



Science



Literacy

OUTDOOR ADVENTURE FLIP BOOK

Grade Level

3-6

Length of Lesson

1-2 Hours

Objective

By the end of this lesson, students will have a better understanding of various aspects of the environment and have increased observation skills.

Materials Needed

- Hand trowels
- Small container
- Magnifying glasses
- Copies of the student flipbook**

****Printer settings for the flipbook should be set as double-sided, flip on the short edge.**

Standards

Common Core

CCSS.ELA-

Literacy.RI.4.3; RI.4.4;

RI.4.5; RF.4.3a

NGSS

3-LS4-2-4; 4-LS1-1; 5-LS2

-1; MS-LS2-2; MS-LS4-2

Lesson Summary

This lesson is a fun, outdoor activity designed to help students recognize various aspects of the environment like tree leaf identification, native flowers and identifying parts of a flower, soil health, and more!

You will want to have a pre-determined area outside, on or off campus. It is best to have a place with some trees and flowers and somewhere that you have permission to dig a few small holes for students to observe soil.

Suggested Sequence of Events:

1. Set Up: Print enough copies of the flip book so that each student can have their own. For younger students, or to reduce time in class, put them together and staple ahead of time.
2. Read through the IAITC Soil and Pollinator Ag Mags to learn more about soil health and the importance of pollination! Interactive online versions can be found on our website.
3. Complete the activity following the procedures:
 - Give each student the papers to create their flipbook to fold and walk through the folding directions with your students. (Folding directions on Teacher Resources page)
 - Make sure students have something to write with and head outside.
 - Use the flipbook however it works best for your students, depending on their age, needs, and understanding of the content.
4. Whole class discussion and reflection of activity.

TEACHER RESOURCES

Printing Directions:

- Printer settings for the flipbook should be set as double-sided, flip on the **short** edge.

Folding Directions:

- Page 1: "My Outdoor Adventure Flip Book"
 - Fold forward on the line above the title so that the title is at the top and facing you. You will notice that the "Treasure Pocket" is facing toward you, at the bottom and upside down.
- Page 2: "Environment"
 - Fold forward on the line above the "I Hear, I Smell, I Feel" boxes so that those are at the top and facing you. Once folded, you will see the "Soil" flap underneath and facing you, right-side up.
 - Slide this page inside the first page so that the "Environment" title is directly under the "My Outdoor Adventure Flip Book" title.
- Page 3: "Trees"
 - Fold forward on the line about the labeled leaf diagram so that the diagram is at the top and facing you. After folding, you will see the title "Flowers" directly under the "Trees" title.
 - Slide this last page inside the "Environment" page. You should now have the pages lined up to read in this order: My Outdoor Adventure Flip Book, Environment, Trees, Flowers, Soil, (Picture of stick)
- Next, add 2-3 staples at the very top to secure the pages together. The closer to the top, the better students will be able to work in their books.
- Turn the flip book over and fold that page up toward you so that you can see the "Treasure Pocket". Lift that page up and add a few staples on both sides to secure the pocket. Make sure not to staple this page to the other pages.

Extension Ideas:

- Read books about nature to introduce or become more familiar with aspects of the environment.
- Have students put their flower and leaf in their "treasure" pocket and then dissect those items when you get back to the classroom. Use magnifying glasses and/or microscopes to take a closer look.
- Complete IAITC's Throw and Grow lesson and learn more about native flowers.
- Learn more about flower and tree life cycles.
- Have students draw a comic strip showing the process of pollination.
- Go to agintheclassroom.org to contact your County Literacy Coordinator for free classroom sets of our Ag Mags!

