



ISE GRADE 5 SCIENCE CURRICULUM STANDARDS / LEARNING OUTCOMES



<u>Curriculum Standards/Learning Outcomes</u>	<u>Teaching Strategies</u>	<u>Resources</u>
<p><u>Topic One: Human Body</u></p> <p>Bones:</p> <ul style="list-style-type: none">• A human body can move in many ways. Movements are aided and limited by bone and joint structures.• Bones have a variety of forms.• Bones have three major functions in the human body: support, protection, and locomotion.	<ul style="list-style-type: none">• Learn the name, location, and orientation of major bones in the human body.• Determine the number of bones in the human skeleton.• Locate some of the major bones in ones body. <p>Using a model of a human skeleton,</p> <ul style="list-style-type: none">• Count up bones in one part of the skeleton (leg, arm, skull, torso) FOSS Activity 1• Students assemble model of the human skeleton. FOSS-1• Create a word bank of vocabulary words to use during the unit (bones, cartilage, joint, skeleton, skull, torso).	<ul style="list-style-type: none">• FOSS Kit: Human Body• Library books: (see list)• Other resources: see FOSS kit supplies



ISE GRADE 5 SCIENCE CURRICULUM STANDARDS / LEARNING OUTCOMES



<u>Curriculum Standards/Learning Outcomes</u>	<u>Teaching Strategies</u>	<u>Resources</u>
<p>Joints:</p> <ul style="list-style-type: none">• The human body has an articulated skeleton ready for action.• The structure of a bone is related to its function.• The human skeleton has three types of joints: hinge, ball-and-socket, and gliding joints. <p>Muscles:</p> <ul style="list-style-type: none">• The main function of muscles is to provide movement.• Muscle tissue contracts when it works.• Muscles provide coordination and structure for the body.• Muscles attach to bones with tissues called tendons.	<ul style="list-style-type: none">• Observe and locate joints in the human hand.• Perform everyday tasks with hand joints immobilized.• Investigate different kinds of joints in the human skeleton.• Identify different kinds of joints in the human skeleton.• Heighten awareness of the exquisite design and versatility of the human body.• Compare human skeletal joints to analogous mechanical structures.• Build models of joints. <ul style="list-style-type: none">• Learn that muscles contract when they work.• Build a model to demonstrate how muscles and tendons work together to move legs and feet.• Demonstrate how muscles, tendons, and ligaments work together.• Build an operating model to demonstrate how muscles, tendons, and ligaments work together to move thumbs.	



ISE GRADE 5 SCIENCE CURRICULUM STANDARDS / LEARNING OUTCOMES



<u>Curriculum Standards/Learning Outcomes</u>	<u>Teaching Strategies</u>	<u>Resources</u>
<p>Coordination:</p> <ul style="list-style-type: none">• The action of bones, muscles, and central nervous system working together is called coordination.• A stimulus is an event that triggers a response. It is often information received through the senses.• Response time is the length of time between a stimulus and a response.	<ul style="list-style-type: none">• Investigate hand and foot response to visual stimuli.• Observe the bones, joints, and muscles that move when the hand and foot respond.• Investigate the effect of practice on response time.• Investigate response time when the stimulus is non-visual (auditory or tactile).• Define that coordination is the action of bones, muscles, and the central nervous system.• Recognize that muscles provide coordination and structure for the body.• Select a topic from the study of joints and muscles to investigate in greater depth.	