

Young Scholars of Western Pennsylvania Charter School

Kindergarten YSWPCS Science

- Module

Unit 1: Doing Science

Investigation

Lesson 1: Our Senses

OCDEL Standards

3.1a.9 SCIENCE AS INQUIRY: - Use the five senses as tools with which to observe, collect information, classify, describe and solve problems. - Use observation to develop a descriptive vocabulary based on sensory experiences.

Common Core Standards

S.K-2.A.1.1.1: Identify a scientific fact as something that can be observed using the five senses.

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

Vocabulary

Touch

Hear

Smell

Taste

Feel

Content

Identify and describe the five senses.

Use the five senses to observe and learn about the world.

Identify the sensory organ associated with each sense.

Observe many properties of one thing.

Interdisciplinary Connections

Math: Solve problems about sense organs.

Art: Compare animal senses to human senses and draw a picture to illustrate their observations.

Recite Rhymes: Recite a rhyme about the senses and then use the senses to observe things.

Writing: Write "I can..." sentences describing senses.

- Module

Unit 1: Doing Science

Investigation

Lesson 2: Science Skills

OCDEL Standards

STANDARD 3.1b: BIOLOGICAL SCIENCES: GENETICS

Connect known ideas with new knowledge to build understanding or refine concepts

STANDARD 3.1c: BIOLOGICAL SCIENCES: EVOLUTION

Form clear explanations based on observations

STANDARD 3.2a: PHYSICAL SCIENCES: CHEMISTRY

Examine and explain change through simple observation and recording

STANDARD 3.2b: PHYSICAL SCIENCES: PHYSICS

Create scientific investigations

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify

simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

Vocabulary

Observe

Compare

Measure

Sort

Content

Observe and describe things.

Pose questions about things and surroundings.

Identify science procedures.

Demonstrate how science processes can be used to describe things and investigate questions.

Interdisciplinary Connections

Math: Identify and make patterns using shapes and colors they have compared.

Music: Answer questions posed in a song about the attributes size, shape, color and texture.

Reading: Ask and answer questions to find out information.

Writing: Make a book that describes different textures.

- Module

Unit 1: Doing Science

Investigation

Lesson 3: Science Tools

OCDEL Standards

STANDARD 3.1b: BIOLOGICAL SCIENCES: GENETICS

Connect known ideas with new knowledge to build understanding or refine concepts

STANDARD 3.1c: BIOLOGICAL SCIENCES: EVOLUTION

Form clear explanations based on observations

STANDARD 3.2a: PHYSICAL SCIENCES: CHEMISTRY

Examine and explain change through simple observation and recording

STANDARD 3.2b: PHYSICAL SCIENCES: PHYSICS

Create scientific investigations

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Vocabulary

Hand lens

Thermometer

Measuring cup

Balance

Ruler

Content

Identify science tools.

Recognize how science tools help in investigations.

Use a hand lens, a measuring cup, a thermometer, a balance, and a ruler to help analyze things.

Describe safe ways to conduct investigations.

Interdisciplinary Connections

Math: use measuring tools to measure standing jumps.

Social Studies: Listen to a story about a scientist and draw pictures of themselves as scientists using science tools.

Art: Use a hand lens to observe properties of newspaper pictures.

Language Arts: Play a game to identify and describe how to use science tools to observe physical attributes.

- Module

Unit 2: Animals

Investigation

Lesson 4: Living and Nonliving things

OCDEL Standards

STANDARD 3.1a: BIOLOGICAL SCIENCES: LIVING AND NON-LIVING ORGANISMS

Identify the similarities and differences of living and non-living things. Describe why living things need air, food and water to survive.

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer). S.K-2.B.3.1.1: Distinguish between living and nonliving things. S.K-2.B.3.1.2: Identify plants and animals as living things.

Vocabulary

Living things

Nonliving things

Content

Classify things as living and nonliving.

Describe characteristics of living things.

Describe characteristics of nonliving things.

Sort living and nonliving things.

Interdisciplinary Connections

Math: Identify a specified number of living or nonliving things.

Music: Respond to a song by naming living and nonliving things found in different environments and showing behaviors of the living things.

Art: Make a collage showing favorite living and nonliving things.

Language Arts: Classify things as living and nonliving.

Unit 2: Animals

Investigation

Lesson 5: Real and Pretend

OCDEL Standards

STANDARD 3.1c: BIOLOGICAL SCIENCES: EVOLUTION

- Form clear explanations based on observations.

Common Core Standards

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Vocabulary

Real

Pretend

Content

Recognize that some books and other media portray animals and plants with characteristics that they do not have in real life.

Identify characteristics of real animals and plants and pretend animals and plants.

Compare real animals and plants and pretend animals and plants.

Interdisciplinary Connections

Language Arts: Identify a story in which animals have characteristics they do not have in real life.

Math: Use a measuring tool to measure and compare the heights of real plants and pretend animals.

Drama: Act out what happens when real animals and pretend animals meet.

Physical Education: Act like real animals and pretend animals in running, crawling, and hopping competitions.

