

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

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



**TEKS FOCUS:** 5A Specialization of structure and function of bones; 10A Functions of the skeletal system; **TEKS SUPPORT:** 11C Importance of nutrition and exercise on health

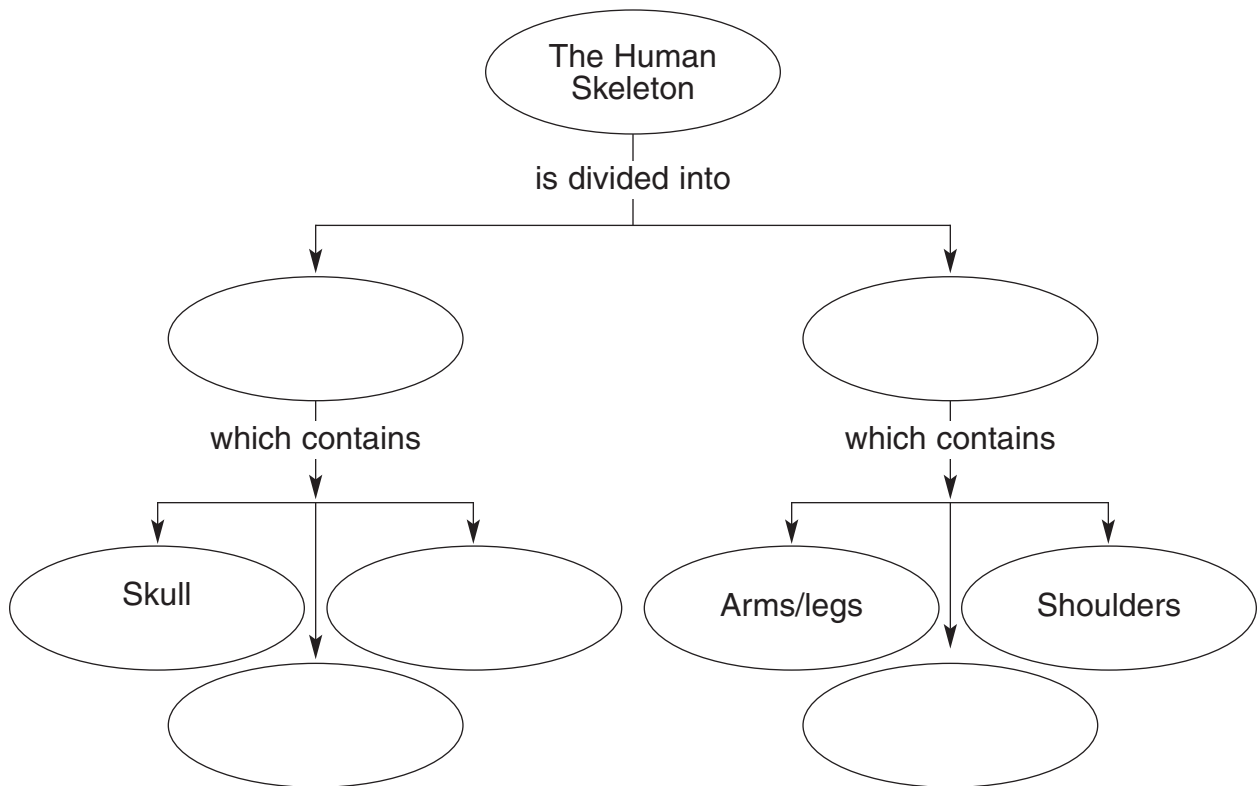
*This section describes the skeletal system and its functions.*

**Introduction (page 921)**

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

**The Skeleton (page 921)**

2. List the functions of the skeletal system.
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
  - e. \_\_\_\_\_
3. Is the following sentence true or false? Most bones act like levers on which muscles act to produce movement. \_\_\_\_\_
4. Is the following sentence true or false? There are 106 bones in the adult human skeleton. \_\_\_\_\_
5. Complete the concept map.



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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.
- b. It is dense and fibrous.
- c. It cannot support weight.
- 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 By adulthood, all the cartilage in the body has been replaced by bone.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? \_\_\_\_\_

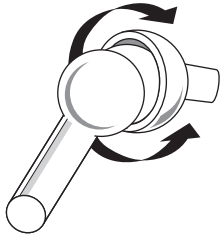
21. List the three classifications of joints, based on their type of movement.

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

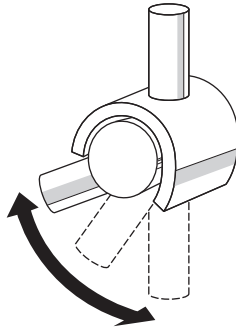
22. What are examples of immovable joints? \_\_\_\_\_  
\_\_\_\_\_

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

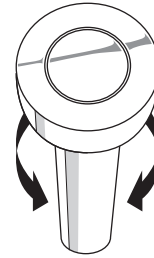
24. Identify the type of freely movable joint represented in each of the drawings below.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

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 \_\_\_\_\_.