

Unifying Theme: Earth Materials

| Essential Standards and Clarifying Objectives | |
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| 4.P.2 Understand the composition and properties of matter before and after they undergo a change or interaction. | |
| 4.P.2.1 | Compare physical properties of samples of matter: (strength, hardness, flexibility, ability to conduct heat, ability to conduct electricity, ability to be attracted by magnets, reactions to water and fire). |
| 4.P.2.2 | Explain how minerals are identified using tests for the physical properties of hardness, color, luster, cleavage, and streak. |
| 4.P.2.3 | Classify rocks as metamorphic, sedimentary or igneous based on their composition, how they are formed and the processes that create them. |
| 4.E.2 Understand the use of fossils and changes in the surface of the Earth as evidence of the history of Earth and its changing life forms. | |
| 4.E.2.1 | Compare fossils (including molds, casts, and preserved parts of plants and animals) to one another and to living organisms. |
| 4.E.2.2 | Infer ideas about Earth's early environments from fossils of plants and animals that lived long ago. |
| Unpacking | |
| What does this clarifying objective mean a child will know, understand and be able to do? | |
| 4.P.2.1 | Students know that samples of matter have many observable properties that can be measured. Students know that samples of matter can be described according to the characteristics of the material they are made from. Students are familiar with, and can test for the following properties: strength, hardness, flexibility, ability to conduct heat, ability to conduct electricity, ability to be attracted to magnets, reactions to water (dissolve) and heat/fire (melt/evaporate). |
| 4.P.2.2 | Students know that minerals can be identified by using particular tests. Students know how to perform tests for hardness and streak. Students are able to describe the color, luster, and cleavage of a mineral. |
| 4.P.2.3 | Students know that rocks are classified as metamorphic, igneous or sedimentary, and that these classifications are based on the processes that created the rock. Igneous rocks are from molten rock. Sedimentary rocks are formed from deposited rock particles (sediments) that are then compacted. Igneous and sedimentary rocks can be transformed into metamorphic rocks through the application of heat and pressure over long periods of time. |
| 4.E.2.1 | Students know that fossils are evidence of living organisms that once existed on Earth. Students know that fossils share some characteristics based on where, how, and from what they were formed. Students know that some organisms lived long ago are similar to existing organisms, but some are quite different. Students know that organisms that are alive today, will, under the right conditions, leave fossil evidence. |
| 4.E.2.2 | Students know that fossils provide information about the environmental conditions that existed when the fossil organism was alive, as well as information about where, when and how, the organism lived. |