

**Randolph Township School District
Randolph Elementary Schools**

**Science Curriculum
Kindergarten**

*“Wisdom begins in wonder.”
-Socrates*

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**Randolph Township School District
Randolph Elementary Schools
Kindergarten- Science**

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Mission Statement

We commit to inspiring and empowering all students in Randolph schools to reach their full potential as unique, responsible and educated members of a global society.

Randolph Township School District Affirmative Action Statement

Equality and Equity in Curriculum

The Randolph Township School district ensures that the district's curriculum and instruction are aligned to the state's standards. The curriculum provides equity in instruction, educational programs and provides all students the opportunity to interact positively with others regardless of race, creed, color, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, religion, disability or socioeconomic status.

N.J.A.C. 6A:7-1.7(b): Section 504, Rehabilitation Act of 1973; N.J.S.A. 10:5; Title IX, Education Amendments of 1972

RANDOLPH TOWNSHIP BOARD OF EDUCATION

EDUCATIONAL GOALS

VALUES IN EDUCATION

The statements represent the beliefs and values regarding our educational system. Education is the key to self-actualization, which is realized through achievement and self-respect. We believe our entire system must not only represent these values, but also demonstrate them in all that we do as a school system.

We believe:

- The needs of the child come first
- Mutual respect and trust are the cornerstones of a learning community
- The learning community consists of students, educators, parents, administrators, educational support personnel, the community and Board of Education members
- A successful learning community communicates honestly and openly in a non-threatening environment
- Members of our learning community have different needs at different times. There is openness to the challenge of meeting those needs in professional and supportive ways
- Assessment of professionals (i.e., educators, administrators and educational support personnel) is a dynamic process that requires review and revision based on evolving research, practices and experiences
- Development of desired capabilities comes in stages and is achieved through hard work, reflection and ongoing growth

**Randolph Township School District
Randolph Elementary Schools
Science~ Kindergarten**

Introduction

The wonder of science for Kindergarten students lies in the beauty of their interactions with the world around them. Their innate and intuitive curiosity is further developed through the inquiry process in the Kindergarten curriculum. It is designed to put the students at the center of the instruction. Students will be guided through the curriculum by inquiry and exploration. The curriculum encompasses Crosscutting Concepts, Disciplinary Core Ideas, and Science and Engineering Practices from the NJSL-S standards. Through developmentally appropriate practices, Kindergarten students are given the opportunity for hands-on, authentic, organic learning experiences, which empower problem solving skills and engage them in rigorous and high interest content. Students grow from investigators and explorers into engineers and problem solvers, fostering a profound love of science and nurturing a devotion to lifelong learning.

RANDOLPH TOWNSHIP SCHOOL DISTRICT

**Curriculum Pacing Chart
Kindergarten Science Curriculum**

SUGGESTED TIME ALLOTMENT	UNIT NUMBER	CONTENT- UNIT OF STUDY
4 Weeks	I	Whistle While You Work: Engineering
6 Weeks	II	Mr. Golden Sun: Weather
4 Weeks	III	I Like to Move it Move it: Forces and Motion
6 Weeks	III	The Circle of Life: Plants and Animals

RANDOLPH TOWNSHIP SCHOOL DISTRICT

Science ~ Kindergarten

UNIT I: Whistle While You Work: Engineering

TRANSFER: Implement the design process to solve a problem.		
STANDARDS / GOALS: NJSLS-S K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
	Engineers question, observe, and gather information to make a new or improved object or tool.	<ul style="list-style-type: none"> • What can we create or improve upon to make our daily lives function easier?
	Engineers sketch, draw, create, and model to solve a problem.	<ul style="list-style-type: none"> • How can we use a design process?
	KNOWLEDGE	SKILLS
	<p>Students will know:</p> <p>A situation that people want to change or create can be approached as a problem to be solved through engineering.</p> <p>Asking questions, making observations, and gathering information is helpful in researching a problem.</p>	<p>Students will be able to:</p> <p>Ask questions based on observations to find more information about the natural and/or designed world.</p> <p>Define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>Conduct research about a problem.</p>