- Module

Unit 2: Animals

Investigation

Lesson 6: Many Animals

OCDEL Standards

STANDARD 3.1a: BIOLOGICAL SCIENCES: LIVING AND NON-LIVING ORGANISMS

- Categorize plants and animals by external characteristics
- Describe why living things need air, food and water to survive
- Identify the specific functions of living things' parts

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer). S.K-2.B.3.1.2: Identify plants and animals as living things.. S.K-2.B.1.1.1: Describe basic external structures of animals and plants.

Vocabulary

Fur

Feathers

Scales

Content

Compare animals by size, shape, or body coverings.

Observe and describe similarities and differences in the appearance of animals.

Identify and name body parts of animals.

Identify ways animals move.

Interdisciplinary Connections

Social Studies: Identify the state animal and describe its characteristics.

Math: Observe animals and their body coverings and display the data in a picture graph.

Art: Use art materials to make models that show animal characteristics.

Writing: Write riddles describing an animal's characteristics.

• Module

Unit 2: Animals

Investigation

Lesson 7: What Animals Need

OCDEL Standards

STANDARD 3.1a: BIOLOGICAL SCIENCES: LIVING AND NON-LIVING ORGANISMS
• Describe why living things need air, food and water to survive

Common Core Standards

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Vocabulary

Food
Air
Water
Shelter

Content

Observe and illustrate what an animal needs.
Recognize that animals need food, water, air and shelter to survive.
Identify how people help pets meet their needs.
Observe similarities between the basic needs of humans and the basic needs of other animals.

Interdisciplinary Connections

Social Studies: Explore how animals' adaptations help them meet their needs in different kinds of places.

Math: Use cups and sand to solve problems about feeding pets.

Art: Draw pictures showing how animals can change the environment to meet their needs.

Language Arts: Identify various types of animal shelters.

• Module

Unit 2: Animals

Investigation

Lesson 8: Animals Grow and Change

OCDEL Standards

STANDARD 3.1a: BIOLOGICAL SCIENCES: LIVING AND NON-LIVING ORGANISMS

Identify stages of life cycles for plants and animals

Categorize plants and animals by external characteristics

Common Core Standards

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Vocabulary

Life Cycle

Content

Describe an animal's life cycle.

Recognize that an animal's growth and change occur gradually.

Recognize that some young animals look like their parents and some do not.

Sequence pictures to show how animals grow and change.

Interdisciplinary Connections

Art: Make a collage to show similarities and differences between adult animals and their young.

Writing: Contribute to a shared writing to write a story describing an animal's life cycle.

Math: Identify the stage in an animal's life cycle that is missing from the sequence.

Social Studies: Explore the life cycles of some unusual Australian mammals.

• Module

Unit 3: Plants

Investigation

Lesson 9: Many Plants

OCDEL Standards

STANDARD 3.1a: BIOLOGICAL SCIENCES: LIVING AND NON-LIVING ORGANISMS

- Categorize plants and animals by external characteristics
- Describe why living things need air, food and water to survive
- Identify the specific functions of living things' parts

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer). S.K-2.B.3.1.2: Identify plants and animals as living things. S.K-2.B.1.1.1: Describe basic external structures of animals and plants.

Vocabulary

Tree

Shrub

Grass

Content

Identify trees, shrubs, and grasses as kinds of plants.

Draw conclusions about kinds of plants.

Observe and describe the sizes and shapes of plants.

Sort plants into groups based on their physical characteristics.

Examine variations among individuals of the same kind of plant.

Interdisciplinary Connections

Writing: Participate in a shared writing experience to write an acrostic poem that describes a tree.

Language Arts: Write a group experience story about different kinds of plants.

Math: Make a picture graph of the types of plants at your school.

Math: PPlay a game to practice sorting plants by kind.

• Module

Unit 3: Plants

Investigation

Lesson 10: What Plants Need

OCDEL Standards

STANDARD 3.1a: BIOLOGICAL SCIENCES: LIVING AND NON-LIVING ORGANISMS

- Describe why living things need air, food and water to survive

Common Core Standards

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Vocabulary

Light

Air

Soil

Space to Grow

Water

Content

Recognize that plants need water, air, light, soil and space to grow.

Observe and compare the growth of plants.

Infer reasons why plants are healthy or not healthy.

Predict the growth of a plant based on whether it is getting what it needs.

Interdisciplinary Connections

Writing: Identify what a plant needs and make a book to illustrate its needs.

Art: Draw pictures to identify things that plants need,

Math: Use measuring to explore what happens when plants receive varying amounts of water.

Drama: Act out ways people help plants meet their needs.

- Module

Unit 3: Plants

Investigation

Lesson 11: Plant Parts

OCDEL Standards

STANDARD 3.1a: BIOLOGICAL SCIENCES: LIVING AND NON-LIVING ORGANISMS

Identify the specific functions of living things' parts

Identify that living things and nonliving things are made of parts that perform specific functions

Common Core Standards

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Vocabulary

Leaf

Fruit

Flower

Roots

Stem

Seeds

Content

Recognize that stems, roots, leaves, flowers, fruits and seeds are parts of plants.

