

Lowerhouse Junior School Science Overview Sheet





Rationale: Teaching Skeletons and Muscles in Year 3 Science helps children understand how their bodies move and function. It builds foundational knowledge for later learning in biology and promotes curiosity about health. Engaging activities, like movement-based experiments, make learning interactive, reinforcing key concepts while encouraging appreciation for the human body's structure and mechanics.

Substantive Knowledge:

- Identify that humans and some other animals have skeletons and muscles for support, protection and movement.
- Identify animals (vertebrates) which have a skeleton
- which supports their body, aids movement & protects vital organs (e.g. name and locate skull, backbone, ribs, bones for movement/limbs, pelvis and be able to name some of the vital organs protected).
- Identify animals without internal skeletons/backbones (invertebrates) and describe how they have adapted other ways to support themselves, move & protect their vital organs

Disciplinary Knowledge:

- Classifying
- Pattern Seeking
- Research

Overview:

Key Vocabulary: Skeleton: The internal framework of bones in the body that provides Lesson 1: What questions can we raise about skeletons and muscles? structure and support. Lesson 2: Do longer legs make you Bones: Hard, dense structures that form the skeleton and support the body. run faster? Muscles: Tissues that contract to produce movement in the body. Lesson 3: What is the purpose of a Joints: Places where two or more bones meet, allowing for movement. Support: The function of the skeleton to hold up the body and maintain its skeleton? Lesson 4: How are vertebrates and shape. invertebrates different? **Protect:** The role of the skeleton in safeguarding vital organs from injury. Lesson 5: How do muscles work Move: The action produced by muscles and joints working together to and why are muscles important? create motion. Lesson 6: What have you learned Skull: The bone structure that encases and protects the brain. about skeletons and muscles? **Ribs:** Curved bones that form the rib cage, protecting the chest organs. Spine: The column of vertebrae that supports the body and protects the spinal cord.

Impact/Assessment

Most Children will be able to: • name some bones that make up their skeleton, giving examples that support, help them move or provide protection • describe how muscles and joints help them to move • use their data to look for patterns (or lack of them) when answering their enquiry question • give similarities e.g. they all have joints to help the animal move, and differences between skeletons