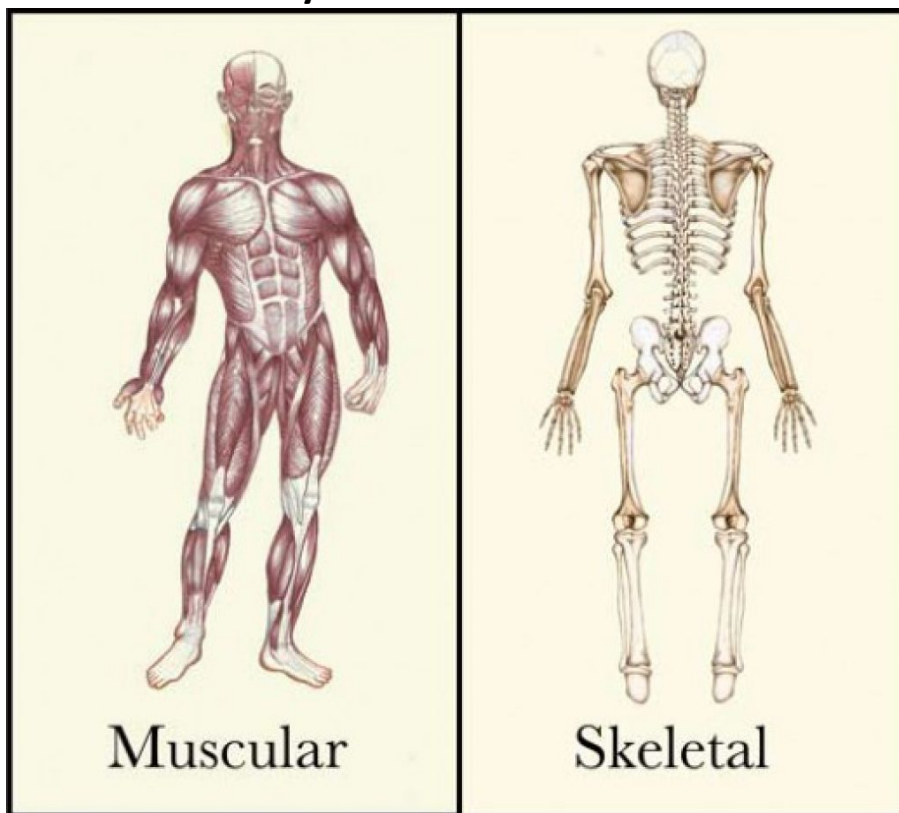
How much effort you gave to the works

(1 = not much effort, not colored/complete, 3=some effort, more than half complete, 5= lots of effort, colored/all complete)

1. Assignment # _____ score: _____
2. Assignment # _____ score: _____
3. Assignment # _____ score: _____
4. Assignment # _____ score: _____
5. Assignment # _____ score: _____

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Cycle 3: Weeks 3 & 4



Overview and Objectives

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Essential Question: How do the processes that happen at a cellular level influence the structure, functions, and behavior at the tissue, organ, organ system, and organism level?

Week 3: DUE Friday, February, 5

- _____ 16. Participate in the lesson: The Skeletal and Muscular System
- _____ 17. Add Skeletal components to your personal body model.
- _____ 18. Added Muscle to your personal body model.
- _____ 19. Participate in the Lab Activity: Muscles and Bones
- _____ 20. All of my research and ideas for my 3-D Organ model is complete; I will have my model ready on Monday, February 8.
- _____ 21. Complete the assigned reading from the Biology textbook: pp. _____.

Name _____ Period: _____

Cycle 3: Biology Jan 18 – March 11

Week 4: DUE Friday, February, 12

- _____ 22. My 3-D Organ model is complete!
- _____ 23. Participate in the student presentation on the Skeletal and/or Muscular systems.
- _____ 24. Complete the assigned reading from the Biology textbook: pp. _____.
- _____ 25. Participate in and take notes on the lesson: The Integumentary system.
- _____ 26. Participate in the student presentation on the Skin (the Integument).
- _____ 27. Participate in and take notes on the lesson: The Nervous System
- _____ 28. Complete the assigned reading from the Biology textbook: pp. _____.
- _____ 29. Complete the lesson and activity: Pain!
- _____ 30. Added Integument and Nervous system organs to my body model.