Observe and identify the parts of a plant.

Describe how plant parts help a plant live.

Interdisciplinary Connections

Art: Identify plant parts by playing a game.

Health: Use pictures of foods that come from plant parts to make a chart.

Language Arts: Write a short play about the parts of a plant.

Math: Measure the amount of water a plant takes in through its stem.

- Module

Unit 3: Plants

Investigation

Lesson 12: Plants Grow and Change

OCDEL Standards

STANDARD 3.1a: BIOLOGICAL SCIENCES: LIVING AND NON-LIVING ORGANISMS

Identify stages of life cycles for plants and animals

Categorize plants and animals by external characteristics

Common Core Standards

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Vocabulary

Flower

Seed

Sprout

Seedling

Adult Plant

Content

Describe the sequence of stages in a plant's life cycle.

Observe stages that are part of the life cycle of a plant: seed, seedling, plant, flower and fruit.

Identify ways that young plants resemble their parent plants.

Interdisciplinary Connections

Drama: Recite an action rhyme about growing plants.

Math: Make a vertical string graph to measure and record natural plant growth.

Math: Count and record how many sprouts certain seeds produce.

Drama: Act out the process of a seed sprouting.

- Module

Unit 4: Habitats

Investigation

Lesson 13: Homes for Living Things

OCDEL Standards

STANDARD 3.1c: BIOLOGICAL SCIENCES: EVOLUTION

Identify characteristics for animal and human survival identified with seasonal changes

Common Core Standards

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together. S.K-2.B.3.1.1: Distinguish between living and nonliving things. S.K-2.B.3.1.2: Identify plants and animals as living things.

Vocabulary

Habitat

Content

Understand that animals and plants are found in different habitats and environments.

Know that animals need food, water, shelter and space to live.

Describe different environments where animals and plants live.

Make a model environment for animals and plants.

Interdisciplinary Connections

Art: Make sand paintings.

Writing: Write a story about an animal and its habitat.

Art: Make a habitat mobile.

Language Arts: Complete sentence frames that tell about animal habitats.

- Module

Unit 4: Habitats

Investigation

Lesson 14: Animals and Plants Together.

OCDEL Standards

STANDARD 3.1c: BIOLOGICAL SCIENCES: EVOLUTION

Identify characteristics for animal and human survival identified with seasonal changes

Identify reasons for observed changes

Form clear explanations based on observations

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify

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Vocabulary

Shelter

Content

Describe how many animals and plants depend on one another.

Understand how animals and plants can change their surroundings.

Interdisciplinary Connections

Writing: Write an illustrated response about an animal.

Art: Use plants to make a picture of a beaver dam or lodge.

Language Arts: Listen to a story and write a poem about animals and trees.

Art: Learn about earthworms and make a picture.

- Module

Unit 5: Day and Night

Investigation

Lesson 15: Day Sky

OCDEL Standards

STANDARD 3.3b: EARTH AND SPACE SCIENCES: ORIGIN AND EVOLUTION OF THE UNIVERSE

Identify features of space

Common Core Standards

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together. **S.K-2.D.3.1.1:** Identify objects that can be observed in the day or night sky (i.e., the Moon, planets, the Sun and other stars).

Vocabulary

Sky
Sun

Clouds

Content

Observe and describe what the sky looks like during the day.

Recognize that the sun can only be seen in the daytime.

Recognize that things are pulled toward the ground unless something holds them up.

Observe that the occurrence of night and day is a repeating pattern.

Observe that things can be big and things can be small as seen from Earth.

Interdisciplinary Connections

Drama: Role play activities done in the morning.

Math: Sequence events in the school day.

Art: Observe the sun in the morning and in the afternoon and paint pictures to show how the sun's position seems to change on different parts of the school building.

Language Arts: Make up words for a song about the sun.

- Module

Unit 5: Day and Night

Investigation

Lesson 16: Night Sky

OCDEL Standards

STANDARD 3.3b: EARTH AND SPACE SCIENCES: ORIGIN AND EVOLUTION OF THE UNIVERSE

Identify features of space

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer). S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

S.K-2.D.3.1.1: Identify objects that can be observed in the day or night sky (i.e., the Moon, planets, the Sun and other stars).

Vocabulary

Stars

Moon

Content

Describe the night sky.

Identify objects in the night sky.

Observe that the moon can be seen at night and sometimes during the day.

Interdisciplinary Connections

Math: Count stars on a felt board.

Art: Make a wax-resist painting of a starry night.

Music: Listen to a song and use puppets to act it out.

Writing: Write and illustrate wishes on a star.

- Module

Unit 6: Earth's Resources

Investigation

Lesson 17: Rocks

OCDEL Standards

STANDARD 3.3a EARTH AND SPACE SCIENCES: EARTH STRUCTURE, PROCESSES AND CYCLES

Distinguish between three types of earth: rock, soil and sand

Common Core Standards

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Vocabulary

Rocks

Content

Observe and describe rocks.

Compare and sort rocks.

