

Outdoor Learning Unit 5

Unit 5: Shadows and Reflections – Week by Week Outdoor Learning Ideas

The following chart provides suggestions for outdoor learning ideas by week. The topics suggested correspond to what is occurring outside in Maine during the spring (April/first part of May). As the natural world is always changing, choose those topics that fit best what is available at your site during each week.

Week 1	Week 2	Week 3	Week 4	Week 5
April Rain Sun Shadows	Pond Life (Reflections)	Bird Nests, Feathers, Eggs	Spring Wildflowers (Planting Seeds)	Flowering Trees

Unit 5: Shadows and Reflections – Overview

Light affects people, animals, and things.

Nature connection – Animals and plants are affected by light

Time frame for nature topics – April through first part of May

Guiding ideas

- Seasonal changes of plants and animals are often triggered by changes in sunlight.
- As spring arrives wildflowers pop up, birds make nests, some trees start to flower, and ponds are teeming with life.

Outdoor learning components and concepts

- April rain/sun shadows
 - Sunlight makes shadows
 - Explore visual properties of opaque, transparent, and translucent objects
 - Explore properties of shadows and light
- Pond life (reflections)
 - Living creatures need water to live
 - Water takes different forms – ice, liquid, steam
 - Ponds are homes for many animals and plants
- Bird nests, feathers, eggs
 - Birds have feathers, wings, lay eggs, and are warm blooded
 - Birds have hollow bones which help them fly
 - Many birds make nests using various materials to do so
- Spring wildflowers (planting seeds)
 - There are many different kinds of wildflowers

- They are ephemeral, sprouting up in the forests and soaking in the sunlight before the leaves come out on the trees
- Wildflowers are very colorful attracting pollinators
- Flowering trees
 - Trees are an important resource for people
 - Trees flower in the spring often producing fruit such as apples and pears

Outdoor learning ideas by the week

- Week 1 – April rain/sun shadows
 - Draw shadows of stationary objects in chalk at the beginning of class and check them later to compare the movement of the sun.
 - Photograph objects and people, and their shadows on a hike.
 - Place a lamp in front of a large felt board and make shadows.
 - Make sun prints by placing an object on sun sensitive paper and leave outside in the sun for a while.
 - Use a light table with a variety of transparent, translucent and opaque objects or reflective objects. Or use black paper cut outs of the shadows of everyday objects.
 - Create a card matching game depicting everyday objects and their matching shadows. Photograph students in an action pose and create a shadow to match. Use both to create cards for a matching game.
 - Set up a white sheet/paper against one wall to create a screen. Using a light projector or small lamp have the children explore shadows with puppets.
 - Take a walk in the rain. How does it sound and smell? Look for animals. Are they hiding? Do some come out in the rain? Splash in puddles.
 - Make a “rain picture” by putting powdered paint on construction paper and take it outside during a gentle rain. Let the rain paint the picture and then bring it inside to dry.
 - Try catching raindrops on your tongue. Sing song about catching raindrops on your tongue (If all the raindrops were gummy bears and lemon drops, oh what a rain it would be. We’d walk around with our mouths open wide. Ah, ah (with mouth open catching raindrops).
 - Use a rainstick to simulate the sound of rain. Use rubbing, tapping and clapping hands to simulate a rainstorm.
- Week 2 – Pond life (reflections)
 - Visit a pond stream or lake and explore what lives in the water.
 - Look for evidence of animals that have visited a pond, stream or lake (i.e. footprints in the mud near the water’s edge, scat, broken plants).
 - Look at the plants living near the water. Are they different from plants in the forest?

- Make an aquarium. Take some pond water, plants, and tadpoles or snails and bring them back to the class to study.
- Look for reflections in the water.
- Bring out watercolor trays and let the children paint the water scene they see.
- Go on a pond scavenger hunt. Use pictures for younger children.
- Turn the water table into a pond by adding rocks, lily pads, and plastic animals of frogs, turtles and fish.
- Experiment with what floats and what sinks.
- Look at pond water under a microscope.
- Make a large mural by painting a pond on a large piece of butcher paper. Have children draw or cut out pictures from magazines of the plants and animals who live in the pond.
- Week 3 – Bird nests, feathers, eggs
 - Go for a hike around your school and look for nests. Compare the different types of nests found and types of birds that made them.
 - How are birds different from other animals? Review the characteristics of birds.
 - Play the robin's nest relay race – Line up two teams at one end of an open area. Place a tub of mud in front of each team. Give the first person in each line a spoon. Each person must take a spoon full of mud, run to the other side of the space, and add it to a small bowl. Once everyone has a turn, give each team a tub of dried grass. Have each person get a turn running to the bowl to add grass. In the end, look at the two bowls of mud and grass and compare to a real robin's nest.
 - Pass around real feathers, nests, and eggs for children to explore. Compare different feathers and wings.
 - Play an egg-matching game
 - Dye eggs with natural materials such as onion skins, blueberry preserves, red cabbage leaves, etc.
 - Make playdough nests
 - Paint with feathers
 - Do a still life drawing of nests, eggs, and feathers and a bird mount.
 - Sensory table ideas - Put colored feathers and colored bowls for matching, plastic eggs in water, dried grass or ribbon for nest building
 - Continue to use the bird Identifier to call birds in the spring.
 - Have the children review their bird list and see what new birds have shown up in the spring. Compare to the birds that they saw all winter long. They can add to the bird field guide they made in the winter.
- Week 4 – Spring wildflowers (planting seeds)

- Search for the first wildflowers of spring. You may have to peek beneath the leaf litter to find them just as they are starting to grow. Use a field guide to try to identify them.
- Plant flower seeds and watch them grow.
- Display some wildflowers for children to draw or paint.
- Go on a color hike to look for wildflowers. Have children identify all the different colors of flowers they find. Can give the children a colored paper and use them to find wildflowers that match the colors.
- Week 5 – Flowering trees
 - Look for flowers on trees. Some, like apple blossoms, are obvious. Others, like maple tree flowers, may be harder for children to recognize.
 - The children can help plant a young tree and continue to care for it throughout the year.