

**Chapter 36: Skeletal, Muscular, and Integumentary Systems**

**Section 36-1 The Skeletal System (pages 921-925)**

**Key Concepts**

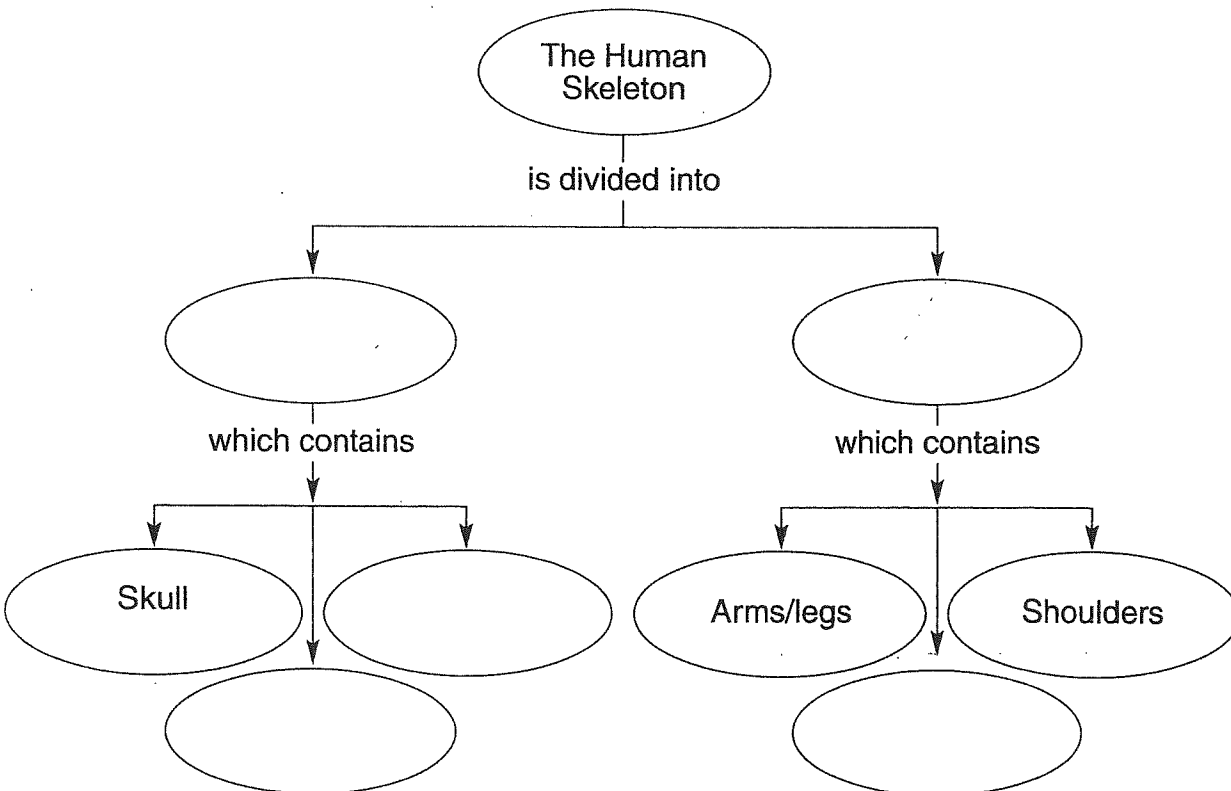
- What are the functions of the skeletal system?
- What is the structure of a typical bone?
- What are the three different kinds of joints?

**Introduction (page 921)**

1. What forms the skeletal system? \_\_\_\_\_  
 \_\_\_\_\_

**The Skeleton (page 921)**

2. List the functions of the skeletal system.
- a. \_\_\_\_\_ d. \_\_\_\_\_  
 b. \_\_\_\_\_ e. \_\_\_\_\_  
 c. \_\_\_\_\_
3. Is the following sentence true or false? Most bones act like levers on which muscles act to produce movement. \_\_\_\_\_
4. How many bones are there in the adult human skeleton? \_\_\_\_\_
5. Complete the concept map.



6. What is the general function of the axial skeleton? \_\_\_\_\_

**Structure of Bones (page 922)**

7. The two minerals that make up most of the mass of bone are \_\_\_\_\_ and \_\_\_\_\_.

8. Is the following sentence true or false? Bones are living tissue. \_\_\_\_\_

*Match each structure in a bone with its description.*

Structure	Description
_____ 9. Periosteum	a. Network of tubes running through bone
_____ 10. Compact bone	b. Soft tissue contained in bone cavities
_____ 11. Haversian canals	c. Tough layer of connective tissue surrounding bone
_____ 12. Spongy bone	d. Thick layer of dense bone beneath the periosteum
_____ 13. Bone marrow	e. Bone with a latticework structure

14. Cells that produce bone are called \_\_\_\_\_.

**Development of Bones (pages 922-923)**

15. The skeleton of an embryo is composed almost entirely of a type of connective tissue called \_\_\_\_\_.

16. The network of fibers in cartilage is made from two proteins called \_\_\_\_\_ and \_\_\_\_\_.

17. Circle the letter of each sentence that is true about cartilage.

- |                               |                              |
|-------------------------------|------------------------------|
| a. It contains blood vessels. | c. It cannot support weight. |
| b. It is dense and fibrous.   | d. It is extremely flexible. |

18. Cartilage is replaced by bone during the process of bone formation called \_\_\_\_\_.

19. Is the following sentence true or false? By adulthood, all the cartilage in the body has been replaced by bone. \_\_\_\_\_

**Types of Joints (page 924)**

20. What is a joint? \_\_\_\_\_

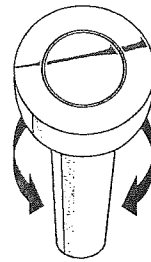
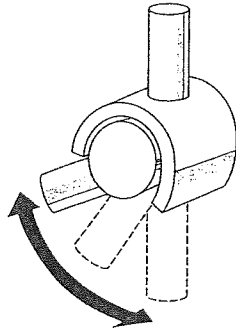
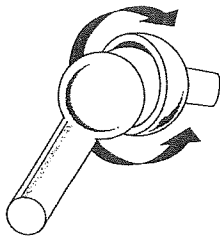
21. List the three classifications of joints, based on their type of movement.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

22. What are examples of immovable joints? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

23. Is the following sentence true or false? The joints between the two bones of the lower leg are slightly movable joints. \_\_\_\_\_

24. Identify the type of freely movable joint represented in each of the drawings below.



\_\_\_\_\_

25. Is the following sentence true or false? Ball-and-socket joints permit the widest range of movement. \_\_\_\_\_

**Structure of Joints (pages 924–925)**

26. Circle the letter of each sentence that is true about the structure of joints.

- a. Cartilage protects the ends of bones as they move against each other at joints.
- b. Ligaments hold bones together at joints.
- c. Synovial fluid prevents the ends of bones from slipping past each other at joints.
- d. A bursa is a swelling caused by inflammation of a joint.

**Skeletal System Disorders (page 925)**

27. Inflammation of a bursa is called \_\_\_\_\_.

28. A serious disorder that involves inflammation of one or more joints is \_\_\_\_\_.

