

BONE BUDDIES & MUSCLE MATES

SECOND GRADE



LEARNING OBJECTIVES

- Identify and locate major bones in the human skeleton
- Explain how bones and muscles work together for movement
- Understand role of tendons and ligaments in the body
- Distinguish between voluntary and involuntary muscles
- Construct a functional robotic hand model
- Collect and communicate scientific observations

7 WEEK UNIT

SKELETAL & MUSCULAR
SYSTEMS

WEEKLY ACTIVITIES

1. Skeletal System Intro: Bone facts video, important bones discussion
2. Skeleton Collaborative Drawing: Build skeleton system as a class
3. X-Ray Art: Chalk and oil pastels on black paper
4. Robotic Hand: DIY robotic hand showing movement mechanics
5. Muscle Investigation: Voluntary vs involuntary muscles exploration
6. Movement Review: Act out muscle/bone activities, record observations
7. Universal project: Blood slime creation (take-home)

SKILLS

1. Knowledge building, observation, discussion
2. Collaboration, anatomy knowledge, drawing
3. Artistic representation of anatomy, fine motor
4. Engineering, understanding systems, construction
5. Scientific thinking, body awareness, observation
6. Physical demonstration, communication, analysis
7. Creative play, takeaway project

MATERIALS

1. Videos, printed resources
2. Large paper, markers, skeleton template
3. Chalk pastels, oil pastels, black paper
4. Paper fasteners, straws, strings, tubes
5. Worksheet templates, observation guides
6. Activity cards, observation sheets
7. Starch, glue, red food coloring, sandwich bags

CALIFORNIA STANDARDS

- 2.L.1.a Explain how plants and animals are adapted to their environments
- 2.L.2.a Describe how organisms obtain and use energy
- 2.PS.1.a Observe how position and motion change when forces applied
- ELA 2.SL.4 Tell stories with relevant, descriptive details