Unit 1: Living Things

Content Area: **Science**
Course(s):
Time Period: **Full Year**
Length: **September-November**
Status: **Published**

Unit Overview

Students will learn about living things and how they survive all around us. Students will be able to observe and predict during investigations. Science practices are integrated into the Cumulative Progress Indicated within each science domain in recognition that science content and processes are inextricably linked; science is a body of knowledge and an evidence-based, model building enterprise that continually extends, refines, and revises knowledge.

Students will display curiosity while observing, predicting and investigating materials and objects. Students will use basic science terms during investigations about living things.

Enduring Understandings

- A living thing needs air, food, and water.
- Three living things are people, animals, and plants.

Essential Questions

- What are the characteristics of a living thing?
- What are three living things?

Learning Objectives

- Identify living things (plants, animals, people) and nonliving things in their environment.
- Describe basic characteristics of living things (they grow, need food and water, and can change).
- Use their senses to observe living things closely.
- Share observations using words, drawings, or gestures.
- Ask questions about plants and animals.

- Identify what living things need to survive (food, water, air, sunlight, and care).
- Demonstrate ways to care for living things (watering plants, gentle handling of animals).
- Observe and describe how living things grow and change over time.
- Use simple time-order words (first, next, last) to talk about growth.
- Sort objects into living and nonliving categories with guidance.
- Compare similarities and differences among living things (big/small, fast/slow, plant/animal).
- Use new vocabulary related to living things (grow, plant, animal, habitat).
- Listen to and respond to stories and informational texts about living things.
- Participate in discussions, songs, and rhymes about plants and animals.
- I can tell what is living and not living.
- I can use my senses to explore plants and animals.
- I can help take care of living things.
- I can talk about how living things grow.

Standards: Content

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).
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).
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]).
5.1.4	Communicate with other children and adults to share observations, pursue questions, make predictions, and/or conclusions.
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).
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).
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).
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).
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).

Standards: Interdisciplinary

0.1.1	Express individuality by making independent decisions about which materials to use.
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).
0.1.2	Express ideas for activities and initiate discussions.
0.1.3	Actively engage in activities and interactions with teachers and peers.
5.1.4	Communicate with other children and adults to share observations, pursue questions, make predictions, and/or conclusions.
0.1.4	Discuss their own actions and efforts.
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).
0.2.1	Make independent choices and plans from a broad range of diverse interest centers.
5.2.1	Observe, manipulate, sort, and describe objects and materials (e.g., water, sand, clay, paint, glue, various types of blocks, collections of objects, simple household items that can be taken apart, or objects made of wood, metal, or cloth) in the classroom and outdoor environment based on size, shape, color, texture, and weight.
0.2.2	Demonstrate self-help skills (e.g., clean up, pour juice, use soap when washing hands, put away belongings).
0.2.3	Move through classroom routines and activities with minimal teacher direction and transition easily from one activity to the next.
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).
0.2.4	Attend to tasks for a period of time.
0.3.1	Recognize and describe a wide range of feelings, including sadness, anger, fear, and

	happiness.
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).
0.3.2	Empathize with feelings of others (e.g., get a blanket for a friend and comfort him/her when he/she feels sad).
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).
0.3.3	Channel impulses and negative feelings, such as anger (e.g., taking three deep breaths, using calming words, pulling self out of play to go to “safe spot” to relax, expressive activities).
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).
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).
0.4.1	Engage appropriately with peers and teachers in classroom activities.
0.4.2	Demonstrate socially acceptable behavior for teachers and peers (e.g., give hugs, get a tissue, sit next to a friend/teacher, hold hands).
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).
0.4.4	Respect the rights of others (e.g., “This painting belongs to Carlos.”).
0.4.5	Express needs verbally or nonverbally to teacher and peers without being aggressive (e.g., “I don’t like it when you call me dummy. Stop!”).
0.4.6	Demonstrate verbal or nonverbal problem-solving skills without being aggressive (e.g., talk about a problem and related feelings and negotiate solutions).
0.5.1	Play independently and cooperatively in pairs and small groups.
0.5.2	Engage in pretend play.
0.5.3	Demonstrate how to enter into play when a group of children are already involved in play.
0.5.4	Take turns.
0.5.5	Demonstrate understanding the concept of sharing by attempting to share.
SL.PK.5	Use drawings or visual displays to add to descriptions to provide additional detail.
SL.PK.6	With guidance and support, speak audibly and express thoughts, feelings, and ideas.
L.PK.1.a	Print many alphabet letters.
L.PK.1.b	Use frequently occurring nouns and verbs.
L.PK.1.c	Form regular plural nouns.
L.PK.1.d	Understand and use question words (e.g., who, what, where, when, why, how).
L.PK.1.e	Use frequently occurring prepositions (e.g., to, from, in, out, on, off, for, by, with).
L.PK.1.f	Begin to speak in complete sentences.
L.PK.1.g	Understands and can follow simple multi-step directions.

L.PK.2.c	Attempt to write a letter or letters by using scribble-writing, letter-like forms, letter-strings, and invented spelling during writing activities throughout the day.
L.PK.4	Begin to determine the meaning of new words and phrases introduced through preschool reading and content.

Assessment Evidence

Formative	• Student participation • Whole group instruction/discussion • Small group instruction/discussion • Completed projects • Classroom Observations • Question and answer • Completed classwork
Summative	● Work samples and portfolios ● Unit Projects ● Student photographs and video clips
Alternative & Benchmark	● Work samples and portfolios ● Unit Projects ● Student photographs and video clips
Assessment Evidence Resource	

Instructional Resources

Instructional Resource List

Curricular Mandates

Below are the curricular requirements as defined in NJ Administrative Code and Statute

	Amistad		Diversity, Equity, and Inclusion
	Holocaust		LGBT and Disabilities (Grades 6-12)
X	Climate Change		Asian American & Pacific Islander

Social Emotional Learning (SEL) Competencies

NJ Social and Emotional Learning Competencies & Sub-Competencies

	Self-Awareness	X	Relationship Skills

X	Responsible Decision-Making	X	Social Awareness
X	Self-Management		

21st Century Skills & Themes

X	Global and Cultural Awareness		Technology Literacy		Planning and Budgeting
X	Creativity and Innovation		Financial Institutions		Risk Management and Insurance
	Information and Media Literacy		Digital Citizenship		Economic and Government Influences
X	Critical Thinking and Problem Solving		Credit Profile		Career Awareness and Planning
	Civic Financial Responsibility		Financial Psychology		