Give examples of ways rocks are useful.

Interdisciplinary Connections

Math: Order rocks by size and tell how they are sequences.

Language Arts: Make a class big book of rocks.

Art: Use small rocks to make a Mosaic.

Math: Make predictions about which rock is heaviest and place rocks in order from lightest to heaviest.

- Module

Unit 6: Earth's Resources

Investigation

Lesson 18: Water

OCDEL Standards

STANDARD 3.3a EARTH AND SPACE SCIENCES: EARTH STRUCTURE, PROCESSES AND CYCLES

- o Identify examples of water in solid and liquid states

- Identify sources of water

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer). S.K-2.B.3.1.1: Distinguish between living and nonliving things. S.K-2.B.3.2.1: Identify natural events (e.g., fire, flood, extreme weather) and human actions (e.g., road construction, pollution, urban development, dam building) that can impact an ecosystem. S.K-2.B.3.3.1: Identify methods of recycling and reusing resources.

Vocabulary

Water

Content

Recognize that water is found in lakes, rivers, ponds and oceans.

Understand that rivers contain salt water.

Describe the physical properties of water, including clarity and color.

Interdisciplinary Connections

Drama: Learn an ocean rhyme that describes characteristics of an ocean.

Social Studies: Examine a globe or world map to locate oceans.

Math: Predict whether objects will sink or float when placed in water.

Art: Use water to make a painting.

- Module

Unit 6: Earth's Resources

Investigation

Lesson 19: Natural Resources

OCDEL Standards

STANDARD 3.3a EARTH AND SPACE SCIENCES: EARTH STRUCTURE, PROCESSES AND CYCLES

- Identify and distinguish between earth forms

- Distinguish between three types of earth: rock, soil and sand
 - Identify examples of water in solid and liquid states
- Identify sources of water

Common Core Standards

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Vocabulary

Natural Resources

Rock

Water

Soil

Content

Identify some natural resources.

Give examples of ways rocks, soil, and water are useful.

Describe ways to dispose of natural resources and to conserve natural resources for future use.

Explore that some materials can be used over and over again.

Explain how to interact with the environment in ways that are respectful of it.

Interdisciplinary Connections

Social Studies: Learn ways plants are used, such as for food, as building materials, and to make cloth, furniture, and decorative objects.

Art: Learn about and make found-art objects.

Language Arts: Write an experience story about taking care of Earth.

Music: Sing about taking care of Earth.

- Module

Unit 7: Weather and the Seasons

Investigation

Lesson 20: Weather

OCDEL Standards

STANDARD 3.3a EARTH AND SPACE SCIENCES: EARTH STRUCTURE, PROCESSES AND CYCLES

Distinguish between different types of precipitation

Collect, describe and record information about weather

Common Core Standards

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Vocabulary

Weather

Sunny

Snowy

Rainy

Cloudy

Windy

Content

Identify and describe weather conditions.

Observe and determine the effects of weather on human activities.

Observe and describe day-to-day weather changes.

Interdisciplinary Connections

Drama: Act out kinds of weather.

Language Arts: Tell a story about weather.

Writing: Write a descriptive poem about a sunny day.

Music: Sing a song about thunder.

• Module

Unit 7: Weather and the Seasons

Investigation

Lesson 21: Measuring Weather

OCDEL Standards

STANDARD 3.3a EARTH AND SPACE SCIENCES: EARTH STRUCTURE, PROCESSES AND CYCLES

Read a thermometer to identify the temperature

Examine and explain change through simple observation and recording

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer). S.K-2.B.3.2.1: Identify natural events (e.g., fire, flood, extreme weather) and human actions (e.g., road construction, pollution, urban development, dam building) that can impact an ecosystem. S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

Vocabulary

Thermometer

Windsock

Content

Interdisciplinary Connections

Math: Record weather for two week and graph the results.

Social Studies: Explore kinds of weather around the world.

Writing: Compose a poem about things that are hot and cold.

Art: Observe the sky and make a collage to record how it words.

- Module

Unit 7: Weather and the Seasons

Investigation

Lesson 22: Seasons

OCDEL Standards

STANDARD 3.3a EARTH AND SPACE SCIENCES: EARTH STRUCTURE, PROCESSES AND CYCLES

Identify seasonal changes in the environment

Examine and explain change through simple observation and recording

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation. S.K-2.A.2.1.2: Describe outcomes of an investigation. S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer). S.K-2.B.3.2.1: Identify natural events (e.g., fire, flood, extreme weather) and human actions (e.g., road construction, pollution, urban development, dam building) that can impact an ecosystem. S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

Vocabulary

Spring

Summer

Winter

Fall

Content

Identify and describe the characteristics of the four seasons.

Identify seasonal changes as a repeating pattern.

Describe how the seasons affect plants and animals.

Interdisciplinary Connections

Drama: Act out the seasons for classmates to guess.

Math: Make a picture graph that shows children's favorite seasons.

Language: Write a poem to describe how a tree changes through the seasons.

Social Studies: Write a postcard to children who live in another place to learn how the seasons change there.

