

<b>Course Name:</b>	Kindergarten Science		
<b>Credits:</b>	N/A		
<b>Prerequisites:</b>	N/A		
<b>Description:</b>	A comprehensive collection of Science topics: Trees and Weather, Materials and Motion, and Animals.		
<b>Academic Standards:</b>	Wisconsin's Science Standards		
<b>Units:</b>	<b>Unit Length:</b>	<b>Unit Standards:</b>	<b>Unit Outcomes:</b>
<b>Trees and Weather</b>	Three Months	SCI.ESS2.D SCI.LSI.A SCI.LS1.C	Students will learn about the different parts and uses of trees. Students will be able to identify different types of weather.
<b>Materials and Motion</b>	Three Months	PS1-1 PS1-3 PS2-1 PS2-2	Students will explore different materials (wood, paper, and fabric). Students will learn pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.
<b>Animals Two By Two</b>	Three Months	LS-1 ESS2-2 ESS3-1	Students will explore some common land and water animals. Students will learn what animals need to live and grow.

<b>Unit Name: Trees and Weather</b>	<b>Length:</b> Three Months
<b>Standards:</b> SCI.ESS2.D SCI.LSI.A SCI.LS1.C	<b>Outcomes:</b> Students will learn about the different parts and uses of trees. Students will be able to identify different types of weather.
<b>Essential Questions:</b> What are the parts of a tree? What are the shapes of leaves? How are they different? How and why is Earth constantly changing? How do trees change throughout the year?	<b>Learning Targets:</b> I can identify different types of weather (sunlight, wind, snow, rain). I can identify the parts of a tree (branches, leaves, trunk, roots). I can tell what plants need to survive (water, light).
<b>Topic 1: Observing Trees</b>	<b>Length:</b> Four Weeks
<b>Standard(s):</b> SCI.LS1.A.1 SCI.LS1.C.K	<b>Academic Vocabulary:</b> branches, leaves, trunk, roots
Lesson Frame: Observing Schoolyard Trees	I can discuss how trees are useful to people and wild animals.
Lesson Frame: Tree Parts	I can use picture and words cards to identify the main parts of trees.
Lesson Frame: Tree Puzzles	I can use puzzles to learn and compare the different shapes of trees.
Lesson Frame: Tree-Silhouette Cards	I can analyze and match tree silhouettes.
<b>Performance Tasks:</b> Teacher observation and journals.	Notes:
<b>Topic 2: Observing Leaves</b>	<b>Length:</b> Four Weeks
<b>Standard(s):</b> SCI.LSI.A	<b>Academic Vocabulary:</b> edge, lobed, toothed, rounded, tip
Lesson Frame: Leaf Walk	I can observe differences and similarities between leaves on trees.
Lesson Frame: Leaf Shapes	I can observe and match leaf shapes.
Lesson Frame: Comparing Leaves	I can tell how leaves are different.
Lesson Frame: Matching Leaf Silhouettes	I can match leaves based on their shape, size, and edges.
Lesson Frame: Leaf Books	I can create a book of various leaves.
<b>Performance Tasks:</b> Teacher observation and journals.	Notes:

<b>Topic 4: Trees through the Seasons</b>	<b>Length:</b> Four Weeks
<b>Standard(s):</b> SCI.ESS2.D	<b>Academic Vocabulary:</b> monitor, overcast, partly cloudy, temperature, thermometer, weather, weather instrument
Lesson Frame: Weather Calendar	I can tell and record the daily weather.
Lesson Frame: Recording Temperature	I can use a thermometer to tell the temperature.
Lesson Frame: Wind Directions	I can make a windsock to use to tell about wind direction.
<b>Performance Tasks:</b> Teacher observation and weather graph.	Notes:

