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| 4 -  Use evidence to construct an explanation relating the speed of an object to the energy of that object. |
| 4 -  Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. |
| 4 -  Ask questions and predict outcomes about the changes in energy that occur when objects collide. |
| 4 -  Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.\* |
| 4 -  Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. |
| 4 -  Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. |
| 4 -  Generate and compare multiple solutions that use patterns to transfer information.\* |
| 4 -  Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. |
| 4 -  Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. |
| 4 -  Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. |
| 4 -  Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. [ |
| 4 -  Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. |
| 4 -  Analyze and interpret data from maps to describe patterns of Earth’s features. |
| 4 -  Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.\* |
| 4 -  Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. |
| 4 -  Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. |
| 4 -  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. |