- Module

Unit 8: Matter

Investigation

Lesson 23: Matter

OCDEL Standards

STANDARD 3.2a: PHYSICAL SCIENCES: CHEMISTRY

- Classify items by properties of matter
- Identify the three types of matter

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

S.K-2.C.1.1.1: Describe basic changes to properties of matter (e.g., formation of mixtures and solutions, baking and cooking, freezing, heating, evaporating, melting).

Vocabulary

Matter

Content

Identify matter as a solid, a liquid, or a gas.

Observe and describe properties of objects.

Compare and sort objects based on observable properties.

Interdisciplinary Connections

Math: Sort attribute blocks by size, color, shape.

Math: Predict, test, and sort items based on whether they sink or float.

Math: Use nonstandard tools to measure objects.

Writing: Describe objects using vocabulary terms Heavy and Light.

- Module

Unit 8: Matter

Investigation

Lesson 24: Matter Can Change

OCDEL Standards

STANDARD 3.2a: PHYSICAL SCIENCES: CHEMISTRY

- Describe the way matter can change
- Examine and explain change through simple observation and recording

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

S.K-2.C.1.1.1: Describe basic changes to properties of matter (e.g., formation of mixtures and solutions, baking and cooking, freezing, heating, evaporating, melting).

Vocabulary

Change

Content

Describe how paper and clay can be changed.

Recognize that the shape of materials can be changed by cutting, tearing, crumpling, smashing or rolling.

Recognize physical changes of matter.

Interdisciplinary Connections

Language Arts: Complete sentences identifying objects that can be cut, torn, bent, folded and mixed.

Math: Cut and tear paper into geometric shapes.

Social Studies: Learn about the art of folding paper.

Health: Experiment with folding, rolling, cutting and wrapping bandages.

- Module

Unit 8: Matter

Investigation

Lesson 25: Heating and Cooling Matter

OCDEL Standards

STANDARD 3.2a: PHYSICAL SCIENCES: CHEMISTRY

- Describe the way matter can change
- Describe what happens when two or more substances are combined
- Examine and explain change through simple observation and recording

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

S.K-2.C.1.1.1: Describe basic changes to properties of matter (e.g., formation of mixtures and solutions, baking and cooking, freezing, heating, evaporating, melting).

Vocabulary

Heat

Cool

Content

Observe, record, and discuss how matter can be changed by heating.

Observe, record and discuss how matter can be changed by cooling.

Interdisciplinary Connections

Math: Predict and check where water will take more or less time to evaporate.

Art: Paint using ice cubes.

Music: Listen to a song about the forms of water and explain that water can change forms.

Language Arts: Children listen to and discuss poems about water and its different forms.

- Module

Unit 9: Energy

Investigation

Lesson 26: Sound

OCDEL Standards

STANDARD 3.2b: PHYSICAL SCIENCES: PHYSICS

- Demonstrate and describe variations of sound
- Create scientific investigations

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

3.2.K.B6: ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Vocabulary

Sound

Vibrate

Content

Observe that sound is made when objects vibrate.

Identify sounds and the sources of their vibrations.

Compare sounds for loudness, pitch and rhythm.

Identify the ear as a receiver of vibrations that produce sound.

Interdisciplinary Connections

Math: Measure water into jars to make instruments.

Drama: Dramatize responses to various alarm sounds.

Writing: Compose a language chart about enjoyable sounds.

Social Studies: Construct "telephones" and place pretend calls to people in the neighborhood.

- Module

Unit 9: Energy

Investigation

Lesson 27: Light

OCDEL Standards

STANDARD 3.2b: PHYSICAL SCIENCES: PHYSICS

- Explore basic energy types and sources

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

3.2.K.B6: ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Vocabulary

Light

Content

Recognize the sun as Earth's source of light.

Identify human-made sources of light.

Recognize how paper can be changed by exposure to sunlight.

Interdisciplinary Connections

Social Studies: Make a travel poster of a place where the sun usually makes the land and water warm.

Art: Make shadow pictures on a sunny day.

Health: Find or draw pictures of things that provide protection from the sun.

Math: Draw and measure the lengths of shadows.

- Module

Unit 9: Energy

Investigation

Lesson 28: Light

OCDEL Standards

STANDARD 3.2b: PHYSICAL SCIENCES: PHYSICS

- Explore basic energy types and sources

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

3.2.K.B3: Describe how temperature can affect the body.

3.2.K.B6: ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

Vocabulary

Heat

Content

Recognize the sun as Earth's source of heat.

Recognize that sound, light and heat are kinds of energy.

Interdisciplinary Connections

Drama: Make up and act out a play about a heat source.

Writing: Make a book about sources of heat.

Health: Observe what happens to milk when it is left at room temperature.

Language Arts: Make up poems using words that rhyme with heat.

- Module

Unit 10: Motion

Investigation

Lesson 29: Where Things Are

OCDEL Standards

STANDARD 3.2b: PHYSICAL SCIENCES: PHYSICS

Apply knowledge of motion to new toys and objects

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

S.K-2.A.3.1.1: Describe a system as being made of multiple parts that work together.

