DRAFT

Grade Level Expectations (Grades 3 & 4)
Earth Materials

FOSS Investigations	Essential Learning Indicators Targeted
Investigation 1: **Mock Rocks** Part 1- Investigating Mock Rocks Part 2 – Taking Rocks Apart Part 3- Observing Crystals Investigation 2: Scratch Test Part 1 – Observing minerals Part 2- Testing for Hardness **Investigation 3:** **Calcite Quest** Part 1- Detecting Calcite Part 2- Looking for More Evidence **Investigation 4:** **Take it for Granite** Part 1 – Identifying Minerals in Granite Part 2 –Choosing your own Investigation	*1.1.1 Understand how to use properties to sort natural and manufactured materials and objects .W • Identify, describe, and sort natural and manufactured materials and objects according to various physical properties. *1.1.5 Understand physical properties of Earth materials including rocks, soil, water, and air. W • Describe rocks based on physical properties. *1.2.3 Know that substances are made of small particles. W • Identify small parts of a substance as still being that substance. • Observe and describe that some particles can only be seen with magnification. • Describe objects that are made of only one kind of material and objects made of several kinds of material. *2.1.1 Understand how to ask a question about objects, organisms, and events in the environment. W • Identify the question being answered in an investigation • Ask questions about objects, organisms, and events based on observations of the natural world. *2.1.2 Understand how to plan and conduct simple investigations following all safety rules. W • Make predictions of the results of an investigation. • Identify and use simple equipment and tools to gather data and extend the senses • Follow all safety rules during investigations. *2.1.3 Apply evidence to construct a reasonable explanation using data. • 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 observed phenomena using given data. *2.1.5 Understand how to report investigations and explanations of objects, events, systems, and processes. W • Report observations or data of simple investigations without making inferences. • Summarize an investigation by describing reasons for selecting the investigation plan, materials used, observations, data, results, explanations and conclusions and safety procedures used. 2.2.1 Understand that all scientific observations are reported accurately and honestly even when the observations contradict expectations. W • 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. *2.2.3. Understand why similar investigations may not produce similar results. W *2.2.5 Understand that scientific comprehension of systems increases through inquiry. W* • *Describe how scientific inquiry results in facts, unexpected findings, ideas, evidence, and explanations.* • *Describe how results of scientific inquiry may change our understanding of the systems of the natural and constructed world.* 3.2.2 Understand that people have invented tools for everyday life and scientific investigations. W • Describe tools (technology) invented to advance scientific investigations. • Describe how scientific tools help people design solutions to human problems

* GLE's assessed in formative assessments found in the 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.

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