

The background features a light cream color with various green illustrations. In the top left, there are three brown acorns with textured caps. To their right are several green leaves and a few small green seed pods. On the left side, there are two yellow flowers with white centers and red stamens. At the bottom, there are more green leaves, a white daisy-like flower with an orange center, and a landscape with dark green trees and grey rocks.

ROOTS, ROCKS, AND WONDER

SCIENCE PLAY IN EARLY CHILDHOOD



WHY SCIENCE?

For young children, science is about experiencing the world around them and developing and testing theories about how the world works.

Scientific exploration offers a full range of learning experiences.





LEARNING EXPERIENCES

COGNITIVE-MATH

Size
Conservation
Counting
Timing
Matching
Classifying
Sorting
Opposites

COGNITIVE-SCIENCE

Cause & Effect
Gravity
States of matter
Predictions/hypotheses &
testing
Observations
Sink/float

LANGUAGE & LITERACY

Practice receptive &
expressive language skills
Vocabulary
Pre-writing skills



LEARNING EXPERIENCES

SOCIAL & EMOTIONAL

Decision making skills
Self-discovery
Cooperation skills
Understanding others
Confidence
Self-expression

PHYSICAL

Fine motor skills
Gross motor skills

CREATIVE

Open-ended discovery



OUTDOOR EXPLORERS

An eight week science exploration program for 3–6 year olds and their caregiver.

“Come explore the world outside of RHPL with Ms. Wendy! We will meet at Rotary Park and spend each week exploring, reading about, and completing projects related to the natural world. Siblings are welcome, but projects will be limited to registered participants 3–6 years old.”

SCHEDULE

10–10:05am: Welcome group and give them the week’s focus

10:05–10:20am: Free exploration with magnifying glasses

10:20–10:35am: Gather, converse with groups about what they observed, read books

10:35–10:40am: Give instructions for project and pass out supplies

10:40–10:55am: Participants complete project with the help of their caregiver

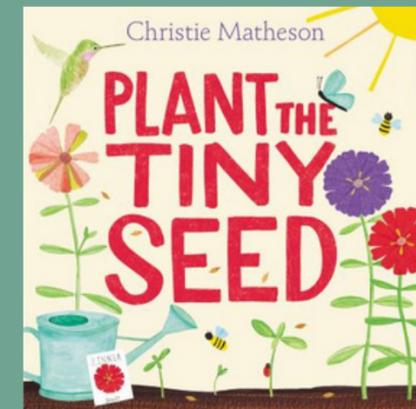
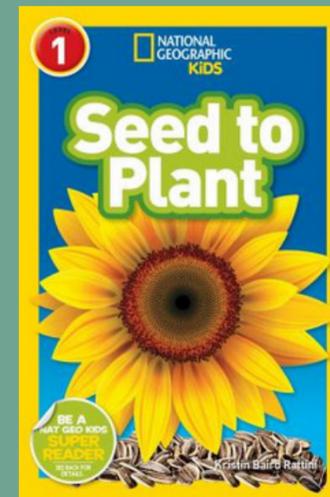
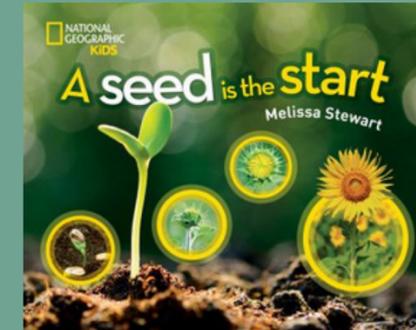
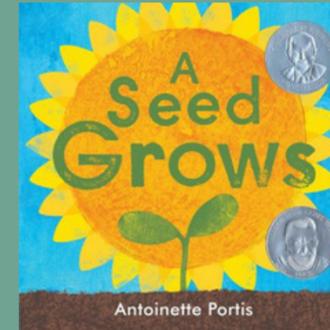
10:55–11am: Goodbyes





