

FOSS and SEEd Standards Alignment Second Grade

Strand 2.1: CHANGES IN EARTH'S SURFACE

Earth has an ancient history of slow and gradual surface changes, punctuated with quick but powerful geologic events like volcanic eruptions, flooding, and earthquakes. Water and wind play a significant role in changing Earth's surface. The effects of wind and water can cause both slow and quick changes to the surface of the Earth. Scientists and engineers design solutions to slow or prevent wind or water from changing the land.

FOSS	STANDARDS
<p><i>Pebbles, Sand, and Silt</i> Investigation 1: First Rocks</p> <p>Part 1: Three Rocks SEP: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations <u>CCC: Cause and effect, Stability and change</u> Standard Content: Rocks can be described by their properties. Smaller rocks (sand) result from the breaking (weathering) of larger rocks.</p> <p>Part 2: Washing Three Rocks SEP: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Obtaining, evaluating and communicating information <u>CCC: Cause and effect, Stability and change</u> Standard Content: Rocks can be described by their properties. When rocks are washed in water, the colors or sparkling qualities are enhanced. Some rocks (such as tuff, scoria and basalt) are formed</p>	<p>2.1.2 Construct an explanation about <u>changes</u> in Earth's surface that happen quickly or slowly. Emphasize the contrast between fast and slow changes. Examples of fast changes could include volcanic eruptions, earthquakes, or landslides. Examples of slow changes could include the erosion of mountains or the shaping of canyons. (ESS1.C)</p> <p>2.3.1 Plan and carry out an investigation to classify different kinds of materials based on <u>patterns</u> in their observable properties. Examples could include sorting materials based on similar properties such as strength, color, flexibility, hardness, texture, or whether the materials are solids or liquids. (PS1.A)</p>

from lava and other materials produced by erupting volcanoes. Volcanoes are mountains built by melted rock that flow out of weak areas in Earth's crust.

Part 3: First Sorting

SEP: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Engaging in argument from evidence

CCC: Patterns

Standard Content: Rocks can be sorted by their properties. When rocks are washed in water, the colors of sparkling qualities are enhanced.

Part 4: Start a Rock Collection

SEP: Asking questions, Analyzing and interpreting data, Obtaining, evaluating and communicating information

CCC:

Standard Content: Rocks are all around us. Rocks are the solid material of Earth.

Part 5: Sorting Activity

SEP: Analyzing and interpreting data, Obtaining, evaluating and communicating information

CCC:

Standard Content: Rocks can be described by their properties. Rocks are composed of minerals.

Pebbles, Sand, and Silt

Investigation 2: River Rocks

Part 1: Screening River Rocks

SEP: Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations

CCC: Patterns, Scale, proportion and quantity, Cause and effect

Standard Content: Rocks can be described by the property of size. Screens can be used to sort the sizes of earth materials. Rock sizes include sand, small gravel, large gravel, small pebbles, and large pebbles. Rocks are earth materials.

Part 2: River Rocks by Size

SEP: Developing and using models, Analyzing and interpreting data, Constructing explanations, Obtaining, evaluating and communicating information

CCC: Cause and effect, Stability and change

Standard Content: Rocks can be categorized visually by size. Rock sizes include sand, small gravel, large gravel, small pebbles, and large pebbles. Rocks larger than cobbles are boulders. Smaller rocks are a result from weathering of larger rocks.

Part 3: Sand and Silt

SEP: Planning and carrying out investigations, Analyzing and interpreting data, Engaging in argument from evidence

CCC: Scale, proportion and quantity

Standard Content: Sand often contains smaller particles called silt. Water can be used to sort the sizes of earth materials.

Part 4: Exploring Clay and Landforms

SEP: Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Obtaining, evaluating and communicating

2.1.1 Develop and use models illustrating the patterns of landforms and water on Earth. Examples of models could include valleys, canyons, or floodplains and could depict water in the solid or liquid state. (ESS2.B)

2.1.2 Construct an explanation about changes in Earth's surface that happen quickly or slowly. Emphasize the contrast between fast and slow changes. Examples of fast changes could include volcanic eruptions, earthquakes, or landslides. Examples of slow changes could include the erosion of mountains or the shaping of canyons. (ESS1.C)

2.1.3 Design solutions to slow or prevent wind or water from changing the shape of land. *Define the problem by asking questions and gathering information, convey designs through sketches, drawings, or physical models, and compare and test designs*. Examples of solutions could include retaining walls, dikes, windbreaks, shrubs, trees, and grass to hold back wind, water, and land. (ESS2.A, ESS2.C, ETS1.A, ETS1.B, ETS1.C)

information.

