

Grade: 1 Subject: Science	Unit of Study: Organisms
Big Idea/Rationale	<p>Students will investigate a variety of organisms to help determine that organisms have certain basic needs in common, such as food and water. In addition, they learn that organisms have certain needs that are specific to the type of organisms - such as type of water, range of temperature, and type of food. In observing and taking care of a number of different plants and animals, students begin to develop positive attitudes and a sensitivity towards living things.</p>
Enduring Understanding (Mastery Objective)	<ul style="list-style-type: none"> • We use our senses to observe the world around us • Organisms have basic needs, such as food, water, air, space, and shelter. • Each type of organism has specific needs, such as type of food, amount of water, amount of light, amount of space, and type of shelter • There is a wide diversity of living things on earth. • Organisms grow, change, and die over time. • Some plants have similarities, such as the ability to grow and the need for water, light, space, and air. • Animals have similarities, such as the ability to move and the need for food, water, space, and shelter. • Plants and animals have similarities, such as basic needs, ability to grow and change, and death. • Humans are similar to other organisms. Humans have basic needs and also grow, change and die.
Essential Questions (Instructional Objective)	<ul style="list-style-type: none"> • How are plants and animals alike? How are they different? • What do living organisms need to survive? How do humans compare to plants and animals? How are they the same and different?
Content (Subject Matter)	<ul style="list-style-type: none"> • Observing and describing the characteristics of seeds and plants. • Planting seeds and observing and recording their growth. • Observing and describing the characteristics of a variety of plants and animals in woodland and freshwater environments. • Recording observations in words and drawings. • Making comparisons among a variety of plants and animals. • Communicating ideas through writing, drawing, and discussion. • Reading to enhance understanding of the basic needs of organisms and the diversity of life. • Applying what students know about plants and animals to what students know about themselves. • Maintaining plants and animals outside their natural environments. • Developing an interest in exploring the characteristics of plants and animals. • Gaining an awareness of the diversity of life.

	<ul style="list-style-type: none"> • Developing positive attitudes toward different forms of life. • Developing awareness that humans are similar to other living things. • Developing sensitivity to the needs of living things.
Skills/ Benchmarks (CCSS Standards)	<ul style="list-style-type: none"> • 5.2.2A.1: Sort and describe objects based on the materials of which they are made and their physical properties. • 5.3.2.A.1: Group living and nonliving things according to the characteristics that they share. • 5.3.2B.1: Describe the requirements for the care of plants and animals related to meeting their energy needs. • 5.3.2.B.2: Compare how different animals obtain food and water. • 5.3.2.B.3: Explain that most plants get water from soil through their roots and gather light through their leaves. • 5.3.2.C.1: Describe the ways in which organisms interact with each other and their habitats in order to meet basic needs. • 5.3.2.C.2: Identify the characteristics of a habitat that enable the habitat to support the growth of many different plants and animals. • 5.3.2.C.3: Communicate ways that humans protect habitats and/or improve conditions for the growth of the plants and animals that live there, or ways that humans might harm habitats. • 5.3.2.D.2: Determine the characteristic changes that occur during the life cycle of plants and animals by examining a variety of species, and distinguish between growth and development. • 5.3.2.E.1: Model an adaptation to a species that would increase its chances of survival, should the environment become wetter, dryer, warmer, or colder over time. • 5.3.2.E.2: Evaluate similar populations in an ecosystem with regard to their ability to thrive and grow. • 5.4.2.G.3: Identify and categorize the basic needs of living organisms as they relate to the environment.
Materials and Resources	<p>Lesson 1 – Sharing What We Know about Organisms</p> <ul style="list-style-type: none"> • Paper and crayons <p>Lesson 2 – Observing and Describing Seeds</p> <ul style="list-style-type: none"> • For each group of students: 1 copy of observing and describing seeds (black line master p 32), hand lens, 4 different seeds (kidney bean, pea, sunflower & pumpkin), 1 copy of the five senses (black line master p 33), <p>Lesson 3 – Planting our Seeds</p> <ul style="list-style-type: none"> • For each student: Planting cards 1 & 3 (black line masters page 45 & 46), planting card 2 (black line master 47-48), clear planter cup, 3 seeds of the same kind, plastic spoon, pail containing moistened soil), adhesive dots <p>Lesson 4 – Observing Woodland Plants</p> <ul style="list-style-type: none"> • For each student: Record sheet 4-A Observing Woodland plants, Record

sheet 4-B Woodland picture, hand lens, For each group of students: 1 moss mat, 1 tree seedling, 1 woodland terrarium, 1 terrarium holding container per group, gravel, china markers, misters, leaf litter, small rocks and twigs.

Lesson 5 – Observing Freshwater Plants

- For each student: Record sheet 5-A Observing Freshwater Plants & 5-B Freshwater picture, hand lens,
- For each group: Elodea plant, Cabomba plant, freshwater aquarium
- For the class: Holding pails for elodea and Cabomba, gravel, china marker, aquariums, water

Lesson 6 – How Have Our Seeds Changed?

- For each student: hand lens, students plant from seeds, Planting card 2 & 3 , Talking my plant home (black line master p 86)

Lesson 7 – Observing Freshwater Snails

- Hand lenses, aquariums,
- For each group: snails in cups to observe them

Lesson 8 – Observing Guppies: How do They Compare with the Snails?

- For each group: aquarium, observing cup 1 for male and 1 for female, fish food, holding tank, nets

Lesson 9 – Observing Pill Bugs

- For each student: Observing Woodland Animals sheet (9-A)
- For each group: observing cups containing leafs and soil, pill bugs, lids for cups, woodland terrarium, freen leaves (lettuce).

Lesson 10 – Observing Bess Beetles or Millipedes: How Do They Compare with the Pill Bugs?

- For each student: hand lens, plastic gloves
- For each group: plastic cup with leaf litter and Bess beetle or millipede, wood chuck (for Bess beetle only), cup with lid.
- For the class: holding tank, Venn diagram, lettuce or mushrooms (for millipedes only).

Lesson 11 – What’s Happening in the Aquarium?

- For each student: Freshwater picture (5-B from lesson 5), hand lens
- For each group: freshwater aquarium

Lesson 12 – What’s happening in the Terrarium?

- For each student: Woodland picture (4-B), hand lens
- For each group: woodland terrarium

Lesson 13 – Freshwater and Woodland Plants: How Do They Compare?

- For each student: hand lens, 1 copy of the reading selection “Four Amazing Plants” (Backline master Page 155-159),
- For each group: freshwater aquarium, woodland terrarium, post its

Lesson 14 – Freshwater and Woodland Animals: How Do They Compare?

- For each group: Hand lenses, freshwater aquarium, woodland terrarium

Lesson 15 – How Are Our Plants and Animals Alike and Different?

- For each student: hand lens, scissors, cutout page (page 179),

	<ul style="list-style-type: none">• For each group: Comparing animals (black line page 180), woodland terrarium. <p>Lesson 16 – Taking a Look at Ourselves</p> <ul style="list-style-type: none">• For each student: hand lens• For each group: Ways Animals and Plants are alike (black line master p 189), Comparing Humans with Other Animals and Plants (Blackline master p 190).• For the class: Plant/animal Venn diagram, Needs of Plants and Animals (from lesson 15) <p>Life cycle of a butterfly – Chart paper, larva, butterfly pavilion, flowers, sugar water.</p>
Notes	