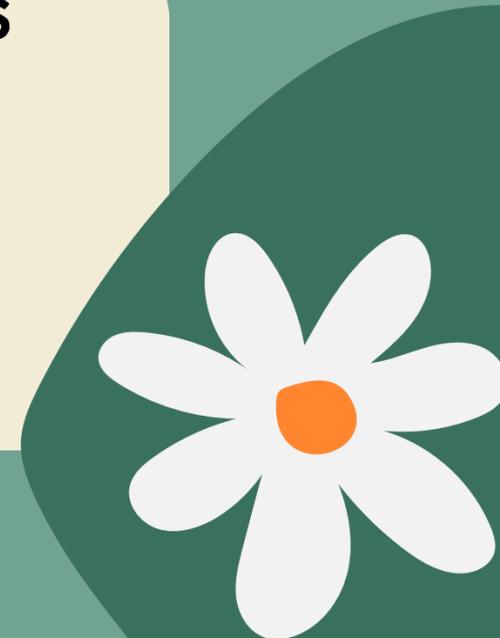
WEEK 1: PLANTS & SEEDS

"Welcome to Outdoor Explorers, this week we will be investigating plants and seeds. You can spend your exploration time looking at the plants in our park – make sure to investigate the plants, looking at each part, look inside each plant to see if you can find any seeds. Seeds can also be found floating in the air or on the ground around us. If you'd like to spend your time investigating other parts of our world – rocks, dirt, plants, animals, water, the sky – feel free to do so!"



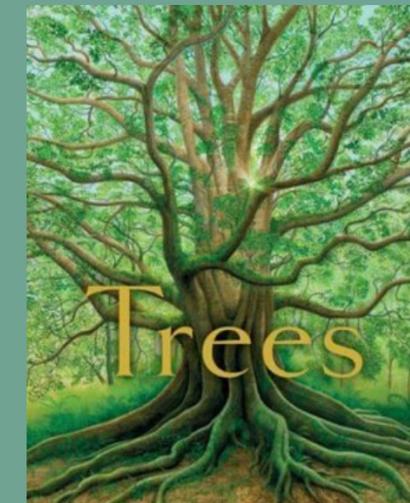
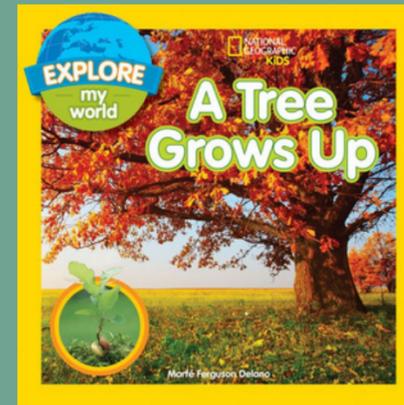
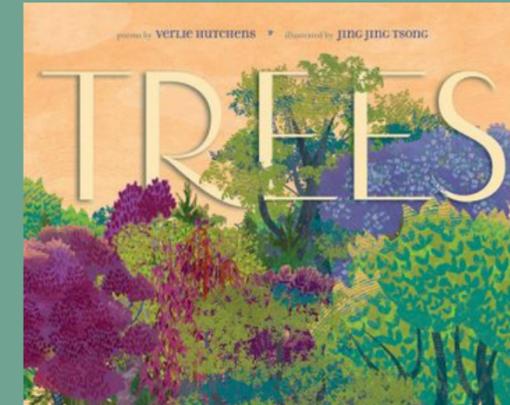
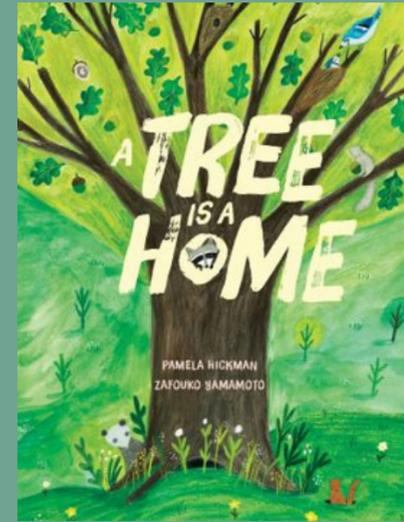
PROJECT: PLANTING SUNFLOWER SEEDS

Supplies needed: sunflower seeds, potting soil, planting cups, small spray bottles with water



WEEK 2: TREES

"Welcome to Outdoor Explorers, this week we will be investigating trees. You can spend your exploration time looking at the trees in our garden – make sure to look at the bark and leaves. If you'd like to spend your time investigating other parts of our world – rocks, dirt, plants, animals, water, the sky – feel free to do so!"