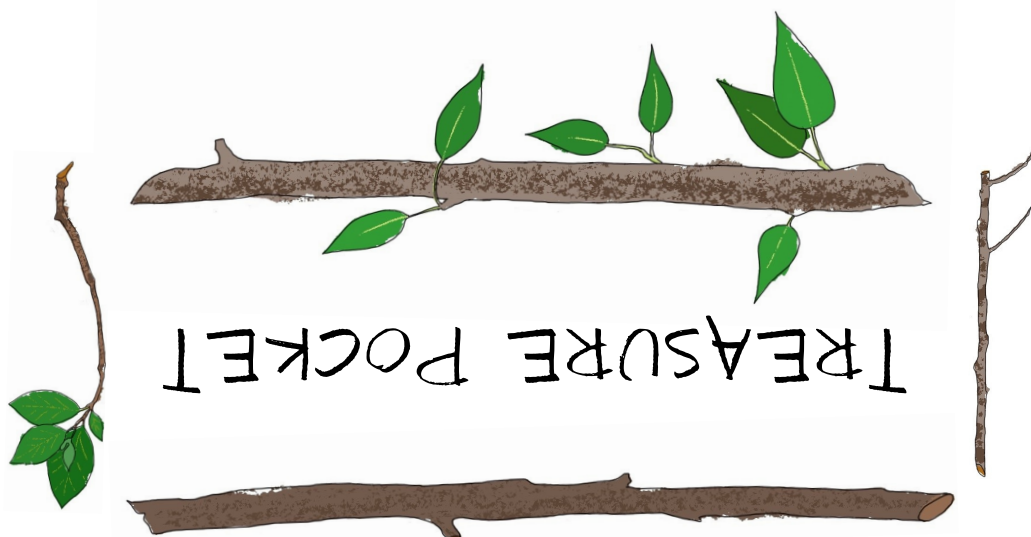
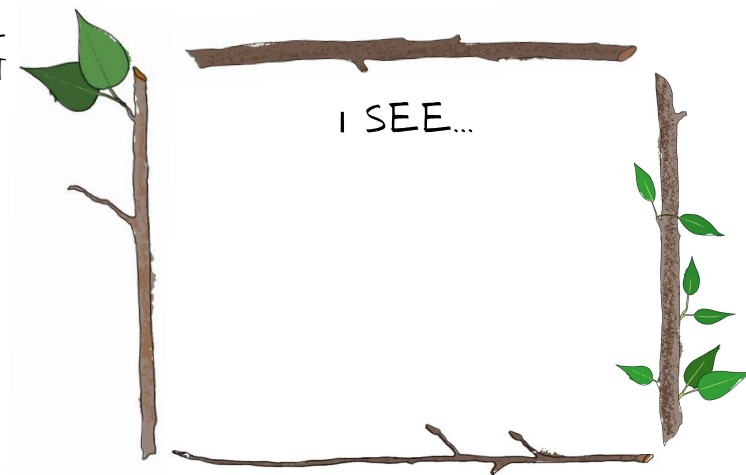
MY OUTDOOR ADVENTURE

FLIP BOOK

NAME: _____

WE ARE SURROUNDED BY NATURE! OFTEN TIMES WE TAKE OUR ENVIRONMENT FOR GRANTED BUT AS HUMAN BEINGS, IT IS OUR JOB TO TAKE CARE OF OUR PLANET! TO DO THAT, WE NEED TO BE AWARE OF OUR SURROUNDINGS AND APPRECIATE THE BEAUTY AND COMPLEXITY OF OUR ECOSYSTEM.

DIRECTIONS: USE YOUR SENSES TO DESCRIBE THE ENVIRONMENT AROUND YOU. MAKE A SHORT LIST OF WHAT YOU SEE, FEEL, SMELL, AND HEAR IN EACH OF THE CORRECT BOXES.



ENVIRONMENT



AGRICULTURE AND THE ENVIRONMENT



PROTECTING OUR ENVIRONMENT AND NATURAL RESOURCES IS EXTREMELY IMPORTANT. A PART OF BEING ABLE TO TAKE CARE OF OUR ENVIRONMENT IS TO LEARN AND UNDERSTAND HOW

LIVING AND NONLIVING THINGS WORK TOGETHER TO CREATE A HEALTHY AND THRIVING ECOSYSTEM.

JUST LIKE SCIENTISTS, CROP AND LIVESTOCK FARMERS UNDERSTAND THIS. TODAY, FARMERS ARE

WORKING WITH THOSE IN THE SCIENCE FIELD TO CONTINUE GROWING FOOD FOR THE WORLD WHILE

PRACTICING SUSTAINABILITY AND REDUCING THEIR IMPACT ON THE ENVIRONMENT.

SOIL: FARMERS RELY ON KEEPING THEIR SOIL HEALTHY TO GROW THE MOST NUTRITIOUS CROP

FOR HUMAN AND ANIMAL CONSUMPTION! PLANTS CAN'T GROW WITHOUT THE NUTRIENTS AND



MINERALS IN THE SOIL. MANY FARMERS PRACTICE NO-TILL FARMING TO REDUCE EROSION, CROP ROTATION TO REPLACE IMPORTANT USED NUTRIENTS, AND THE 4R'S (RIGHT SOURCE, RIGHT RATE,

RIGHT TIME, AND RIGHT PLACE) WHEN APPLYING FERTILIZERS.

