

The Human Skeletal System

Florida Benchmark: Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs. (Adapted from NGSS)

NGSS Standard: Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs.

Objective:

- Identify the major bones of the human body.
- Understand the functions of the skeletal system (support, movement, protection).
- Construct a model representing parts of the skeletal system.

Materials:

- Pipe cleaners (for structure)
- Straws (for bones)
- Playdough or clay (for joints)
- Scissors
- Science journal or worksheet
- Printed skeleton diagram

Safety Precautions:

- Use scissors carefully and under supervision.
 - Avoid poking or swinging pipe cleaners or straws near others.
 - Maintain a clean workspace to prevent slipping on small materials.
 - Handle models with care to prevent breakage.
-

Procedures:

- 1. Introduction:**
 - Begin with a short discussion: *Why do we need bones?*
 - Show a model or diagram of the human skeleton.
 - Discuss key functions of the skeletal system (support, movement, and protection).
- 2. Building the Skeleton Model:**
 - Give students pipe cleaners to form the basic frame.

- Use straws as bones and attach them to the frame.
 - Playdough or clay will act as joints connecting the bones.
 - Students can compare their models to a real skeleton diagram.
3. **Observation & Discussion:**
- Have students move different sections of their models to understand how joints work.
 - Ask: *What happens if a joint is missing? What would our body feel like without bones?*
 - Write observations in a science journal.
4. **Generalization:**
- Recap the major functions of the skeletal system.
 - Relate it to real-life situations (e.g., sports, injuries, X-rays).
5. **Assessment:**
- Label the major bones on a worksheet.
 - Write one function of the skeletal system and an example of how it helps us.
 - Group discussion: Name a bone and describe its function.
-

Note: Clean-up

- Ensure all materials are collected and stored properly.
- Dispose of small scraps responsibly to avoid clutter.
- Wipe down workspaces to maintain cleanliness.