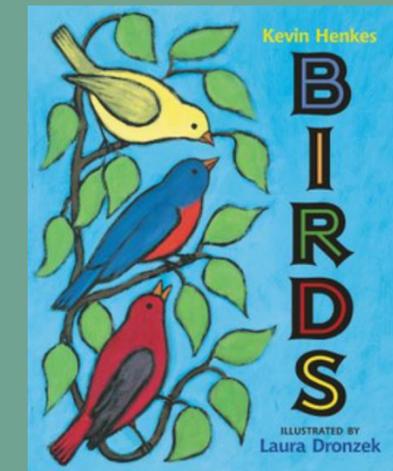
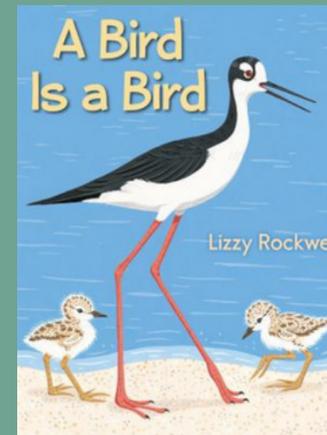
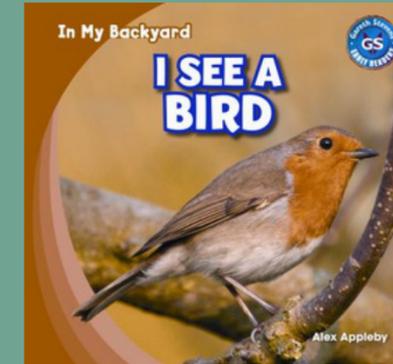
PROJECT: BARK & LEAF RUBBINGS

Supplies needed: paper and crayons



WEEK 3: BIRDS

"Welcome to Outdoor Explorers, this week we will be investigating birds. You can spend your exploration time looking at the birds in and around our garden - make sure to look up in the sky, in the trees around us, and even in the bird houses. If you'd like to spend your time investigating other parts of our world - rocks, dirt, plants, animals, water, the sky - feel free to do so!"



PROJECT: BINOCULARS & BIRD JOURNAL

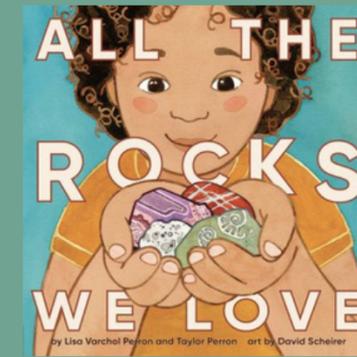
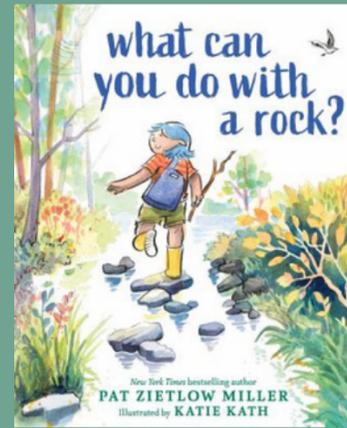
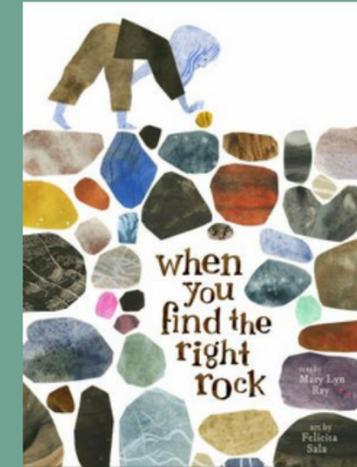
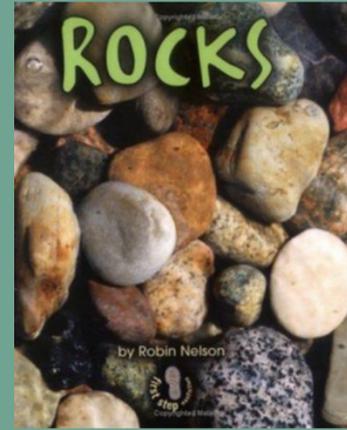
Supplies needed: binoculars
and markers -or-
Homemade toilet paper tube
binoculars and markers





WEEK 4: ROCKS

“Welcome to Outdoor Explorers, this week we will be investigating rocks. You can spend your exploration time looking at the rocks in our garden. We have both small and large rocks throughout the garden and the lagoon. If you pick up a rock, observe if it is light or heavy, smooth or rough. If you’d like to spend your time investigating other parts of our world – rocks, dirt, plants, animals, water, the sky – feel free to do so!”