CCC: Stability and change

Standard Content: Clay particles are very small even smaller than silt. Weathering caused by wind or water causes larger rocks to break into smaller rocks. Some Earth events happen very quickly (volcanic eruptions, floods), others occur very slowly over a long period of time (weathering of rocks)

Pebbles, Sand, and Silt

Investigation 3: Using Rocks

Part 1: Rocks in Use

SEP: Planning and carrying out investigations, Analyzing and interpreting data, Obtain, evaluating and communicating information

CCC:

Standard Content: Earth materials are natural resources. The properties of different earth materials make them suitable for specific uses. Earth materials are commonly used in the construction of buildings and streets.

Part 2: Observing Sandpaper

SEP: Defining the problem, Planning and carrying out investigations, Analyzing and interpreting data, Obtain, Engaging in argument from evidence

CCC: Cause and effect

Standard Content: The properties of different earth materials make them suitable for specific uses. Different sizes of sand are used on sandpaper to change the surface of wood from rough to smooth.

2.3.1 Plan and carry out an investigation to classify different kinds of materials based on patterns in their observable properties. Examples could include sorting materials based on similar properties such as strength, color, flexibility, hardness, texture, or whether the materials are solids or liquids. (PS1.A)

2.3.2 Construct an explanation showing how the properties of materials influence their intended use and function. Examples could include using wood as a building material because it is lightweight and strong or the use of concrete, steel, or cotton due to their unique properties. (PS1.A)

<p>Part 3: Sand Sculptures SEP: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations <u>CCC: Cause and effect, Scale proportion and quantity</u> Standard Content: The properties of different earth materials make them suitable for specific uses. Earth materials are used to make sculptures and jewelry.</p> <p>Part 4: Clay Beads SEP: Constructing explanations <u>CCC:</u> Standard Content: The properties of different earth materials make them suitable for specific uses. Earth materials are used to make sculptures and jewelry.</p> <p>Part 5: Making Bricks SEP: Constructing explanations, Obtaining, evaluating and communicating information <u>CCC: Energy and matter</u> Standard Content: The properties of different earth materials make them suitable for specific uses. Simple bricks are made by combining clay soil with plant materials.</p>	
<p><i>Pebbles, Sand, and Silt</i> Investigation 4: Soil and Water</p> <p>Part 1: Homemade Soil SEP: Asking questions and defining problems, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Engaging in argument from evidence <u>CCC: Cause and effect, Stability and change</u> Standard Content: Humus is decayed material from plants and animals. The ingredients of soil can be observed by mixing soil and</p>	<p>2.1.1 Develop and use models illustrating the <u>patterns of landforms and water on Earth</u>. Examples of models could include valleys, canyons, or floodplains and could depict water in the solid or liquid state. (ESS2.B)</p> <p>2.1.2 Construct an explanation about <u>changes in Earth's surface that happen quickly or slowly</u>. Emphasize the contrast between fast and slow changes. Examples of fast changes could include volcanic eruptions, earthquakes, or landslides.</p>

water, shaking it and letting it settle. Soil is made partly from weathered rock and partly from organic materials.

Part 2: Local Soil

SEP: Asking questions and defining problems, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Engaging in argument from evidence, Obtaining, evaluating and communicating information

CCC: Cause and effect

Standard Content: Soils can be described by their properties (particle size, color, texture, ability to support plant growth). Soil is made partly from weathered rock and partly from organic material. Soils vary from place to place. Soils differ in their ability to support plants.

Part 3: Natural Sources of Water

SEP: Obtaining, evaluating and communicating information

CCC:

Standard Content: Earth materials are natural resources. Natural sources of water include streams, rivers, ponds, lakes, marshes, and oceans. Sources of water can be fresh or saltwater. Water can be solid liquid or gas.

Part 4: Land and Water

SEP: Developing and using models, Constructing explanations and designing solutions, Obtaining, evaluating and communicating information

CCC: Cause and effect, Stability and change

Standard Content: The shapes and kinds of land and water can be represented in photos, drawings and maps. Wind and water change the shape of the land. Engineers design methods to slow erosion by wind and water.