POLLINATION: POLLINATORS ARE RESPONSIBLE FOR POLLINATING OVER 1,200 CROPS THAT

PEOPLE EAT AROUND THE WORLD. FARMERS WHO GROW THOSE PLANTS ARE PLACING



POLLINATOR HABITATS AROUND THEIR FARMS TO HELP PROMOTE POLLINATOR POPULATIONS AND

ENCOURAGE POLLINATION OF THOSE CROPS!

HERE ARE SOME COMMON, NATIVE ILLINOIS TREE LEAVES AND SEEDS:

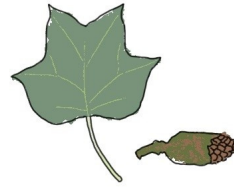


LOCUST

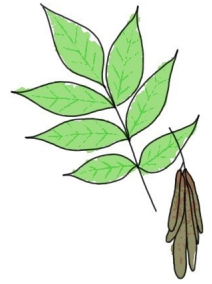
RED OAK



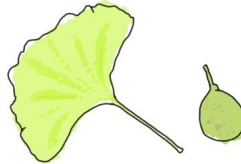
TULIP



ASH



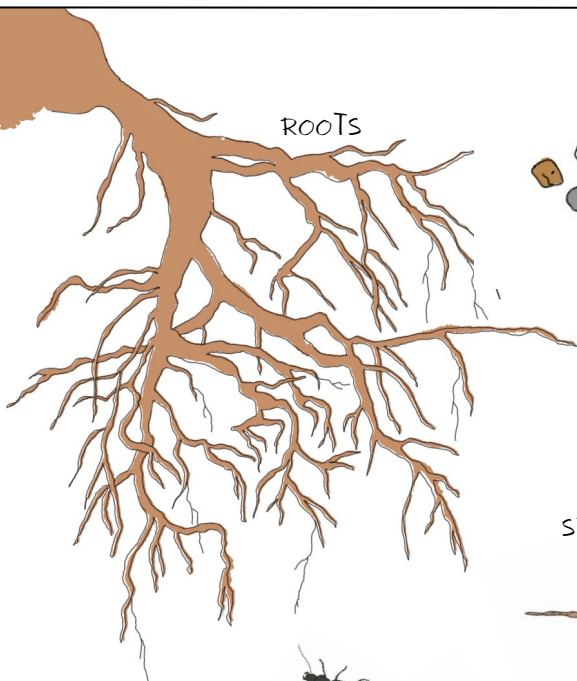
WHITE OAK



GINKGO



SILVER MAPLE



ROOTS



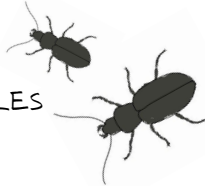
ROCKS



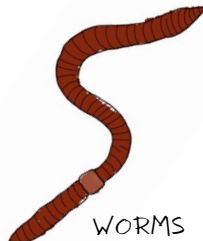
ANTS



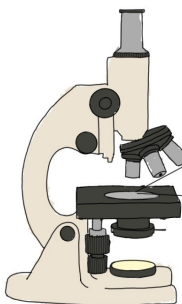
SPIDERS



BETLES



WORMS



MICROORGANISMS

STEP 3: OBSERVE THE HOLE AND RECORD
YOUR OBSERVATIONS HERE

STEP 4: OBSERVE SOIL IN YOUR BIN AND RECORD
YOUR OBSERVATIONS
HERE

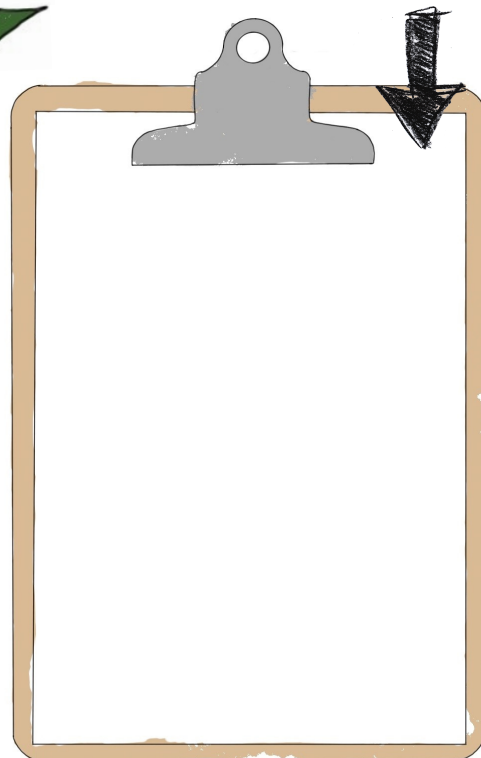
DON'T BE AFRAID
TO GET YOUR
HANDS DIRTY AND
BREAK APART
ANY CLUMPS!

