Unit 04: Anatomy and Physiology Skeletal

Content Area: **Science**
Course(s): **Generic Course**
Time Period: **Marking Period 2**
Length: **3 weeks**
Status: **Published**

Standards

LS1.A: Structure and Function (pp. 143-145, NRC, 2012)

- Systems of specialized cells within organisms help them perform the essential functions of life. (HS-LS1-1)
- Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level. (HS-LS1-2)
- Feedback mechanisms maintain a living system's internal conditions within certain limits and mediate behaviors, allowing it to remain alive and functional even as external conditions change within some range. Feedback mechanisms can encourage (through positive feedback) or discourage (negative feedback) what is going on inside the living system. (HS-LS1-3)

SCI.9-12.HS-LS1-1	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells.
SCI.9-12.HS-LS1-3	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
SCI.9-12.HS-LS1-2	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.

Essential Questions

- What are the physiologic mechanisms of the skeletal system?
- How do bones provide support, protection and movement for the body?

Content / Skills

- Analyze the structure of a long bone
- Compare and contrast compact and spongy bone
- Compare and contrast the structure of the four classes of bone
- Compare endochondral and intramembraneous bone development
- Describe the process of bone growth at epiphyseal plates
- Explain the functional importance of bone markings
- Identify the components of the skeletal system
- List important functions of the skeletal system
- Identify the major parts of the axial and appendicular skeleton
- Discriminate between different bones in a lab practical
- Identify the markings on a bone