Examples of slow changes could include the erosion of mountains or the shaping of canyons. (ESS1.C)

2.1.3 Design solutions to slow or prevent wind or water from changing the shape of land. *Define the problem by asking questions and gathering information, convey designs through sketches, drawings, or physical models, and compare and test designs.* Examples of solutions could include retaining walls, dikes, windbreaks, shrubs, trees, and grass to hold back wind, water, and land. (ESS2.A, ESS2.C, ETS1.A, ETS1.B, ETS1.C)

Strand 2.2: LIVING THINGS AND THEIR HABITATS

Living things (plants and animals, including humans) need water, air, and resources from the land to survive and live in habitats that provide these necessities. The physical characteristics of plants and animals reflect the habitat in which they live. Animals also have modified behaviors that help them survive, grow, and meet their needs. Humans sometimes mimic plant and animal adaptations to survive in their environment.

FOSS	STANDARDS
<p><i>Insects and Plants</i> Investigation 2: Brassica Seeds In order to address 2.2.4 - "Student Projects" p. 180 - Teachers will need to have students create a structure that mimics the function of a plant or animal (For example- create a structure to mimic how animals help plants move seeds)</p> <p>Part 1: Planting Brassica SEP: Planning and carrying out investigations <u>CCC: Cause and effect</u> Standard Content: Plants are living organisms that need water, air, nutrients, light and space to grow. Plants produce seeds that develop into new plants that look like the parent plant.</p> <p>Part 2: Observing Brassica Growth SEP: Asking questions, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Engaging in argument from evidence, Obtaining, evaluating and communicating information <u>CCC: Patterns, Cause and effect</u> Standard Content: As plants grow, they develop roots, stems, leaves, buds, flowers, and seeds in a sequence called life cycle. Bees</p>	<p>2.2.3 Develop and use a model that mimics the function of an animal dispersing seeds or pollinating plants. Examples could include plants that have seeds with hooks or barbs that attach themselves to animal fur, feathers, or human clothing, or dispersal through the wind, or consumption of fruit and the disposal of the pits or seeds. (LS2.A)</p> <p>2.2.4 Design a solution to a human problem by mimicking the <u>structure and function</u> of plants and/or animals and how they use their external parts to help them survive, grow, and meet their needs. <i>Define the problem by asking questions and gathering information, convey designs through sketches, drawings, or physical models, and compare and test designs.</i> Examples could include a human wearing a jacket to mimic the fur of an animal or a webbed foot to design a better swimming fin. (LS1.A, LS1.D, ETS1.A, ETS1.B, ETS1.C)</p>

<p>and other insects help some plants by moving pollen from flower to flower</p> <p>Part 3: Plant Life Cycle SEP: Planning and carrying out investigations, Analyzing and interpreting data, constructing explanations, observing and evaluating and communicating information <u>CCC:</u> Structure and function Standard Content: As plants grow, they develop roots, stems, leaves, buds, flowers, and seeds in a sequence called life cycle.</p> <p>Part 4: Planting Outdoors SEP: Planning and carrying out investigations, Developing and using models, Analyzing and interpreting data, Obtaining, evaluating, and communicating information <u>CCC:</u> Patterns Standard Content: Plants are living organisms that need water, air nutrients, light and space to grow. Animals disperse seeds, moving them from one location to another. There are many different kinds of living things.</p>	
<p><i>Insects and Plants</i> Investigation 3: Milkweed Bugs</p> <p>Part 1: Eggs SEP: Asking questions, Planning and carrying out investigations <u>CCC:</u> Standard Content: Insects hatch from eggs. Living organisms need to be treated with care and respect.</p> <p>Part 2: Habitats SEP: Planning and carrying out investigations, Obtaining, evaluating and communicating information</p>	<p>2.2.1 Obtain, evaluate, and communicate information about <u>patterns</u> of living things (plants and animals, including humans) in different habitats. Emphasize the diversity of living things in land and water habitats. Examples of patterns in habitats could include descriptions of temperature or precipitation and the types of plants and animals found in land habitats. (LS2.C, LS4.C, LS4.D)</p> <p>2.2.2 Plan and carry out an investigation of the <u>structure and function</u> of plant and animal parts in different habitats. Emphasize how different plants and animals have different structures to survive in their habitat. Examples could include</p>

CCC: Stability and change

Standard Content: Insects need air, food, water and appropriate space; different insects meet these needs in different ways in different habitats. Variations exist within a group of related organisms.