SOIL

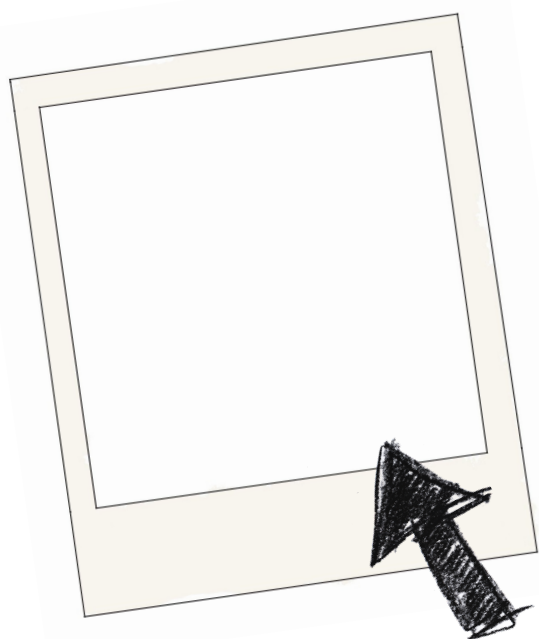
SOIL IS MADE UP OF ORGANIC MATTER (ONCE LIVING PLANT AND ANIMAL MATTER), MINERAL PARTICLES (SAND, SILT, AND CLAY), AND PORE SPACES (OPEN AREAS POTENTIALLY FILLED WITH AIR, WATER, AND LIVING ORGANISMS).

THE SOIL BENEATH OUR FEET IS AS IMPORTANT AS THE AIR WE BREATHE AND THE WATER WE DRINK! THIS IS BECAUSE IT IS THE PRIMARY SOURCE OF FOOD, FEED, FUEL, FORAGE, AND FIBER.

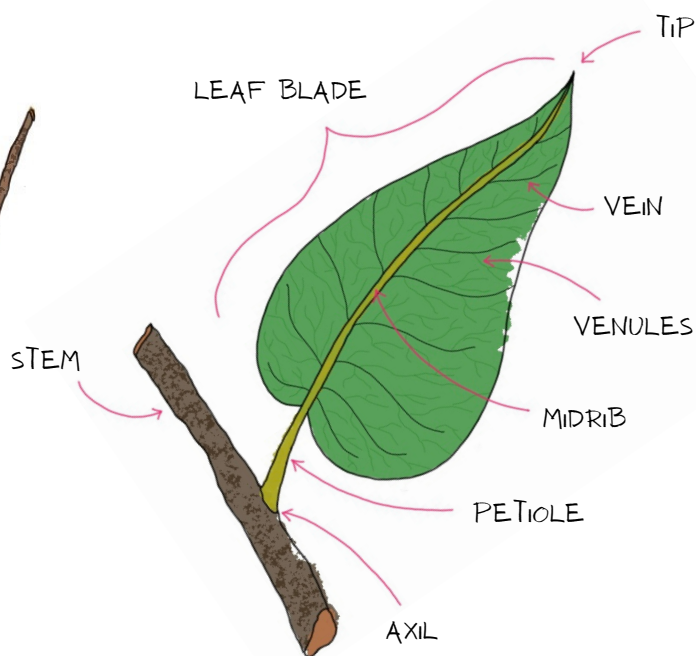
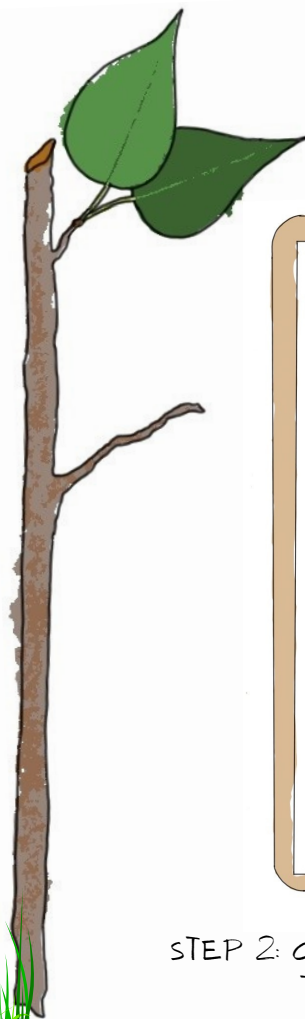
STEP 1: CHOOSE YOUR DIGGING SPOT AND DESCRIBE SURROUNDINGS HERE



STEP 2: CAREFULLY DIG YOUR HOLE AND PUT THE LOOSE SOIL INTO A BIN



FIND A LEAF AND DRAW IT HERE!