3.3.K.B3: Distinguish between scientific fact and opinion.

Ask questions about objects, organisms, and events.

Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.

Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.

Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information. Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.

Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

Vocabulary

Beside
Above
Below
Behind
In Front Of

Content

Observe the location of a thing in relation to another thing.
Use position terms such as above, below, behind, in front of, and beside to describe the location of something.

Interdisciplinary Connections

Social Studies: Use position words to explore newspapers.
Writing: Write sentences that identify things found above children's heads and below their feet.
Math: Use numeral cards and position word cards to place blocks around a table.
Art: Build a sculpture and describe it for another person to identify.

- Module

Unit 10: Motion

Investigation

Lesson 30: How Things Move

OCDEL Standards

STANDARD 3.2b: PHYSICAL SCIENCES: PHYSICS
Apply knowledge of motion to new toys and objects

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.
S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

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Vocabulary

Zigzag

Round and Round

Straight

Up and Down

Back and Forth

Content

Observe and describe the ways things can move.

Observe and describe movements as fast or slow.

Interdisciplinary Connections

Social Studies: Compare fast and slow music tempos from different cultures.

Math: Roll and slide cylinders on a ramp, measuring and comparing the distances covered.

Language Arts: Write a poem describing types of movement.

Art: Paint an animal in motion and place it in a mural.

- Module

Unit 10: Motion

Investigation

Lesson 31: Changing How Things Move

OCDEL Standards

STANDARD 3.2b: PHYSICAL SCIENCES: PHYSICS

Apply knowledge of motion to new toys and objects

Common Core Standards

S.K-2.A.2.1.1: Understand that making a change to an investigation may change the outcome(s) of the investigation.

S.K-2.A.2.1.2: Describe outcomes of an investigation.

S.K-2.A.2.2.1: Identify simple tools that can be used in an investigation (e.g., measuring cup, hand lens, ruler, balance scale, thermometer).

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Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

Vocabulary

Push

Pull

Content

Identify push and pull as ways to move things.

Observe that a push or a pull can change the way a thing is moving.

Identify gravity as a force.

Understand that gravity pulls things down to the ground.

Interdisciplinary Connections

Math: Count steps across the room.

Physical Education: Identify pulling and pushing forces on a playground and act them out.

Physical Education: Follow directions to move in different directions and in different ways.

Language Arts: Write a book about kinds of forces.

- Module

Trees

Investigation

Investigation 1: Fall Trees

OCDEL Standards

3.1a: Living and Non-Living Organisms

3.1c: Evolution

4.8: Human and Environment

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.1.K.A1: Identify the similarities and differences of living and non-living things.

3.1.K.A3: Observe, compare, and describe stages of life cycles for plants and/or animals.

3.1.K.A5: Observe and describe structures and behaviors of a variety of common animals.

3.1.K.A9:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.
- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.
- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

3.1.K.C2: Describe changes animals and plants undergo throughout the seasons.

3.1.K.C3:

CONSTANCY AND CHANGE

Describe changes that occur as a result of climate.

Vocabulary

Branch

Broadleaf

Conifer

Leaf

Root

Trunk

Twig

Bark

Circumference

Height

Living

Shape

Silhouette

Adopt

Pattern

Rubbing

Scar

Content

Trees have identifiable structures

Trees are a resource.

Trees are growing, living organisms.

Trees have basic needs, including water, light, and nutrients from soil.

Trees are identifiable by their shape.

Individual trees can be described by their properties, including size, shape, and texture.

Interdisciplinary Connections

Language:

Science Journals

Make a tree-observation class book.

Math:

Hang up the tree circumference strings.

Make circumference strings.

Art:

Make more puzzles.

Science:

Plan a discovery center.

Collect prunings.

Pass the scrapbook on.

- Module

Trees

Investigation

Investigation 2: Leaves

OCDEL Standards

3.1a: Living and Non-Living Organisms

3.1c: Evolution

4.8: Human and Environment

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.1.K.A1: Identify the similarities and differences of living and non-living things.

3.1.K.A3: Observe, compare, and describe stages of life cycles for plants and/or animals.

3.1.K.A5: Observe and describe structures and behaviors of a variety of common animals.

3.1.K.A9:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.
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- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

3.1.K.C2: Describe changes animals and plants undergo throughout the seasons.

3.1.K.C3:

CONSTANCY AND CHANGE

Describe changes that occur as a result of climate.

Vocabulary

Branch

Different

Edge

Leaf

Point

Shape

Size

Tip
Egg
Heart
Line
Oval
Paddle
Round
Spear
Triangle
Wedge
Bigger
Fatter
Lobed
Same
Serrated
Skinnier
Smaller
Outline
Silhouette
Matching
Missing

Content

Leaves have identifiable structures.
Leaves grow on the tips and sides of small branches.
Many kinds of trees lose their leaves in the fall.
Leaves from the same trees have the same shape.
Leaf shapes can be compared to geometric shapes.

Leaves have many properties that can be compared.

Leaves can be identified by their shapes, tips and colors.