Unit Name: <b>Materials and Motion</b>	<b>Length:</b> Three Months
<b>Standards:</b> PS1-1 PS1-3 K-PS2-1 K-PS2-2	<b>Outcomes:</b> Students will explore different materials (wood, paper, and fabric). Students will learn pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.
<b>Essential Questions:</b> How can you change the shape of wood? How can paper be made strong to form a bowl? How are fabrics different? What causes objects to move?	<b>Learning Targets:</b> I can describe different kinds of materials (wood, paper, and fabric). I can construct an object made from a small set of pieces (particleboard, plywood, and papier-mache). I can compare the effects of different strengths or directions of pushes and pulls on an object.
Topic 1: <b>Getting to Know Wood</b>	<b>Length:</b> Three Weeks
<b>Standard(s):</b> PS1-1 PS1-3	<b>Academic Vocabulary:</b> sink, float, compare, test, sawdust, shavings, waterlogged, evaporate, plywood, particleboard
Lesson Frame: Observing Wood	I can observe different kinds and forms of wood found in my home and school environment.
Lesson Frame: Wood and Water	I can observe how wood and water interact.
Lesson Frame: Testing a Raft	I can find ways to sink floating wood samples by attaching paper clips to wood with rubber bands.
Lesson Frame: Sanding Wood	I can use my knowledge of wood and learn how to change wood.
Lesson Frame: Sawdust and Shavings	I can compare sawdust and shavings.
Lesson Frame: Making Particleboard	I can make particleboard.
Lesson Frame: Making Plywood	I can make plywood from thin strips of wood and glue.
<b>Performance Tasks:</b> Create Particleboard Create Plywood Teacher Observation Journals	Notes:
Topic 2: <b>Getting to Know Paper</b>	<b>Length:</b> Three Weeks
<b>Standard(s):</b> PS1-1 PS1-3	<b>Academic Vocabulary:</b> paper, chipboard, construction paper, corrugated cardboard, corrugated paper, facial tissue, newsprint, paper Towel, tagboard, waxed paper
Lesson Frame: Paper Hunt	I can observe and compare the properties of ten kinds of paper.
Lesson Frame: Using Paper	I can use crayons, pencils, and marking pens to explore and compare the properties of paper that make it suitable or unsuitable for writing and drawing.

Lesson Frame: Paper and Water	I can drop water on ten different paper samples and observe and compare the results.
Lesson Frame: Paper Recycling	I can explore papermaking and recycling.
Lesson Frame: Papier-Mache	I can use wheat paste to mold strips of newspaper over a small container.
<b>Performance Tasks:</b> Make paper from facial tissue. Teacher Observation Journals	Notes:
<b>Topic 3: Getting to Know Fabrics</b>	<b>Length:</b> Three Weeks
<b>Standard(s):</b> PS1-1 PS1-3	<b>Academic Vocabulary:</b> burlap, cloth, conserve, corduroy,denim, fabric, recycle, reuse, texture, thread
Lesson Frame: Feely Boxes and Fabric Hunt	I can observe the properties of ten different fabrics (burlap, corduroy, denim, fleece, knit, ripstop nylon, satin, seersucker, sparkle organza, and terry cloth).
Lesson Frame: Taking Fabric Apart	I can investigate the structure of woven fabrics by disassembling and comparing loosely woven burlap and tightly woven wool plaid.
Lesson Frame: Water and Fabric	I can investigate how fabrics interact with water.
Lesson Frame: Graphing Fabric Uses	I can think about the kinds of fabric that would make a good pair of pants and other items of clothing.
Lesson Frame: Reuse and Recycle Resources	I can explore natural resources and the need to reuse and recycle materials.
Lesson Frame: Building Structure	I can place cups of water outdoors in the sunshine and shade and compare the water temperature after at least 15 minutes.
<b>Performance Task:</b> Build a structure from materials to block sunlight. Teacher Observation Journals	Notes:
<b>Topic 4: Getting Things to Move</b>	<b>Length:</b> Three Weeks
<b>Standard(s):</b> PS1-1 PS1-3	<b>Academic Vocabulary:</b> cause, collide, collision, direction, distance, affect, gravity, pull, push, speed, strength
Lesson Frame: Pushes and Pulls	I can observe and describe how a push or pull causes something to move.
Lesson Frame: Colliding Objects	I can use balls and ramps to achieve different speeds.
Lesson Frame: Rolling Outdoors	I can find slopes in the schoolyard that can be used to set balls in motion.
Lesson Frame: Balloon Rockets	I can observe a balloon-rocket system to find out how far the air in the balloon will propel the system along the flight line.