Part 3: Growing Milkweed Bugs

SEP: Asking questions, Planning and carrying out investigations, Analysing and interpreting data, Constructing explanations

CCC: Structure and function, Patterns, Stability and change

Standard Content: As insects grow, they molt their hard, external covering. Insects have three main body parts: head, thorax, and abdomen. Insects and other animals have different structures that help them grow and survive. The life cycle of some insects is egg, nymph stages and adult, which produces eggs.

Part 4: Insect Search

SEP: Asking questions and defining problems, Developing and using models, Planning and carrying out investigations, Analysing and interpreting data, Constructing explanations and

designing solutions, Engaging in argument from evidence, Obtaining, evaluating, and communicating information

CCC: Structure and function, Stability and change

Standard Content: Insects need air, food, water and appropriate space; different insects meet these needs in different ways.

Designing an insect habitat requires asking questions, making observations and gathering information to clearly understand the problem to be solved. Designs can be conveyed through drawings. There are many kinds of living things.

the shallow roots of a cactus in the desert or the seasonal changes in the fur coat of a wolf. (LS1.A, LS4.A, LS4.D)

Insects and Plants

Investigation 4: Silkworms

Part 1: Eggs and Larvae

SEP: Planning and carrying out investigations

CCC: Stability and change

Standard Content: Insects need air, water and space including shelter; different insects meet these needs in different ways.

Part 2: Silkworm Structures

SEP: Planning and carrying out investigations, Analyzing and interpreting data, Using mathematical and computational thinking, Engaging in argument from evidence, Obtaining, evaluating and communicating information

CCC: Patterns, Structure and function

Standard Content: The structures of some insects change as the insect grows. As insects grow they molt their exoskeleton. Insects have 3 main body parts: head, thorax, and abdomen.

Part 3: Pupae and Adults

SEP: Analyzing and interpreting data, Constructing explanations, Obtaining, evaluating and communicating information

CCC: Patterns, Stability and change

Standard Content: The structures of some insects change as the insect grows. The life cycle of some insects involves complete metamorphosis - egg, larva, pupa, and adult, which produces eggs.

Part 4: Plant Eaters

SEP: Planning and carrying out investigations, Constructing explanations, Engaging in argument from evidence

CCC: Patterns

Standard Content: Insects need air, food, water and space including shelter; different insects meet these needs in different ways. Some

2.2.1 Obtain, evaluate, and communicate information about patterns of living things (plants and animals, including humans)

in different habitats. Emphasize the diversity of living things in land and water habitats. Examples of patterns in habitats could include descriptions of temperature or precipitation and the types of plants and animals found in land habitats. (LS2.C, LS4.C, LS4.D)

2.2.2 Plan and carry out an investigation of the structure and function of plant and animal parts in different habitats.

Emphasize how different plants and animals have different structures to survive in their habitat. Examples could include the shallow roots of a cactus in the desert or the seasonal changes in the fur coat of a wolf. (LS1.A, LS4.A, LS4.D)

<p>kinds of plants provide habitats for a greater diversity of insects and other animals other than plants.</p>	
<p><i>Insects and Plants</i> Investigation 5: Butterflies</p> <p>Part 1: Caterpillars SEP: Constructing explanations <u>CCC: Patterns, Stability and change, Structure and function</u> Standard Content: The life cycle of the butterfly involves complete metamorphosis - egg, larva, pupa, and adult, which produces eggs. Butterflies construct chrysalises when they pupate.</p> <p>Part 2: Chrysalises SEP: Defining problems, Analyzing and interpreting data, Designing solutions <u>CCC:</u> Standard Content: Asking questions, Planning and carrying out investigations, Analysing and interpreting data, Constructing explanations. Life cycles are different for different animals.</p> <p>Part 3: Adult to Butterflies SEP: Defining problems, Analyzing and interpreting data, Construction explanations, Obtaining, evaluating and communicating information <u>CCC: Patterns, Structure and function</u> Standard Content: The life cycle of the butterfly involves complete metamorphosis - egg, larva, pupa, and adult, which produces eggs. Life cycles are different for different animals. There are many different kinds of living things that live in different places.</p> <p>Part 4: Flower Powder SEP: Planning and carrying out investigations, Developing and using models, Constructing explanations and designing solutions <u>CCC: Structure and function</u></p>	<p>2.2.1 Obtain, evaluate, and communicate information about patterns of living things (plants and animals, including humans) in different habitats. Emphasize the diversity of living things in land and water habitats. Examples of patterns in habitats could include descriptions of temperature or precipitation and the types of plants and animals found in land habitats. (LS2.C, LS4.C, LS4.D)</p> <p>2.2.3 Develop and use a model that mimics the function of an animal dispersing seeds or pollinating plants. Examples could include plants that have seeds with hooks or barbs that attach themselves to animal fur, feathers, or human clothing, or dispersal through the wind, or consumption of fruit and the disposal of the pits or seeds. (LS2.A)</p>