TREES

HERE ARE SOME COMMON NATIVE ILLINOIS FLOWERS:



BEEBALM

BLACK-EYED SUSAN



BUTTERFLY WEED



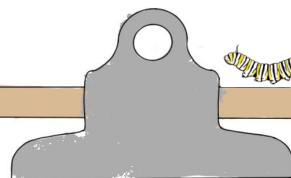
GOLDENROD



IRIS



CONE FLOWER



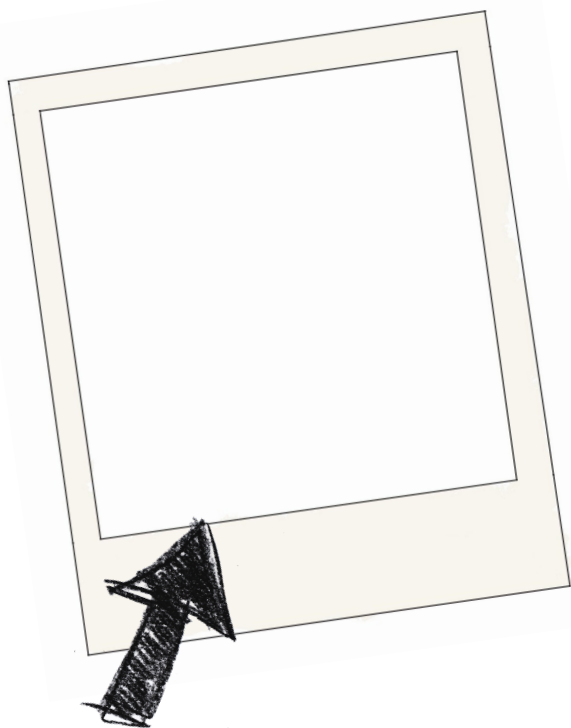
POLLINATION

POLLINATORS ARE RESPONSIBLE FOR POLLINATION ON MORE THAN 180,000 DIFFERENT PLANT SPECIES AND MORE THAN 1,200 CROPS THAT PEOPLE EAT EVERY DAY AROUND THE WORLD.

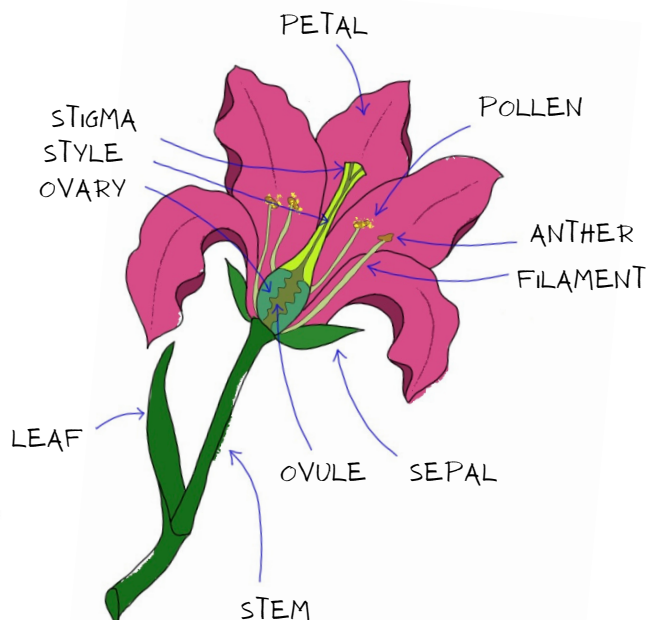
POLLINATORS DON'T ACTUALLY KNOW THAT THEY'RE HELPING TO POLLINATE PLANTS. POLLINATORS VISIT FLOWERS TO SEARCH FOR NECTAR AND POLLEN, THEIR SOURCES OF FOOD!



CAN YOU EXPLAIN HOW POLLINATION WORKS?



FIND A FLOWER AND DRAW IT HERE!



CAN YOU IDENTIFY ANY OF THESE PARTS ON THE FLOWER YOU FOUND AND DREW?

FLOWERS