<p>ELA: RI.2.1 W.2.6 W.2.8 SL.2.5</p> <p>MATHEMATICS: MP.2 MP.4 MP.5 2.MD.D.10</p> <p>TECHNOLOGY 8.1.2.E.1 8.2.2.A.5 8.2.2.C.1 8.2.2.C.3 8.2.2.C.4 8.2.2.C.5 8.2.2.D.1 8.2.2.D.3 8.2.2.D.4</p> <p>KEY TERMS: problem, solution, engineer, technology, design process, model, trial</p>	<p>Before beginning to design a solution, it is important to clearly understand the problem.</p> <p>The role of an engineer is to design a solution to a given problem.</p> <p>The design process (define, research, brainstorm solutions, select a solution, test, redesign if needed) can be used to solve a problem.</p>	<p>Develop a simple model based on evidence to represent a proposed object or tool.</p> <p>Collaborate twith peers to share data collected.</p> <p>Analyze data from test of an object or tool to determine if it works as intended.</p> <p>Use observations and questions to identify engineers as workers who find solutions to problems.</p> <p>Analyze situations to solve a problem.</p> <p>Ask questions, make observations, and gather information helpful in thinking about a problem.</p> <p>Compare and test design solutions to a problem.</p> <p>Sketch and model to communicate a solution to a problem.</p>
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	<p>Students will know:</p> <p>A situation that people want to change or create can be approached as a problem to be solved through engineering.</p> <p>To ask questions, make observations, and gather information that is helpful in thinking about problems.</p> <p>Before beginning to design a solution, it is important to clearly understand the problem.</p> <p>The role of an engineer is to design a solution to a given problem.</p> <p>The design process (define, research, brainstorm solutions, select a solution, test, redesign if needed) can be used to solve a problem.</p>	<p>Students will be able to:</p> <p>Ask questions based on observations to find more information about the natural and/or designed world.</p> <p>Define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>Develop a simple model based on evidence to represent a proposed object or tool.</p> <p>Analyze data from test of an object or tool to determine if it works as intended.</p> <p>Collaborate with peers to share data collected.</p> <p>Use observations and questions to identify engineers as workers who find solutions to problems.</p> <p>Analyze situations to solve a problem.</p> <p>Ask questions, make observations, and gather information helpful in thinking about a problem.</p> <p>Compare and test design solutions to a problem.</p>
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	<p>KEY TERMS: problem, solution, engineer, technology, design process, model, trial</p>	<p>Sketch and model to communicate a solution to a problem.</p>
<p>ASSESSMENT EVIDENCE: Students will show their learning by:</p> <ul style="list-style-type: none"> ● Creating, designing, and producing a solution to a problem. (ie. new toy to play with) ● Inquiring about a proposed phenomenon, explore to justify the happening (unit launch, engineering wonder board, facilitate inquiry using pictures/videos) <p>KEY LEARNING EVENTS AND INSTRUCTION:</p> <ul style="list-style-type: none"> ● Develop an organizational system (ie. school supplies) ● Use the design process to engineer a tool to hold an object (ie. paper tower) ● Design a tool to solve a problem (ie. reaching under the couch) ● Use purposeful parts to aid in the development of tools to solve a problem ● Test and modify designs to alter the outcome of a trial when solving a problem ● Review the engineering design process ● Develop a classroom ‘wonder board’ 		

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Science ~ Kindergarten
UNIT I: Whistle While You Work: Engineering

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
4 Weeks	UNIT I: Whistle While You Work: Engineering	<p><u>Suggested Resources</u></p> <p>Science Dimensions Unit 1 Project- Design a Coin Sorter Teach lesson 1 and 2 Performance Task Unit 1 Review</p> <p>Safari Montage (Use video chapters as needed) Sid the Science Kid: Sid Engineers a Solution Puppet Engineering The Magic School Bus: Revving up Sid the Science Kid: I want to be a scientist All About Simple Machines</p> <p>Brainpop Simple Machines</p> <p>Literary Resources <i>Fun with Simple Machines</i> by E. Tarlow <i>What Do Wheels Do All Day?</i> By A. Jones Prince</p> <p>Pinterest 50 Genius Stem Activities for Kids</p>

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Science ~ Kindergarten
UNIT II: Mr. Golden Sun: Weather

