# Pre-K 2020 Unit #8: Science - Nature All Around Us (PK)

Content Area: **Science**
Course(s): **Pre K**
Time Period: **Marking Period 4**
Length: **4 weeks**
Status: **Published**

## Established Goals/Standards

Please choose the appropriate Goals/Standards from the Standards tab above.

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| SCI.PK.5.1.1 | Display curiosity about science objects, materials, activities, and longer-term investigations in progress (e.g., ask who, what, when, where, why, and how questions during sensory explorations, experimentation, and focused inquiry). |
| SCI.PK.5.1.2 | Observe, question, predict, and investigate materials, objects, and phenomena during classroom activities indoors and outdoors and during any longer-term investigations in progress. Seek answers to questions and test predictions using simple experiments or research media (e.g., cracking a nut to look inside; putting a toy car in water to determine whether it sinks). |
| SCI.PK.5.1.3 | Use basic science terms (e.g., observe, predict, experiment) and topic-related science vocabulary (e.g., words related to living things [fur, fins, feathers, beak, bark, trunk, stem]; weather terms [breezy, mild, cloudy, hurricane, shower, temperature]; vocabulary related to simple machines [wheel, pulley, lever, screw, inclined plane]; words for states of matter [solid, liquid]; names of basic tools [hammer, screwdriver, awl, binoculars, stethoscope, magnifier]). |
| SCI.PK.5.1.4 | Communicate with other children and adults to share observations, pursue questions, make predictions, and/or conclusions. |
| SCI.PK.5.1.5 | Represent observations and work through drawing, recording data, and “writing” (e.g., drawing and “writing” on observation clipboards, making rubbings, charting the growth of plants). |
| SCI.PK.5.2.2 | Explore changes in liquids and solids when substances are combined, heated, or cooled (e.g., mixing sand or clay with various amounts of water; preparing gelatin; mixing different colors of tempera paint; and longer term investigations, such as the freezing and melting of water and other liquids). |
| SCI.PK.5.2.3 | Investigate sound, heat, and light energy through one or more of the senses (e.g., comparing the pitch and volume of sounds made by commercially made and homemade instruments, recording how shadows change during the course of a day or over time, using flashlights or lamp light to make shadows indoors). |
| SCI.PK.5.3.1 | Investigate and compare the basic physical characteristics of plants, humans, and other animals (e.g., observing and discussing leaves, stems, roots, body parts; observing and drawing different insects; sorting leaves by shape; comparing animals with fur to those with feathers). |
| SCI.PK.5.3.2 | Observe similarities and differences in the needs of living things, and differences between living and nonliving things (e.g., observing and discussing similarities between animal babies and their parents; discussing the differences between a living thing, such as a hermit crab, and a nonliving thing, such as a shell). |
| SCI.PK.5.3.3 | Observe and describe how natural habitats provide for the basic needs of plants and animals with respect to shelter, food, water, air, and light (e.g., digging outside in the soil to investigate the kinds of animal life that live in and around the ground or replicating a natural habitat in a classroom terrarium). |