Standard Content: As butterflies, moths, bees and other insects get food they move pollen from a flower of one kind to another flower of the same kind. Plants depend on insects and birds to pollinate flowers in order to produce seeds. There are many different kinds of living things that live in different places.

Strand 2.3: PROPERTIES OF MATTER

All things are made of matter which exists with different forms and properties. Matter can be described and classified by its observable properties. Materials with certain properties are well-suited for specific uses. Heating or cooling some types of matter may or may not irreversibly change their properties.

FOSS	STANDARDS
<p>Solids and Liquids Investigation 1: Solids</p> <p>Part 1: Solid Objects SEP: Planning and carrying out investigations, Obtaining, evaluating, and communicating information <u>CCC: Structure and function</u> Standard Content: Solid is one state or phase of matter. Objects are described and identified by their properties.</p> <p>Part 2: Solid Materials SEP: Planning and carrying out investigations, Analyzing and interpreting data <u>CCC: Structure and function</u> Standard Content: Objects are made of one or more materials.</p>	<p>2.3.1 Plan and carry out an investigation to classify different kinds of materials based on <u>patterns</u> in their observable properties. Examples could include sorting materials based on similar properties such as strength, color, flexibility, hardness, texture, or whether the materials are solids or liquids. (PS1.A)</p> <p>2.3.2 Construct an explanation showing how the properties of materials influence their intended use and <u>function</u>. Examples could include using wood as a building material because it is lightweight and strong or the use of concrete, steel, or cotton due to their unique properties. (PS1.A)</p> <p>2.3.3 Develop and use a model to describe how an object, made of a small set of pieces, can be disassembled and reshaped into a new object with a different <u>function</u>. Emphasize that a great variety of</p>

<p>Part 3: Group Solid Objects SEP: Planning and carrying out investigations, Constructing explanations, engaging in argument from evidence <u>CCC: Patterns, Structure and function</u> Standard Content: Solids can be sorted by their properties.</p> <p>Part 4: Construct with Solids SEP: Developing and using modeling, Planning and carrying out investigations, Constructing explanations and designing solutions. <u>CCC: Structure and function, Systems and system models,</u> Standard Content: Some properties of solid objects and materials make them appropriate for tower construction. Engineers use knowledge of material properties to design structures that solve problems.</p> <p>Part 5: Outdoor Solids SEP: Planning and carrying out investigations, Analyzing and interpreting data, Engaging in argument from evidence <u>CCC:</u> Standard Content: Natural and human-made objects occur outdoors.</p>	<p>objects can be built from a small set of pieces. Examples of pieces could include wooden blocks or building bricks. (PS1.A)</p>
<p><i>Solids and Liquids</i> Investigation 2: Liquids</p> <p>Part 1: Liquids in Bottles SEP: Asking questions, Planning and carrying out investigations, Obtaining, evaluating and communicating information <u>CCC: Cause and effect, Patterns</u> Standard Content: Liquid is one common state of matter. Liquids move freely in containers.</p>	<p>2.3.1 Plan and carry out an investigation to classify different kinds of materials based on <u>patterns</u> in their observable properties. Examples could include sorting materials based on similar properties such as strength, color, flexibility, hardness, texture, or whether the materials are solids or liquids. (PS1.A)</p>

