# FOURTH GRADE
# Science
# PRIORITY STANDARDS

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| **Earth & Space Science** | |
| **4.ESS1 Earth's Place in the Universe** | |
| 4.ESS1.1 | **Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.**<br>[Clarification Statement: Examples of evidence from patterns could include rock layers with shell fossils above rock layers with plant fossils and no shells, indicating a change from water to land over time; and, a canyon with different rock layers in the walls and a river in the bottom, indicating that over time a river cut through the rock.]<br>[Assessment Boundary: Assessment does not include specific knowledge of the mechanism of rock formation or memorization of specific rock formations and layers. Assessment is limited to relative time.] |
| **4.ESS2 Earth's Systems** | |
| 4.ESS2.1 | **Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.^**<br>[Clarification Statement: Examples of variables to test could include angle of slope in the downhill movement of water, amount of vegetation, speed of wind, relative rate of deposition, cycles of freezing and thawing of water, cycles of heating and cooling, and volume of water flow.]<br>[Assessment Boundary: Assessment is limited to a single form of weathering or erosion.] |
| 4.ESS2.2 | **Analyze and interpret data from maps to describe patterns of Earth's features.**<br>[Clarification Statement: Maps can include topographic maps of Earth's land and ocean floor, as well as maps of the locations of mountains, continental boundaries, volcanoes, and earthquakes.]<br>[Assessment Boundary: Assessment does not include tectonic plate movement (e.g. boundary types, fault types, volcano types, subducting plate movement, etc.] |
| **Engineering, Technology, and the Application of Science** | |
| **4.ETS1 Engineering Design** | |
| 4.ETS1.2 | **Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.**<br>[Clarification Statement: Emphasis is on researching a problem prior to designing a solution, plan for testing to evaluate how well it will perform under a range of likely conditions using scientific knowledge and communicating the design process.]<br>[Assessment Boundary: Assessment is limited to the design process and modeling.] |
| **Physical Science** | |
| **4.PS3 Energy** | |
| 4.PS3.2 | **Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. ^**<br>[Clarification Statement: Emphasis is on gathering evidence through observations to explain how energy is transferred and transformed within a system (e.g. relative rate an ice cube melts on different surfaces or obtain observational data for what affects how to change the amount of electricity a solar panel makes.]<br>[Assessment Boundary: Assessment does not include quantitative measurements of energy.] |
| **4.PS4 Waves and their Applications in Technologies for Information Transfer** | |
| 4.PS4.1 | **Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.** [Clarification Statement: Examples of models could include diagrams, analogies, and physical models using wire to illustrate wavelength and amplitude of waves.]<br>[Assessment Boundary: Assessment does not include interference effects, electromagnetic waves, non-periodic waves, or quantitative models of amplitude and wavelength.] |