

5th grade

Plants and ecosystems 11 weeks 8/31 - 11/6

5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. **[Clarification Statement: Examples of models could include diagrams, and flow charts.]**

5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water. **[Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.]**

5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

[Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]

- Photosynthesis (2)
- What's on your plate? (1)
- Making food webs (2)
- Owl Pellets (2)
- Wolves in Yellowstone (2)
- Deer in RCP (2)

Properties of Matter 11 weeks 11/9 - 2/11

5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. **[Clarification Statement: Examples of evidence could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.] [Assessment Boundary: Assessment does not include the atomic-scale mechanism of evaporation and condensation or defining the unseen particles.]**

5-PS1-2. Measure and graph 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. **[Clarification Statement: Examples of reactions or changes could include phase changes, dissolving, and mixing that form new substances.] [Assessment Boundary: Assessment does not include distinguishing mass and weight.]**

5-PS1-3. Make observations and measurements to identify materials based on their properties. **[Clarification Statement: Examples of materials to be identified 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.] [Assessment Boundary: Assessment does not include density or distinguishing mass and weight.]**

5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

- Legos and atoms overview (2)
- Properties inventory
 - Magnetism and conductivity (1)
 - Hardness, color, pliability (1)
 - Thermal conductivity (1)
- Mixtures introduction (1)
- Assessing physical or chemical change in mixtures
 - Gravel and salt, diatomaceous earth and water (1)
 - Salt water and Kool aid (1)
 - BS and Vin (1)
 - CaCl and Water (1)
 - Pancake batter (1)

5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. **[Clarification Statement: Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.] [Assessment Boundary: Assessment is limited to the interactions of two systems at a time.]**

5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. **[Assessment Boundary: Assessment is limited to oceans, lakes, rivers, glaciers, ground water, and polar ice caps, and does not include the atmosphere.]**

Spaceship Earth In class

1. Water on Earth (Project Wet resource, also there is a FOSS manual that Amy can give me if I don't have it.)
2. Defining the 4 spheres
 - a. Using white beach balls to display research results
3. The interactions of the 4 spheres

Human Impacts and solutions 6 weeks 2/13 - 3/25

5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

- Oil spill, EiE

The Earth in space 12 weeks 4/4 - 6/17

5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down. **[Clarification Statement: "Down" is a local description of the direction that points toward the center of the spherical Earth.] [Assessment Boundary: Assessment does not include mathematical representation of gravitational force.]**

5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. **[Assessment Boundary: Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, stage).]**

5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. **[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.] [Assessment Boundary: Assessment does not include causes of seasons.]**

- Effect of atmosphere on ecosystems and climate change (2)
- Mapping water on earth and tracking use of fresh water (2)
- Observing, measuring and graphing shadow data (2)
- Solar system (not in standards) (2)
- Gravity pulls down and equally (2)
- Stars and constellations (2)