TRANSFER: Demonstrate the effects that weather has on life and life systems.		
STANDARDS / GOALS:	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
<p><u>NJSLS-S</u></p> <p>K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.</p> <p>K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.</p> <p>K-PS3-1 Make observations to determine the effect of sunlight Earth's surface.</p> <p>K-PS3-2 Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.</p>	The weather system has measureable properties that work together.	<ul style="list-style-type: none"> ● Why does the weather change?
	Weather has observable patterns.	<ul style="list-style-type: none"> ● How can we observe weather patterns? ● Why do we need a weather forecast?
	The sun's warmth has observable effects on the Earth's surface.	<ul style="list-style-type: none"> ● How does the sun change the Earth?
	KNOWLEDGE	SKILLS
	<p>Students will know:</p> <p>Weather is a combination of sunlight, wind, snow, rain, and temperature in a particular region at a particular time.</p>	<p>Students will be able to:</p> <p>Observe and analyze weather patterns.</p> <p>Synthesize weather over time to identify patterns.</p>

<p>K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <p>ELA W.K.7 W.K.2 RI.K.2 RI.K.7 RI.K.8 RI.K.9 RI.K.10</p> <p>MATHEMATICS MP.2 MP.4 K.CC.A.2 K.CC.C.7 K.MD.B</p> <p>TECHNOLOGY 8.1.2.E.1 8.2.2.A.5</p>	<p>Meteorologists measure weather conditions to describe and record the weather and to notice patterns overtime.</p> <p>Sunlight warms Earth’s surfaces.</p> <p>Some kinds of severe weather are more likely than others in a given region.</p> <p>Weather scientists (meteorologists) forecast severe weather so that communities can prepare for and respond to these events.</p> <p>Weather alerts (alarms, sirens, cell phone alerts) prepare communities for extreme weather.</p> <p>Weather and temperature change based on the seasons of the year.</p> <p>Weather changes from day to day.</p> <p>Scientists use tools to measure different types of weather.</p>	<p>Collect and record weather related data.</p> <p>Compare data to identify a pattern.</p> <p>Describe patterns in the natural world in order to answer scientific questions related to weather patterns.</p> <p>Use tools to measure and track temperature.</p> <p>Develop a solution to minimize harmful effects of the sun.</p> <p>Ask questions based on observations to identify more information about severe weather.</p> <p>Determine the characteristic of a severe weather system.</p> <p>Identify and understand the effects of severe and hazardous weather.</p> <p>Understand necessary preparation for severe weather.</p> <p>Observe and describe seasons based on pictures of weather.</p> <p>Classify types of weather based on properties.</p> <p>Identify properties of gradual weather change.</p> <p>Determine the temperature on a given day.</p>
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<p>8.2.2.C.1 8.2.2.C.3 8.2.2.C.4 8.2.2.C.5 8.2.2.D.1 8.2.2.D.3 8.2.2.D.4</p>	<p>Meteorologists use weather maps to show and report the weather in different places.</p> <p>KEY TERMS: weather, weather systems, severe weather, hazardous weather, cloudy, sunny, rainy, windy, snowy, blizzard, thunderstorm, thunder, lightning, hurricane, tornado, dust storm, winter, spring, summer, fall, temperature, thermometer, windsock, wind gage, wind vane, rain gage, siren, pattern, graph, data, forecast, predict, light, heat, sun</p>	<p>Create a tool to determine wind direction and speed.</p> <p>Recognize that weather changes by region.</p> <p>Identify what is included in a weather forecast (temperature, wind, precipitation).</p> <p>Plan and describe appropriate attire based on the weather.</p>
<p>ASSESSMENT EVIDENCE: Students will show their learning by:</p> <ul style="list-style-type: none"> ● Creating and designing a system to share forecasts on a specific region ● Gathering information to create and share a weather forecast ● Analyzing and answering a proposed phenomenon related to the effects of severe weather <p>KEY LEARNING EVENTS AND INSTRUCTION:</p> <ul style="list-style-type: none"> ● Explore the career of a meteorologist ● Identify and label types of weather ● Identify and create tools that are used to predict weather ● Measuring weather with tools ● Observe the effects on the sun (the sun’s heat- hands on activity) ● Design a shade system ● Create a weather graph tracking daily weather over a period of time 		