Interdisciplinary Connections

Language:

Science Journals

Make invitations for back to school night.

Math:

Make a leaf shape bar graph.

Art:

Make leaf rubbings.

Try spatter painting.

Science:

Use a two handed feely box.

Add to the scrapbook.

- Module

Trees

Investigation

Investigation 3: Trees Through the Seasons

OCDEL Standards

3.1a: Living and Non-Living Organisms

3.1c: Evolution

4.8: Human and Environment

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.1.K.A1: Identify the similarities and differences of living and non-living things.

3.1.K.A3: Observe, compare, and describe stages of life cycles for plants and/or animals.

3.1.K.A5: Observe and describe structures and behaviors of a variety of common animals.

3.1.K.A9:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.
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3.1.K.C2: Describe changes animals and plants undergo throughout the seasons.

3.1.K.C3:

CONSTANCY AND CHANGE

Describe changes that occur as a result of climate.

Vocabulary

Leaves

Other

Seed

Twig

Food

Fruit

Nut

Seed

Shell
Adopted
Cone
Fall
Evergreen
Lose
Needle
Scale
Bark
Branch
Bud
Growth Ring
Leaf Scar
Trunk

Content

Trees are resources.
Trees are growing, living organisms.
Fruits and nuts provide protection and food for the seeds.
Trees change through the seasons.
Some trees lose their leaves in winter, while others do not.
Evergreen trees can be identified by the properties of their leaves.
Twigs have structures such as leaf scars and buds.
Growth rings in twigs and trunks show how much a tree has grown in a year.

Interdisciplinary Connections

Language:
Science Journals
Art:
Make a tree bulletin board.

Science:

Make a food from trees center.

Watch for seed showers.

Watch for life in trees.

Compare cones.

- Module

Wood and Paper

Investigation

Investigation 1: Getting to Know Wood

OCDEL Standards

3.2a: Physical Sciences: Chemistry

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.2.K.B3: Describe how temperature can affect the body.

3.2.K.B6:

ENERGY

Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

3.2.K.B7:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.

- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.
- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

Vocabulary

basswood

grain

layer

particleboard

pine

plywood

redwood

rough

smooth

texture

wood

absorb

float

sink

soak

spread

different

same

test

weight

fewer

graph

more

Content

Wood has many observable properties.

Wood is a resource that comes from different kinds of trees.

Some woods are processed and transformed by people.

Wood is used for many everyday things.

Wood floats in water.

Wood absorbs water.

Some kinds of wood sink more easily than others.

Interdisciplinary Connections

Language:

Use science journals.

Begin a wood chart.

Math:

Weigh paper clips.

List wooden items from home.

Social Studies:

Take a field trip to lumberyard or a construction site.

Science:

Peer inside a branch.

Start a wood study center.

Play Memory.

Do another sinking-wood investigation.

- Module

Wood and Paper

Investigation

Investigation 2: Changing Wood

OCDEL Standards

3.2a: Physical Sciences: Chemistry

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.2.K.B3: Describe how temperature can affect the body.

3.2.K.B6:

ENERGY

Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

3.2.K.B7:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
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- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.
- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.
- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

Vocabulary

change

sand

sandpaper

sawdust

shape
woodworker
mixture
screen
shavings
waterlogged
cornstarch
glue
matrix
mix
particleboard
break
laminated
plywood
stripe
strong

Content

Wood has many observable properties.
Sanding can change the shape of wood.
Sawdust and wood shavings are tiny pieces of wood.
Wood that is waterlogged sinks.
Some objects occur in nature. Others are made by people.
Gluing thin sheets of wood together produces much stronger wood.

Interdisciplinary Connections

Language:
Add to science journals.

Art:

Make pictures from sawdust, shavings, and twigs.

Draw with charcoal.

Science Extension:

Add to the wood study center.

- Module

Wood and Paper

Investigation

Investigation 3: Getting to Know Paper

OCDEL Standards

3.2a: Physical Sciences: Chemistry

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.2.K.B3: Describe how temperature can affect the body.

3.2.K.B6:

ENERGY

Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

3.2.K.B7:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
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Vocabulary

chipboard

construction

corrugated

corrugated cardboard

facial tissue

kraft

newsprint

paper towel

tagboard

waxed

absorb

bumpy

rough

slick

smooth

soak

tear

texture

bend

corner

crease

flat

fold

half

strong

thick

thin

bead

change

drop

dropper

float

submerge

wet

Content

Paper has many observable properties.

Many objects are made from paper.

People make paper from wood. Wood is a resource that comes from trees.

The properties of some kinds of paper make them useful for writing or drawing.

The properties of different papers determine their use.

Some kinds of paper absorb water while others do not.

Paper changes when soaked in water. Some papers break down into small fibers.

Interdisciplinary Connections

Language:

Use science journals.

Make a paper chart.

Science:

Explore other kinds of paper.

Bring in rice paper.

Art:

Construct a paper Humpty-Dumpty.

Paint on paper.

Examine paper illustration techniques.

Make collage masks.

Teach students simple oragami.