PROJECT: PET ROCKS

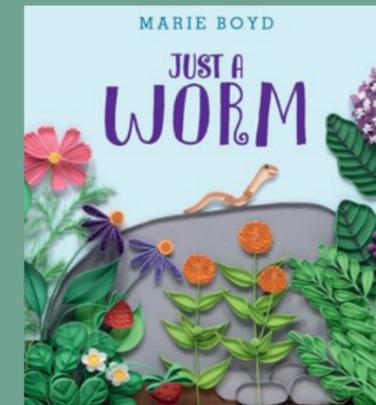
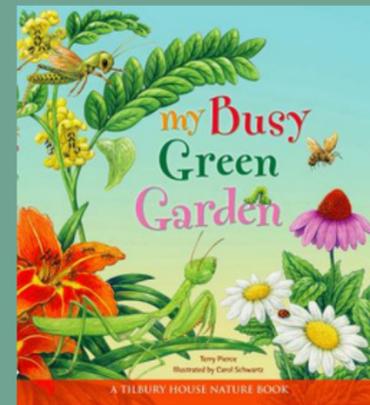
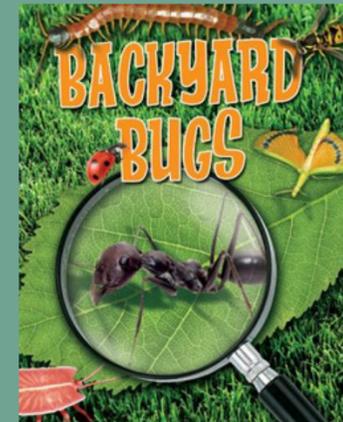
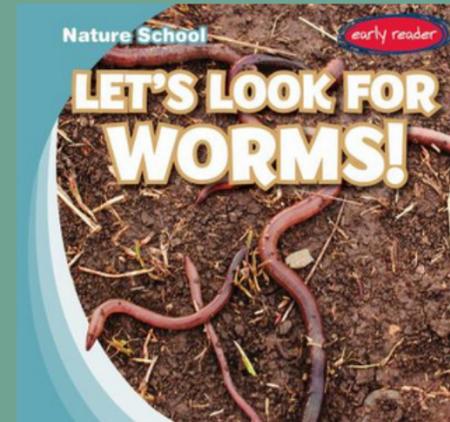
Supplies needed: rocks, paint, paintbrush, paint pallets (optional), cups with water





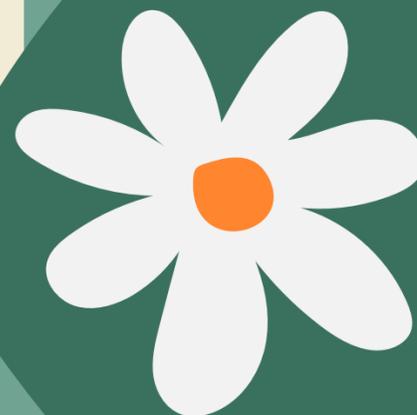
WEEK 5: INSECTS & WORMS

“Welcome to Outdoor Explorers, this week we will be investigating insects and worms. You can spend your exploration time looking for insects and worms in our garden – make sure to look on the ground, in plants, and in air around you. If you’d like to spend your time investigating other parts of our world – rocks, dirt, plants, animals, water, the sky – feel free to do so!”