- Identify a pattern in weather and predict the forecast
- Refer to online weather forecasts to compare weather patterns
- Explore models to identify patterns of severe weather (i.e. using a paper bag)
- Plan for severe weather (i.e. explore safety and effects on life)

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Science ~ Kindergarten
UNIT II: Mr. Golden Sun: Weather

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
6 Weeks	UNIT II: Mr. Golden Sun: Weather	<p><u>Suggested Resources</u></p> <p>Science Dimensions Unit 4 Unit Project Unit 4- Teach lessons 1 and 2 Unit 4 Performance Task Unit 5 Unit Project Unit 5- Teach Lessons 1, 2, 3 and 4 Unit 5 Performance Task Unit 5 Review</p> <p>Safari Montage (Use video chapters as needed) Powerful Weather What is Weather Primary Geography: Writing about the weather, place and people Martha Speaks: Martha the Weather Dog All About Climate and Seasons It's Cold Outside It's Hot Outside It's Raining Outside Air and Wind The Magic School Bus: Kicks up a Storm</p>

		<p>Brainpop Seasons, Winter, Spring, Summer, Fall, Water Cycle, Temperature, Arctic Habitats, Desert, Sun, Forests</p> <p>Literary Resources <i>In the Desert</i> by A. Ives <i>Deserts</i> by J. McCory Martin <i>The Sky</i> by P. Prince <i>Tornados</i> by J. McCory Martin <i>Thunder and Lightning</i> by W. Pfeffer <i>Rain</i> by R. Kalan <i>Rain</i> by M. Dane Bauer <i>Summer Fun</i> by S. Shapiro <i>We Like Summer</i> by W. Blevins <i>Winter</i> by J. Carr <i>Winter is Here</i> by K. Weinberger <i>The Storm</i> by A. Davidson <i>What's the Weather?</i> By J. Cali <i>How do you Know It's Spring</i> by L. Herrington <i>We Need the Sun</i> by Scholastic Inc. <i>Snow Rabbit, Spring Rabbit</i> by I. Sung Na</p> <p>Pinterest How to make a cloud Weather Sensory Bin Exploring Sunography (Making Sun Prints) Tornado in a bottle Rain cloud in a jar Weather prediction chart</p>
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RANDOLPH TOWNSHIP SCHOOL DISTRICT
Science ~ Kindergarten
UNIT III: I Like to Move it, Move it: Forces and Motion

TRANSFER: Change the motion or direction of an object.		
<p>STANDARDS / GOALS:</p> <p><u>NJSLS-S</u></p> <p>K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p> <p>K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.</p> <p>K-PS2-1 Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.</p>	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
	Motion is a combination of pushes and pulls on an object, causing start, stop and variation in speed.	<ul style="list-style-type: none"> • How does motion impact objects?
	Simple tests can be designed to gather evidence to support or refute student ideas about causes.	<ul style="list-style-type: none"> • How can we make and support a claim?
	KNOWLEDGE	SKILLS
	<p>Students will know:</p> <p>Pushes and pulls can have different strengths and directions.</p> <p>Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.</p> <p>When objects touch or collide they push on one another and can change motion.</p>	<p>Students will be able to:</p> <p>Determine the strength and direction of pushes and pulls.</p> <p>Experiment with pushes and pulls to start and stop objects.</p> <p>Change the variables in an experiment to alter the outcome.</p>

<p>K-PS2-2 Analyze data to determine if a design solution works as intended to change the speed or direction of an object.</p> <p>ELA: RI.K.1 W.K.7 SL.K.3</p> <p>Mathematics: MP.2 K.MD.A.1 K.MD.A2</p> <p>TECHNOLOGY 8.1.2.E.1 8.2.2.A.5 8.2.2.C.1 8.2.2.C.3 8.2.2.C.4 8.2.2.C.5 8.2.2.D.1 8.2.2.D.3 8.2.2.D.4</p>	<p>A stronger push or pull makes things speed up or slow down more quickly.</p> <p>Engineers solve problems that have many acceptable solutions.</p> <p>Varied trials can gather data to support or disprove a claim.</p> <p>Object, angles, materials, weights, and shapes affect the motion of an object.</p> <p>A simple problem can be solved through the development of a new or improved object or tool.</p> <p>KEY TERMS: force, motion, choice, argument, ramp, push, pull, problem, solution, speed, variations, trials, repeat, claim, stronger, friction</p>	<p>Design a ramp to test the speed variations of objects.</p> <p>Make and support a claim about a problem they see that needs to be solved.</p> <p>Test claim and make alterations to determine an acceptable solution.</p> <p>Sketch a model to provide the greatest speed of an object.</p> <p>Construct a tool that improves the motion of a push or pull.</p>
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ASSESSMENT EVIDENCE: Students will show their learning by:

