

The Skeletal System

Chapter 6 Reading Guide – PART A

The purpose of this reading guide is to review important terms and concepts throughout the chapter while you are reading. Answer the items below on a separate sheet of paper.

Macroscopic Features of Bone

1. Explain the characteristics of the four general shapes of bone.
2. Explain the difference between compact bone and spongy bone tissue.
3. Explain the structure and function of the periosteum.

Microscopic Features of Bone

1. What is the difference between osteocytes, osteoclasts, and osteoblasts?

Bone Formation and Growth

1. At what stage is a human embryo made up of cartilage? Bone? Explain.
2. Discuss epiphyseal closure and when it occurs.
3. What are the requirements for normal bone growth?

Fractures

1. Explain what occurs in the steps of healing a fracture and the timeframes for each step in the process.
2. Using “Clinical Notes” on page 143 explain how fractures are named.

Skeletal Divisions

1. How many bones are there in the skeletal system?
2. Which skeleton forms the longitudinal axis of the body? What does it include?
3. How many bones are associated with each limb in the appendicular skeleton?

Axial Skeleton

1. How many bones form the skull, explain which bones are associated with which part.
2. Cranium – Which structures help break up airflow and clean air before it reaches the respiratory tract? Which bone are they associated with?
3. What is the purpose of the bones in the face?
4. Which is the only moveable bone in the face?
5. Using information in Figure 6-15, explain how the skull of a newborn is different from an adult.

Vertebrae

1. How is the spine divided? How many bones does it consist of?
2. How many curves does the spinal column consist of, when do they form?
3. What are the first two cervical vertebrae that allow for specialized movements? Explain the type of joint and movement that occurs.

Thoracic Cage

1. What does the thoracic cage consist of?
2. Explain ossification of the sternum, what is occurring and when does it happen?
3. What is the difference between true ribs and false ribs?