<p>Part 2: Properties of Liquids SEP: Constructing explanations, Engaging in argument from evidence <u>CCC: Patterns</u> Standard Content: Liquids have many properties that help identify them.</p> <p>Part 3: Liquid Level SEP: Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Using mathematics and computational thinking, Constructing explanations, Obtaining evaluating and communicating information. <u>CCC: Scale, proportion, and quantity, Patterns, Cause and effect</u> Standard Content: Liquids take the shapes of their containers. The surfaces of liquids are flat and level.</p> <p>Part 4: Puddles SEP: Asking questions, Planning and carrying out investigations, Analyzing and interpreting data <u>CCC: Cause and effect</u> Standard Content: Liquids pour and flow.</p>	
<p><i>Solids and Liquids</i> Investigation 3: Bits and Pieces</p> <p>Part 1: Solids in Containers SEP: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Engaging in argument from evidence <u>CCC: Scale, proportion and quantity</u> Standard Content: Solid materials can occur as masses of small</p>	<p>2.3.1 Plan and carry out an investigation to classify different kinds of materials based on <u>patterns</u> in their observable properties. Examples could include sorting materials based on similar properties such as strength, color, flexibility, hardness, texture, or whether the materials are solids or liquids. (PS1.A)</p> <p>2.3.2 Construct an explanation showing how the properties of materials influence their intended use and <u>function</u>. Examples could include using wood as a building material because it is lightweight</p>

particles. A mass of particulate matter can form piles and support a more dense object on its surface.

Part 2: Separating Soup Mix

SEP: Developing and using models, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Obtaining, evaluating and communicating information.

CCC: Cause and effect, Scale, proportion and quantity

Standard Content: Particulate solids can be separated by size (with screens)

Part 3: Solids in Bottles

SEP: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Engaging in argument from evidence

CCC: Patterns

Standard Content: Masses of particulate matter can pour. The surface of a mass of particles is not flat and level.

Part 4: Beads and Screens

SEP: Developing and using models, Analyzing and interpreting data, Constructing explanations, Obtaining, evaluating and communicating information

CCC: Cause and effect, Patterns

Standard Content: Particulate solids can be separated by size (with screens)

Part 5: Spills

SEP: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations

CCC:

Standard Content: Particulate matter occurs naturally in the

and strong or the use of concrete, steel, or cotton due to their unique properties. (PS1.A)

outdoors. Masses of particulate matter can pour. The surface of a mass of particles is not flat and level.

Solids and Liquids

Investigation 4: Solids, Liquids, and Water

Part 1: Solids and Water

SEP: Asking questions, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations

CCC: Stability and change, cause and effect

Standard Content: Some solids change when mixed with water, others do not. Some solids dissolve in water. Water mixtures can be separated using evaporation.

Part 2: Liquids and Water

SEP: Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations

CCC: Stability and change

Standard Content: Some liquids, mix with water; others form layers.

Part 3: Toothpaste investigation

SEP: Asking questions, Planning and carrying out investigations, Analyzing and interpreting data, Constructing explanations, Engaging in argument from evidence, Obtaining, evaluating and communicating information

CCC: Cause and effect

Standard Content: Some materials are mixtures of solids and Liquids.

Part 4: Changing Properties

SEP: Planning and carrying out investigations, Analyzing and

2.3.2 Construct an explanation showing how the properties of materials influence their intended use and function. Examples could include using wood as a building material because it is lightweight and strong or the use of concrete, steel, or cotton due to their unique properties. (PS1.A)

2.3.3 Develop and use a model to describe how an object, made of a small set of pieces, can be disassembled and reshaped into a new object with a different function. Emphasize that a great variety of objects can be built from a small set of pieces. Examples of pieces could include wooden blocks or building bricks. (PS1.A)

2.3.4 Obtain, evaluate, and communicate information about changes in matter caused by heating or cooling. Emphasize that some changes can be reversed and some cannot. Examples of reversible changes could include freezing water or melting crayons. Examples of irreversible changes could include cooking an egg or burning wood. (PS1.B)

interpreting data, Constructing explanations, Obtaining, evaluating and communicating information.

CCC: Energy and matter, Cause and effect

Standard Content: Melting occurs when material changes from solids to liquid. Freezing occurs when material changes from liquid to solid. Heat causes materials to melt; cold causes them to freeze. Some changes are reversible; some changes are irreversible.

Part 5: Tea Time

SEP: Planning and carrying out investigations, Analyzing and interpreting data

CCC:

Standard Content: Water can dissolve materials from natural solids found in the outdoor environment.