Indiana Science/Computer Science Content Connectors

Grade 5

Matter and Its Interactions	1	Use a model (e.g. diagram, picture) to describe that matter is made of particles too small to be seen. [Clarification Statement: Examples could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.] (E) 5-PS1-1A
	2	Measure quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. 5-PS1-2A
	3	Make observations and measurements of physical properties (e.g., color, hardness, magnetic forces) to classify materials. [Clarification Statement: Examples of materials to be classified could include baking soda and other powders, metals, minerals, and liquids. Examples of properties could include color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility; density is not intended as an identifiable property.] (E) 5-PS1-3A
	4	Conduct an investigation to determine whether the mixing of two or more substances results in new substances. 5-PS1-4A
Motion and Stability: Forces and Interaction	1	Support the argument that Earth's gravity pulls objects towards its surface. 5-PS2-1A
Energy	1	Use models to describe that the sun gives energy to plants, which becomes food for animals. 5-PS3-1A
	2	Use models to describe that food gives animals the energy they need for life processes (e.g., growth, body warmth, motion). (E) 5-PS3-1B
From Molecules to Organisms: Structures and Processes	1	Determine the evidence needed to support the claim that plants receive most of what they need to grow from air and water. 5-LS1-1A
Ecosystems: Interactions, Energy, and Dynamics	1	Use a model to describe the movement of matter among plants, animals, decomposers, and the environment. (E) 5-LS2-1A
Ea Un	Skip to main content	Use data to compare the apparent brightness of stars based on their relative distances from Earth. 5-ESS1-1A

	2	**Use data from graphical displays to reveal patterns in the length and direction of shadows throughout the day, daily patterns of day and night, and the seasonal appearance of stars. [Clarification Statement: Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months.] (E)** 5-ESS1-2A
Earth's Systems	1	**Use a model to describe how Earth's major systems (the geosphere, the hydrosphere, the atmosphere, and the biosphere) interact.** 5-ESS2-1A
	2	**Use evidence from graphs to support the claim that most of Earth's water is in the oceans as salt water, and most of the fresh water is in glaciers or underground.** 5-ESS2-2A
Earth and Human Activity	1	**Use information to determine actions people can take to lessen the impact of human activities on Earth's resources and environments. (E)** 5-ESS3-1A
Engineering Design	1	**Identify a solution to a problem based on a specific set of desired features (criteria) and available materials and resources (constraints).** 3-5-ETS1-1A
	2	**Generate and compare multiple solutions to a problem by investigating how well each solution works under certain conditions.** 3-5-ETS1-2A
	3	**Identify a design improvement to a problem by sharing ideas with peers.** 3-5-ETS1-2B
	4	**Test design solutions to identify aspects of the design that can be modified or improved based on specific limitations.** 3-5-ETS1-3A