PROJECT: BUG CATCHER

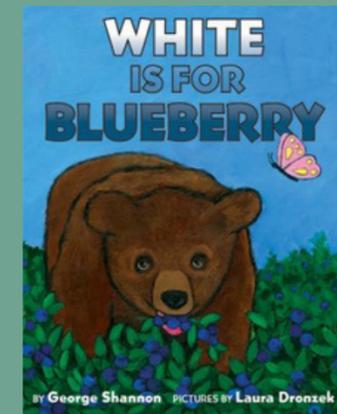
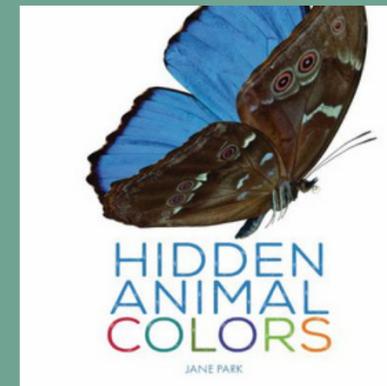
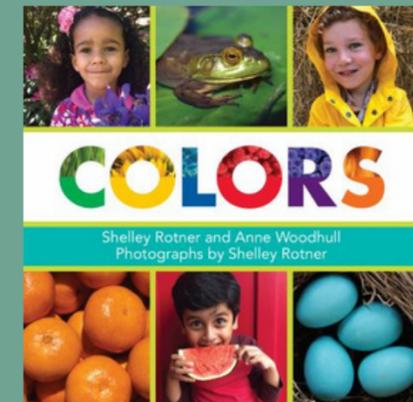
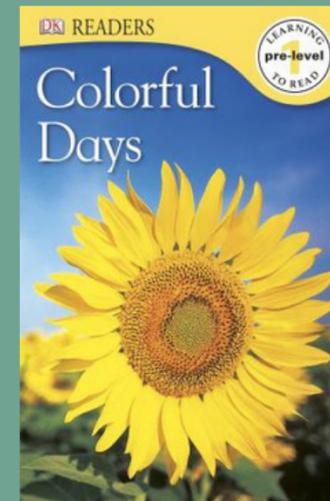
Supplies needed: bug hotels,
markers –or–
Homemade bug hotels,
stickers





WEEK 6: COLORS

“Welcome to Outdoor Explorers, this week we will be investigating the colors of the world around us. You can spend your exploration time looking at all of the colors in our garden. What colors are the flowers, the plants, the trees, the ground, the animals, the bugs, the sky? If you’d like to spend your time investigating other parts of our world – rocks, dirt, plants, animals, water, the sky – feel free to do so!”



PROJECT: COLOR SCAVENGER HUNT

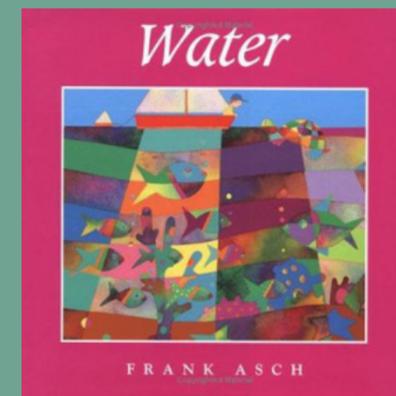
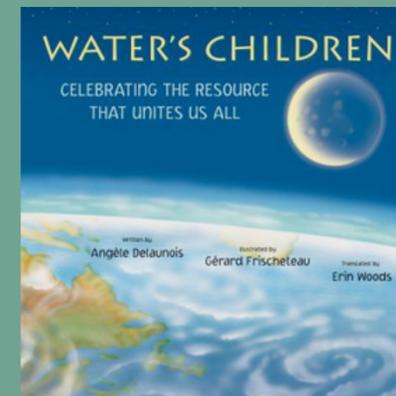
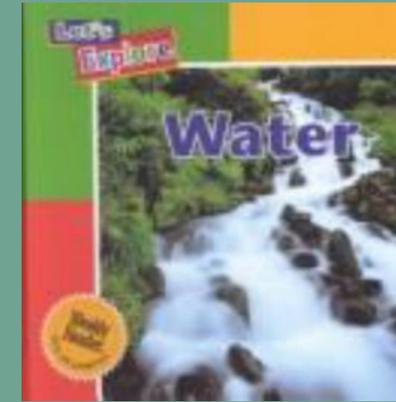
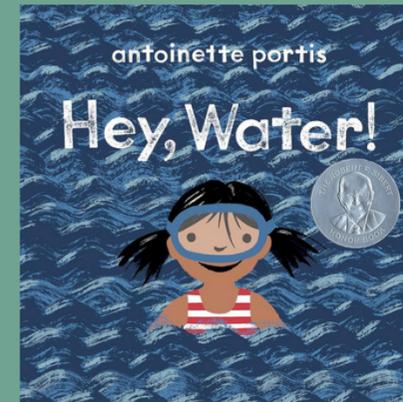
Supplies needed: color scavenger hunt sheet, golf pencils, clipboards (optional)