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| SCI.PK.5.4 | Children observe and investigate the Earth. |
| SCI.PK.5.4.1 | Explore and describe characteristics of soil, rocks, water, and air (e.g., sorting rocks by shape and/or color, observing water as a solid and a liquid, noticing the wind's effect on playground objects). |
| SCI.PK.5.4.2 | Explore the effects of sunlight on living and nonliving things (e.g., growing plants with and without sunlight, investigating shadows that occur when the sun's light is blocked by objects). |
| SCI.PK.5.4.3 | Observe and record weather (e.g., chart temperatures throughout the seasons or represent levels of wind by waving scarves outdoors). |
| SCI.PK.5.4.4 | Demonstrate emergent awareness of the need for conservation, recycling, and respect for the environment (e.g., turning off water faucets, collecting empty yogurt cups for reuse as paint containers, separating materials in recycling bins, re-using clean paper goods for classroom collage and sculpture projects). |
| SCI.PK.5.1.1 | Display curiosity about science objects, materials, activities, and longer-term investigations in progress (e.g., ask who, what, when, where, why, and how questions during sensory explorations, experimentation, and focused inquiry). |
| SCI.PK.5.1.2 | Observe, question, predict, and investigate materials, objects, and phenomena during classroom activities indoors and outdoors and during any longer-term investigations in progress. Seek answers to questions and test predictions using simple experiments or research media (e.g., cracking a nut to look inside; putting a toy car in water to determine whether it sinks). |
| SCI.PK.5.1.3 | Use basic science terms (e.g., observe, predict, experiment) and topic-related science vocabulary (e.g., words related to living things [fur, fins, feathers, beak, bark, trunk, stem]; weather terms [breezy, mild, cloudy, hurricane, shower, temperature]; vocabulary related to simple machines [wheel, pulley, lever, screw, inclined plane]; words for states of matter [solid, liquid]; names of basic tools [hammer, screwdriver, awl, binoculars, stethoscope, magnifier]). |
| SCI.PK.5.1.4 | Communicate with other children and adults to share observations, pursue questions, make predictions, and/or conclusions. |
| SCI.PK.5.1.5 | Represent observations and work through drawing, recording data, and "writing" (e.g., drawing and "writing" on observation clipboards, making rubbings, charting the growth of plants). |
| SCI.PK.5.2.2 | Explore changes in liquids and solids when substances are combined, heated, or cooled (e.g., mixing sand or clay with various amounts of water; preparing gelatin; mixing different colors of tempera paint; and longer term investigations, such as the freezing and melting of water and other liquids). |
| SCI.PK.5.2.3 | Investigate sound, heat, and light energy through one or more of the senses (e.g., comparing the pitch and volume of sounds made by commercially made and homemade instruments, recording how shadows change during the course of a day or over time, using flashlights or lamp light to make shadows indoors). |
| SCI.PK.5.3.1 | Investigate and compare the basic physical characteristics of plants, humans, and other animals (e.g., observing and discussing leaves, stems, roots, body parts; observing and drawing different insects; sorting leaves by shape; comparing animals with fur to those with feathers). |
| SCI.PK.5.3.2 | Observe similarities and differences in the needs of living things, and differences between living and nonliving things (e.g., observing and discussing similarities between animal babies and their parents; discussing the differences between a living thing, such as a hermit crab, and a nonliving thing, such as a shell). |
| SCI.PK.5.3.3 | Observe and describe how natural habitats provide for the basic needs of plants and animals with respect to shelter, food, water, air, and light (e.g., digging outside in the soil to investigate the kinds of animal life that live in and around the ground or replicating a |

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| | natural habitat in a classroom terrarium). |
| SCI.PK.5.3.4 | Observe and record change over time and cycles of change that affect living things (e.g., monitoring the life cycle of a plant, using children's baby photographs to discuss human change and growth, using unit blocks to record the height of classroom plants). |
| SCI.PK.5.4.1 | Explore and describe characteristics of soil, rocks, water, and air (e.g., sorting rocks by shape and/or color, observing water as a solid and a liquid, noticing the wind's effect on playground objects). |
| SCI.PK.5.4.2 | Explore the effects of sunlight on living and nonliving things (e.g., growing plants with and without sunlight, investigating shadows that occur when the sun's light is blocked by objects). |
| SCI.PK.5.4.3 | Observe and record weather (e.g., chart temperatures throughout the seasons or represent levels of wind by waving scarves outdoors). |
| SCI.PK.5.5.1 | Identify and use basic tools and technology to extend exploration in conjunction with science investigations (e.g., writing, drawing, and painting utensils, scissors, staplers, magnifiers, balance scales, ramps, pulleys, hammers, screwdrivers, sieves, tubing, binoculars, whisks, measuring cups, appropriate computer software and website information, video and audio recordings, digital cameras, tape recorders). |

## Essential Questions

Please add your Essential Questions by clicking on the Lists tab above.

- What are the characteristics of the four seasons?
- What are the different types of weather?
- What are the four seasons?
- What are the parts of a plant?
- What is a shadow?

## Enduring Understanding

Please add your Enduring Understandings by clicking on the Lists tab above.

- A shadow is light from the sun that is blocked
- The different types of weather are sunshine, rain, snow, wind and clouds.
- The four seasons are winter, spring, summer and fall
- The parts of a plant are the roots, stem, leaf, petals and seeds.
- Winter is cold, summer is hot, fall is cool and spring is warm.

## Content

Students will be able to:

- Understand basic needs
- Investigate materials
- Make scientific predictions
- Learn the plant life cycle

- Explore living things
- Observe the sky
- Observe changes in the Earth and sky
- Practice safety habits
- Investigate energy
- Organize information
- Test observations
- Observe the seasons
- Explore changes
- Share scientific information
- Investigate the environment

Vocabulary:

- leaves
- roots
- seedling
- soil
- stem
- shadow
- sun
- wind
- energy
- hibernate

## Resources

- Science Poster (13,14)
- Growing Vegetable Soup by Lois Ehert
- What the Sun/Moon Sees by Nancy Tafuri
- Weather by Pamela Chanko
- What Makes the Seasons? by Megan Montague Cash