- Developing a tool to change the motion of an object. (ie. hockey stick, lever)
- Analyzing and answer a proposed phenomenon related to the relationship between force and motion

KEY LEARNING EVENTS AND INSTRUCTION:

- Draw and design your own model of motion (i.e. rollercoaster, marble run)
- Build and test model to explore the change of direction
- Changing direction and speed of an object with (i.e. bowling maze)
- Perform trials and alter a ramp to make objects speed up or slow down
- Explore the career of scientists and their contribution to force and motion
- Record observations in a journal

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Science ~ Kindergarten
UNIT III: I Like to Move It, Move It: Forces and Motion

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
4 Weeks	UNIT III: I Like to Move It, Move It: Forces and Motion	<p><u>Suggested Resources</u></p> <p>Science Dimensions Unit 2 project Unit 2 lesson 1 and 2 Unit 2 Performance Task</p> <p>Safari Montage (Use video chapters as needed) Sid the Science Kid: Ignatz’s Inertia The Magic School Bus Plays Ball How Elevators Operate How Gears Work Friction</p> <p>Brainpop Magnets Pushes and Pulls</p>

		<p>Sink or Float</p> <p>Literary Resources <i>Habor</i> by D. Crews <i>Freight Train</i> by D. Crews <i>Fun with Simple Machines</i> by E. Tarlow <i>What do Wheels do All Day?</i> by A. Jones Prince <i>Up, Up, and Away</i> by J. Scott</p>
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RANDOLPH TOWNSHIP SCHOOL DISTRICT
Science ~ Kindergarten
UNIT IV: The Circle of Life: Needs of Plants and Animals

TRANSFER: Understand the importance of minimizing human impact on the ecosystem.		
STANDARDS / GOALS:	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
<u>NJSLS-S</u> K-2-ETS1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	Plants and animals require specific environments to survive.	<ul style="list-style-type: none"> • Where do plants and animals live?
	The environment is affected by the living things that inhabit it.	<ul style="list-style-type: none"> • How do plants and animals change their environment?
	People depend on Earth’s natural resources in their daily lives.	<ul style="list-style-type: none"> • How can we save natural resources?
K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) needs to survive.	KNOWLEDGE	SKILLS
K- ESS3-1 Use a model to represent the relationship between the needs of different plant or animals.	Students will know: All plants and animals need food in order to live and grow.	Students will be able to: Observe and record animal life cycles (butterflies, chicks, frogs, worms, and fish). Observe and record changes in the growth of plants overtime. Identify and label the life cycle of given plants.
K- ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air,		