WEEK 7: WATER

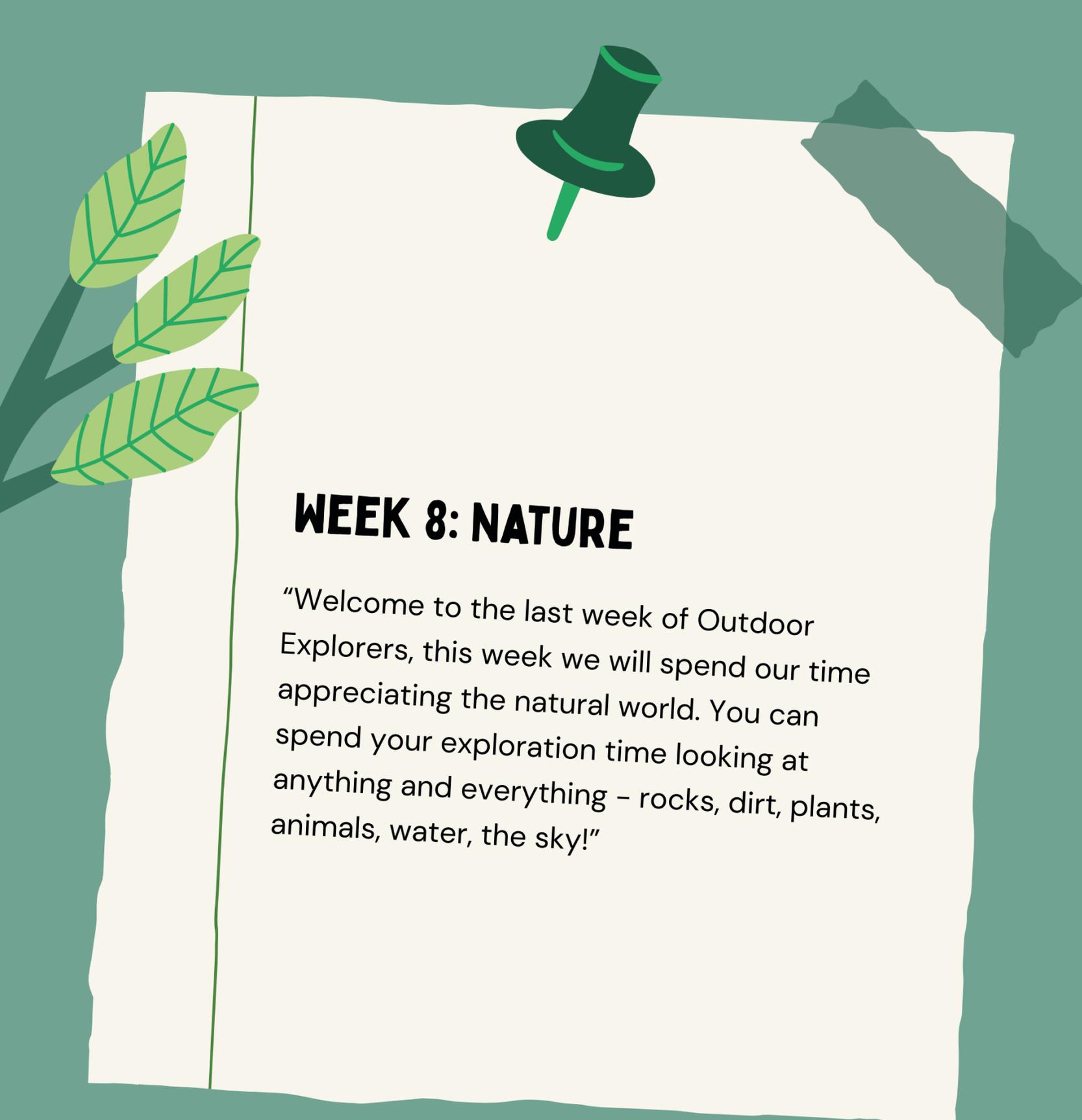
“Welcome to Outdoor Explorers, this week we will be investigating water. You can spend your exploration time looking at the pond in our park or the river on the other side of the walking path – make sure to look in the water to see if anything is living there. If you’d like to spend your time investigating other parts of our world – rocks, dirt, plants, animals, water, the sky – feel free to do so!”