- Module

Wood and Paper

Investigation

Investigation 4: Changing Paper

OCDEL Standards

3.2.a: Physical Sciences: Chemistry

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.2.K.B3: Describe how temperature can affect the body.

3.2.K.B6:

ENERGY

Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

3.2.K.B7:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.

- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.
- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be reproduced, and review and ask questions about the work of other scientists.

Vocabulary

absorb

blot

fiber

flip

pattern

pulp

recycle

roll

screen

across

around

dry

flour

layer

mold

over

papier mache

stiff

strip

tear

wheat paste

Content

Recycling extends the use of trees.

New paper can be made from old paper.

The properties of recycled paper can be compared to those of new paper.

Objects can be made from paper.

Paper can be soaked in wheat paste to make it soft and moldable when wet, and stiff and strong when dry.

Interdisciplinary Connections

Language:

Use science journal.

Art:

Decorate the papier mache bowls.

Try variations of papermaking.

Color the recycled paper.

Make something with the dried paper.

Make chipboard.

- Module

Wood and Paper

Investigation

Investigation 5: Constructions

OCDEL Standards

3.2a: Physical Sciences: Chemistry

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.2.K.B3: Describe how temperature can affect the body.

3.2.K.B6:

ENERGY

Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.

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Vocabulary

apart

bottom

box

edge

outline

overlap

seam

shape

side

top

trace

alternate

base

horizontal

under-over

pattern

slit
strip
vertical
weave
artistic
construction
design
sculpture

Content

Knowledge of the properties of paper can be used to make useful or artistic constructions.
Paper containers we use everyday began as flat pieces of paper.
Paper can be woven by using an under-over alternating pattern.
Some objects are found in nature; others are made by people.
Wood can be held together with glue.

Interdisciplinary Connections

Language:

Use science journals.
Make a class book.

Math:

Seriate a set of boxes.
Pair boxes.
Make new boxes.

Science Extensions:

Maintain a workbench.
Take paper tubes apart.
Continue the paper-construction center.

Make a bulletin-board wood collage.

Art:

Finish the sculptures.

Social Studies:

Visit a post office.

Set up a classroom post office.

- Module

Fabric

Investigation

Investigation 1: Fabric All Around

OCDEL Standards

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.1.K.A9:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
- Use simple equipment (tools and other technologies) to gather data and understand that this allows scientists to collect more information than relying only on their senses to gather information.
- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.
- Communicate procedures and explanations giving priority to evidence and understanding that scientists make their results public, describe their investigations so they can be

Vocabulary

Cloth

Fabric

Nubby

Rough

Scratchy

Shiny

Slippery

Smooth

Soft

Burlap

Corduroy

Denim

Fleece

Knit

Ripstop

Nylon

Satin

Seesucker

Sparkle

Organza

Terry Cloth

Collage

Color

Pattern

Plaid

Print

Shape

Stripe

Thick

Thin

Thread

Warp

Woof

Woven

Alternate

Cardboard

Fringe

Open Weave

Over

Tight Weave

Under

Weaving

Yarn

Needle

Overcast Stitch

Sew

Content

Fabrics have observable properties.

Fabrics can be comparable and sorted by their properties.

Fabrics are made from different materials.

Fabric is used for many things in our everyday lives.

Many fabrics are made by weaving threads together.

Scientists communicate problems, designs and solutions.

Sewing is the process that weaves thread through more than one piece of fabric to join them.

Interdisciplinary Connections

Language Connections:

Communicate through science journals.

Make word and fabric cards.

Math Extensions:

Count seams.

- Module

Fabric

Investigation

Investigation 2: Fabric Interactions

OCDEL Standards

15.1: Constructing Knowledge

15.2: Organizing and Understanding Knowledge

15.4: Learning Through Experience

Common Core Standards

3.1.K.A9:

- Distinguish between scientific fact and opinion.
- Ask questions about objects, organisms, and events.
- Understand that all scientific investigations involve asking and answering questions and comparing the answer with what is already known.
- Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.
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Vocabulary

Absorb
Bead
Bulb
Dropper
Least
Most
Soak
Spread
Waterproof
Clean
Detergent
Dirty
Laundry
Muslin
Scrub
Brush
Soap
Stain
Blue
Dye
Green
Orange
Permanent
Purple
Red
Yellow
Absorbent
Property
See Through

Sturdy

Use

Content

Some fabrics absorb water and others repel it.

Fabrics can be compared by their properties.

Some fabric stains can be cleaned by washing.

Cleaning fabric with soap and a scrub brush is better than using water only.

Scientists communicate solutions and problems.

Fabric can be permanently dyed a wide variety of colors.

Different properties of fabrics make them useful for different purposes.

Interdisciplinary Connections

Language Extensions:

Record investigations in science journals.

Make a quilt.

Make a class book.

Math Extensions:

Make colorful caps.

Make small pattern quilts.

Art Extensions:

Simulate yarn-dye and piece-dye techniques.

Make a tooth-fairy pillow.

Tie-dye T-shirts.

Mix colors.

Try a modified batik.

Science Extension:

Take a field trip.