<p>and/or other living things in the local environment.</p> <p>K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.</p> <p>ELA RI.K.1 W.K.2 W.K.7 SL.K.5</p> <p>MATHEMATICS K.MD.A.2 K.CC.A.1 K.CC.A.3 K.CC.B.5 K.CC.7 MP.2 MP.4</p> <p>TECHNOLOGY 8.1.2.E.1 8.2.2.A.5 8.2.2.C.1 8.2.2.C.3 8.2.2.C.4 8.2.2.C.5 8.2.2.D.1 8.2.2.D.3 8.2.2.D.4</p>	<p>Animals obtain their food from plants or from other animals.</p> <p>Living things need water, air, and resources from the land.</p> <p>Animals live in places that have the things they need to survive.</p> <p>Plants and animals can change their environment.</p> <p>Humans use natural resources for everything they do.</p> <p>Things that people do to live comfortably can affect the world around them.</p> <p>Humans can make choices that reduce their impact on the land, air, water, and other living things.</p>	<p>Identify patterns within animal and plant life cycles.</p> <p>Identify possible food sources for various types of animals.</p> <p>Develop and create a food chain for a specific animal.</p> <p>Observe and record changes in the growth of plants overtime.</p> <p>Identify and label the life cycle of given plants.</p> <p>Compare and contrast living things and nonliving things.</p> <p>Identify the needs of living organisms.</p> <p>Create a habitat for a living thing.</p> <p>Model the changes that plants and animals have on a given area in a habitat over time.</p> <p>Research natural resources.</p> <p>Construct a model of a natural resource.</p> <p>Understand and demonstrate the ways that people use natural resources to benefit their lives.</p>
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	<p>Completing research by asking question, making observations and gather information aids in developing a solution.</p> <p>Designs can be conveyed through sketches, drawings, or physical models when solving a problem.</p> <p>There are many ways to communicate a solution to a given problem.</p> <p>KEY TERMS: living things, nonliving things, animals, plants, life cycle, grow, food chain, habitat, natural resources, shelter, environment, reuse, reduce, recycle</p>	<p>Identify a problem in the environment that needs to be fixed.</p> <p>Research and communicate to others a solution for a given problem in the environment.</p> <p>Generate and list questions that can be asked to help solve a problem.</p> <p>Draw and sketch ideas to plan a solution.</p> <p>Collaborate with peers to compare and contrasts many ways to solve a problem.</p> <p>Communicate successful solution to a problem.</p>
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ASSESSMENT EVIDENCE: Students will show their learning by:

- Creating systems in the classroom to reuse, reduce, recycle (i.e. recycling bin use) in order to protect Earth’s Natural Resources
- Analyzing a system in the natural world (animal life cycle or plant life cycle) and record observations about whether it has the things it needs to live and grow
- Reducing the abuse of natural resources and human impact in our school community (i.e. persuasive writing)
- Analyzing and answer the phenomenon (unit launch, animal/plants wonder board, facilitate inquiry on pictures/vidoes)

KEY LEARNING EVENTS AND INSTRUCTION:

- Analyze ways humans impact land, water, air, and other living things
- Explore various types of pollution

- Explore multiple ways to reuse plastic items (i.e. a milk carton, plastic bottle, etc.)
- Take a trip to the Zoo
- Research Careers in Zoology
- Research people who have made strides to protect Earth's natural resources
- Create a system for natural resources to survive (i.e. grow labs)
- Participate in observation of animal life cycles (i.e. butterflies, chicks, frogs, worms, and fish) digitally or with living materials
- Identify the needs of plants and animals

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Science ~ Kindergarten
UNIT IV: The Circle of Life: Needs of Plants and Animals

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
8 Weeks	Unit IV: The Circle of Life: Needs of Plants and Animals	<p><u>Suggested Resources</u></p> <p>Science Dimensions Unit 3 lessons 1-4 Unit 3 Project Lesson 3 Phenomenon Unit 6 lesson 1 and 2</p> <p>Living Materials Carolina Biological Supply (caterpillars, tadpoles) Quiver Farms (chicks)</p> <p>Safari Montage (Use video chapters as needed) All About Animal Life Cycles Life Cycle Animal Survivors Animal Journeys The Story of the Butterfly The Story of the Honeybee Sid the Science Kid: Seed the Science Kid Betsy’s Kindergarten Adventures: Bread and Butterflies Animals Around the World Animal Changes The Magic School Bus Cracks the Yolk All About Plant Structure and Growth</p>

Where Food is Grown
Growing Our Food
Pumpkin Circle: The Story of a Garden

Brainpop

Plant Life Cycle
Butterflies
Frogs
Natural Resources
Mammals
Insects
Mammals
Food Chain

Literary Resources

Log Hotel by A. Schreiber
Eat Your Colors by L. Evans
Seed, Sprout, Pumpkin, Pie by J. Esbaum
In the Garden by Rigby
Gossie by O. Dunrea
An Earthworm's Life by J. Himmelman
My Bug Box by P. Blanchard and J. Suhr
Honey Bees by M. E.H. Rustad
Dragonflies by M. Hall
Honey for Baby Bear by B. Randell
Can you see the Eggs? by J. Giles
Forest Animals by E. Schafer
The Big Blue Sea by J. Scott
See me Grow by P. Arlon
Living Things by D. Avery
Who Has These Feet? by L. Hulbert
Copycat Critters by D. Lee
Sea Animals by A. Thomas
Safari by G. Tuchman

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