<p><b>Performance Task:</b> Observe and describe how objects move. Create balloon-rockets. Journals Teacher Observation</p>	<p>Notes:</p>
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Unit Name: <b>Animals Two by Two</b>	<b>Length:</b> Three Months
<b>Standards:</b> K-LS-1 K-ESS2-2 K-ESS3-1	<b>Outcomes:</b> Students will explore some common land and water animals. Students will learn what animals need to live and grow.
<b>Essential Questions:</b> What do animals such as fish and birds need to live and grow? What do animals such as snails need to live and grow? What do animals such as worms need to live and grow? What do animals such as isopods need to live and grow?	<b>Learning Targets:</b> I can describe what plants and animals need to survive. I can explain how plants and animals (including humans) can change the environment to meet their needs. I can use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
Topic 1: <b>Goldfish and Guppies</b>	<b>Length:</b> Three Weeks
<b>Standard(s):</b> K-LS1-1 K-ESS2-2 K-ESS3-1	<b>Academic Vocabulary:</b> aquarium, bill, compare, female, male, fin, gill, guppy, scale
Lesson Frame: The Structure of Goldfish	I can observe goldfish living in a simple aquarium.
Lesson Frame: Caring for Goldfish	I can learn how to care for goldfish.
Lesson Frame: Goldfish Behavior	I can add a tunnel to the aquarium to observe how the fish respond.
Lesson Frame: Comparing Guppies to Goldfish	I can compare the structures and behaviors of guppies to those of goldfish, and identify the guppies by gender.
Lesson Frame: Comparing Schoolyard Birds	I can go bird watching to observe and compare the structures and behaviors of two types of common schoolyard birds.
<b>Performance Tasks:</b> Teacher Observation Journals	Notes:
Topic 2: <b>Water and Land Snails</b>	<b>Length:</b> Three Weeks
<b>Standard(s):</b> K-LS1-1 K-ESS2-2 K-ESS3-1	<b>Academic Vocabulary:</b> land snail, sea animal, tentacle, terrarium, vial, water snail
Lesson Frame: Observing Water Snails	I can explore two kinds of aquatic snails.
Lesson Frame: Shells	I can observe seashells.
Lesson Frame: Land Snails	I can collect and get to know local land snails.
<b>Performance Tasks:</b> Teacher Observations Journals	Notes:

Topic 3: <b>Big and Little Worms</b>	<b>Length:</b> Three Weeks
<b>Standard(s):</b> K-LS1-1 K-ESS2-2 K-ESS3-1	<b>Academic Vocabulary:</b> bristle, clitellum, segment
Lesson Frame: The Structure of Redworms	I can dig through a terrarium to discover that there are redworms living in the soil.
Lesson Frame: Redworm Behavior	I can focus on the movement and behavior of redworms.
Lesson Frame: Comparing Redworms to Night Crawlers	I can discover a new kind of worm in their terrarium- night crawlers.
<b>Performance Task:</b> Teacher Observations Journals	Notes:
Topic 4: <b>Pill Bugs and Sow Bugs</b>	<b>Length:</b> One Months
<b>Standards:</b> K-LS1-1 K-ESS2-2 K-ESS3-1	<b>Academic Vocabulary:</b> antenna, ball, carapace, isopod, jagged, moisture, pill bug, sow bug
Lesson Frame: Isopod Observation	I can investigate two kinds of isopods (sowbugs and pill bugs).
Lesson Frame: Identifying Isopods	I can compare the isopods and sort them into two groups.
Lesson Frame: Isopod Movement	I can go the the schoolyard to find isopods.
Lesson Frame: Animals Living Together	I can build a class terrarium to observe how several animals live together.
<b>Performance Task:</b> Teacher Observation Journals	Notes: