

Grade Level Expectations (Grades 3 & 4)

Human Body

DRAFT

FOSS Investigations	Essential Learning Indicators Targeted
<p>Investigation 1: Bones Part 1 – Counting Bones Part 2 – Mr. Bones Puzzles Part 3 – Owl Pellets</p> <p>Investigation 2: Joints Part 1 – Looking at Thumb Joint Part 2 – Doing Joint Tasks Part 3 – Naming Joints Part 4 – Comparing Bones</p> <p>Investigation 3: Muscles Part 1 – Making a Leg Model Part 2 – Making a Thumb Model Part 3 – Making an Arm Model</p> <p>Investigation 4: Coordination Part 1 – Stimulus/ Response Part 2 – Response and Practice Part 3 – Timing Your Response Part 4 – Choosing Your Own Investigation</p>	<p>*1.1.2 Understand the relative position and motion of objects. W</p> <ul style="list-style-type: none"> • Measure and describe the position of one object relative to another object (or surroundings) using positional language (such as front of, behind, to the left, to the right, above, and below) and a distance scale (such as centimeters). <p>*1.2.1 Analyze how the parts of a system go together, and how these parts depend on each other. W</p> <ul style="list-style-type: none"> • Identify the parts of a system and how the parts go together. • Describe the function of a part of a system. • Explain how one part of a system depends upon other parts of the same system. <p>*1.2.6 Understand that organisms can be a single cell or many cells that form parts with different functions. (Investigations 2 & 3)</p> <ul style="list-style-type: none"> • Observe with a microscope and record that living things are made mostly of cells <p>*1.2.8 Understand the organization and function of human body structures and organs and how those structures and organs interconnect. W</p> <ul style="list-style-type: none"> • Describe the interdependence of organ systems in the human body (e.g. what would happen if one part of the human body system was missing). • Identify or describe how the human body systems compare to the systems of other living organisms . <p>2.1.1 Understand how to ask a question about objects, organisms and events in the environment. W</p> <ul style="list-style-type: none"> • Recognize the question being answered in an investigation. • Ask questions about objects, organisms and events based on observations of the natural world. <p>*2.1.2 Understand how to plan and conduct simple investigations following all safety rules. W</p> <ul style="list-style-type: none"> • Make predictions of the results of an investigation. • Generate a logical plan for, and conduct, a simple controlled investigation with the following attributes: prediction; appropriate materials, tools and available computer technology; variables kept the same (controlled); one changed variable (manipulated); measured (responding) variable; gather, record, and organize data using appropriate units, charts, and/or graphs; multiple trials • Identify and use simple equipment and tools to gather data and extend the senses. • Follow all safety rules during investigations. <p>*2.1.3 Understand how to construct a reasonable explanation using evidence. W</p> <ul style="list-style-type: none"> • Generate a scientific conclusion including supporting data from an investigation. • Describe a reason for a given conclusion using evidence from an investigation. • Generate a scientific explanation of an observed phenomenon using given data. <p>*2.1.4 Understand how to use simple models to represent objects, events, systems and processes. (Investigations 2 & 3)</p> <ul style="list-style-type: none"> • List similarities and differences between a model and what the model represents • Create a simple model to represent common objects, events, systems, or processes. <p>*2.1.5 Understand how to report investigations and explanations of objects, events, systems, and processes.</p> <ul style="list-style-type: none"> • Report observations or data of simple investigations without making inferences. • Summarize an investigation by describing: materials used in the investigation; observations, data, results; explanations and conclusions; safety procedures used. <p>*2.2.1 Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations. W</p>

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	<ul style="list-style-type: none"> • Explain why scientific observations are recorded accurately and honestly. • Explain why scientific records of observations are not changed even when the records do not match initial expectations. • Explain why honest acknowledgement of the contributions of others and information sources are necessary. <p>2.2.3 Understand why similar investigations may not produce similar results. W (Investigation 4 only)</p> <ul style="list-style-type: none"> • Describe reasons why two similar investigations can produce different results. <p>2.2.4 Understand how to make the results of scientific investigations reliable. W (Investigation 4 only)</p> <ul style="list-style-type: none"> • Describe how the method of investigation insures reliable results. • Identify and describe ways to increase the reliability of the results of an investigation. <p>3.2.2. <i>Understand that people have invented tools for everyday life and for scientific investigations.</i></p> <ul style="list-style-type: none"> • <i>Describe tools (technology) invented to advance scientific investigations.</i> • <i>Describe how scientific tools help people design solutions to human problems.</i> <p>3.2.3 <i>Understand how knowledge and skills of science, mathematics, and technology are used in common occupations.</i></p> <ul style="list-style-type: none"> • <i>Identify science, math, and technology skills used in a career.</i> • <i>Identify occupations using scientific, mathematical, and technological knowledge and skills.</i>

* GLE's assessed in formative assessments found in WA Assessment Folio.

GLE's in italics are not currently addressed in the investigations but could be addressed with extension activities, FOSS Science Stories, and other resources.