PROJECT: WATER EXPLORATION

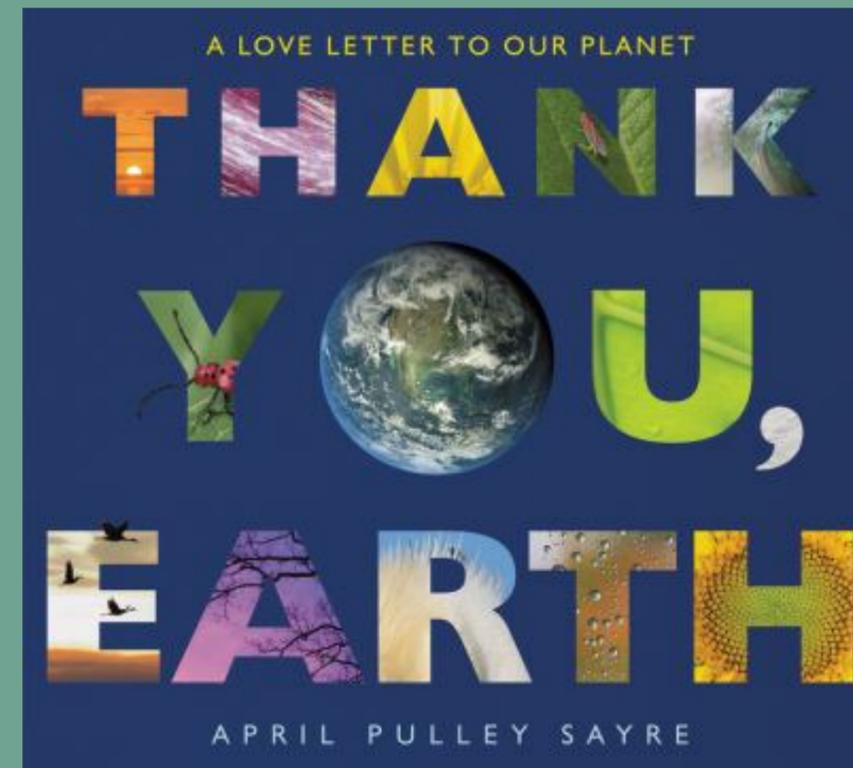
Supplies needed: individual sensory tubs, water, natural materials collected by children





WEEK 8: NATURE

“Welcome to the last week of Outdoor Explorers, this week we will spend our time appreciating the natural world. You can spend your exploration time looking at anything and everything – rocks, dirt, plants, animals, water, the sky!”



PROJECT: NATURE BRACELETS

Supplies needed: wide tape-packing, duct, etc, natural materials collected by children





NATURE EXPLORATION AS STEAM LEARNING

**SCIENCE THROUGH OBSERVATION AND
QUESTIONING**

**TECHNOLOGY THROUGH TOOLS LIKE MAGNIFYING
GLASSES AND BINOCULARS**

**ENGINEERING THROUGH BUILDING AND PROBLEM
SOLVING**

ART THROUGH CREATIVE NATURE PROJECTS

**MATH THROUGH COUNTING, SORTING, AND
COMPARING**





**THANK YOU
SO MUCH!**

The background features a light cream color with various green illustrations. In the top left, there are acorns and oak leaves. In the top right, there are lemons and green leaves. In the bottom left, there are yellow flowers and green leaves. In the bottom right, there are large green leaves. At the bottom center, there is a landscape with dark green trees, a grey rock formation with a cave entrance, and a white daisy flower with an orange center.

CONTACT ME:

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