

WHAT IS IN MY HABITAT?



OVERVIEW:

Students will use their senses to observe what is in the habitat and will begin a journal of their observations.

OBJECTIVES:

After completing this activity, students should be able to:

1. Define a habitat and the essential parts of a habitat that wildlife need to live.
2. Define observation and explain how the five senses are used in this process.
3. Start a journal of what they observe in the habitat.

BACKGROUND:

Detroit used to be known as the “City of Trees.” But since 1950, the city has lost 500,000 trees to disease and urban growth. One result of the loss of so many trees was a loss in habitats for plants and animals in Detroit.

There are several types of habitats that are found in Detroit. A **wetland** is a habitat that is constantly wet and flooded at more or less regular intervals. A **forest** is a community of trees, shrubs, herbs, and associated plants and organisms covering a considerable area, and using oxygen, water, and soil nutrients as it attains maturity and reproduces itself.

The habitat will be constructed from native southeastern Michigan plant species. **Native plant species** are plants that have adapted over eons to the soils and climate. These plants will attract native wildlife by providing food and shelter necessary for them to live in our city.

Observation is a necessary skill for the students to obtain or enhance for them to be affective caretakers of their outdoor classroom. They will start a journal to be used with for observations of their habitat. They will enter new observations each week. Younger children can draw realistic pictures in their journal.

PROCEDURE:

1. Activate prior knowledge. Ask the students if they know what observation means and how do they observe something. Ask the students to identify their senses. **Observation means things that are seen, heard, felt, tasted or smelled.**
2. Inform the students that they will be playing a game. The

SUBJECT:

Life Science: Ecology
English

GRADE LEVEL:

K-5

Michigan Curriculum Framework Science Content Benchmarks:

Constructing New Scientific Knowledge
(C) 1.1.1 Generate questions about the world based on observation.

Reflecting on Scientific Knowledge
(R) 11.1.2 Show how science concepts can be illustrated through creative expression such as language arts and fine arts.

GROUP SIZE:

Small groups
made up of 4-5 students

TIME:

1 Period, 50 minutes

TEACHING STRATEGIES:

Discussion
Cooperative learning

MATERIALS:

- 1 Sheet of 8 1/2 x 11 paper
- 6 Clipboards
- 6 Observation Sheets
- 1 Pencil per student
- Magnifying Glasses

WHAT IS IN MY HABITAT?



students will be going out into their habitat. *A habitat is a place where plants and animals live.* Each group will have to record as many sight and sound observations in the habitat as possible. ** Note for younger students you could chose to hide objects for them to find and observe with their magnifying glasses.*

3. Put the students into small groups of 4 or 5 students. Each group will have one recorder which will write down the observations. ** Note for younger students you could record their observations.*
4. Have the students form a circle and close their eyes. Ask them to be perfectly silent for 60 seconds and to remember everything they hear. After observation time have them get together with their groups and give their answers to the recorder. Give the groups no more than five minutes to record their observations.
5. Bring the class back together and inform them that they will have 15 minutes to observe and record everything in their habitat. Have them be as specific as possible. ** Note make up some ground rules. For example they cannot put everyone name in the class as an observation.*
6. After the observation time have them come together and have each person in the group introduce themselves and have the recorder read aloud their findings. The other group recorders should cross out any answers that match theirs. The team with the most answers left are the winners. ** Note for younger students you could chose to just have the team with the most observations be the winners.*
7. Conclusion – take the class out into the habitat each week and discuss the similarities and differences they observe.

- ***Extension of this Lesson***

The observations for the students could be more specific by having them record the weather on these days and ask them to draw conclusions about wildlife they observe and the weather for that day.

The students could also start a database with their observations that list wildlife physical descriptions, time and date of observations.

PROCESSES:

Observe
Classify
Oral Communication
Written Communication

CAREERS:

Ecologist
Naturalist
Forester
Journalism

RESOURCES:

Silverstein, Shel (1964). The Giving Tree. New York: Harper & Row Publishers.

Tresselt, Alvin (1992). The Gift of the Tree. New York: Lothrop, Lee & Shephard Books.

WHAT IS A HABITAT?



OVERVIEW:

Students will learn about the essential elements of a wildlife habitat such as food, water, shelter and space.

OBJECTIVES:

After completing this activity, students should be able to:

1. Define a habitat and the essential parts of a habitat that wildlife need to live.
2. Illustrate and diagram the parts of a habitat.
3. Name at least two different types of habitats.

BACKGROUND:

Detroit used to be known as the “City of Trees.” But since 1950, the city has lost 500,000 trees to disease and urban growth. One result of the loss of so many trees was a loss in habitats for plants and animals in Detroit.

There are several types of habitats that are found in Detroit. *A wetland is a habitat that is constantly wet and flooded at more or less regular intervals. A forest is a community of trees, shrubs, herbs, and associated plants and organisms covering a considerable area, and using oxygen, water, and soil nutrients as it attains maturity and reproduces itself.*

PROCEDURE:

1. Activate prior knowledge. Show a poster on Michigan habitats and ask the students what they see. Bring out the vocabulary that is desired: *A habitat is a place where plants and animal lives.*
2. For older students, discuss different types of habitats (wetland, forest, field, etc.)
3. Ask students for examples of animals and their habitats. List them on the chalkboard.
4. Go into your outdoors classroom and find examples of food, water and shelter for Detroit animals.
5. Inside, each student will receive one picture card of a native Michigan animal. Each student will draw a habitat for their animal and label the food, water and shelter of the animal. Don't forget the sun!
6. After 15 minutes of working the timekeeper informs the teacher that time is up.
7. Each group has three minutes to present their habitat

SUBJECT:

Life Science: Ecology

GRADE LEVEL:

K-5

Michigan Curriculum Framework Science Content Benchmarks:

Reflecting on Scientific Knowledge (R) 11.1.2 Show how science concepts can be illustrated through creative expression such as language arts and fine arts.

GROUP SIZE:

Small groups
made up of 4-5 students

TIME:

1 Period, 50 minutes

TEACHING STRATEGIES:

Guided reading
Discussion
Cooperative learning

MATERIALS:

- Wildlife Cards
- 1 sheet of 8 1/2 x 11 white construction paper per student
- 10 boxes Crayons and/or Markers
- Paint
- Paint Brushes
- Stickers
- 1 pencil per student
- Chalkboard
- 1 Piece of chalk

Scavenger Hunt



OVERVIEW:

A scavenger hunt is a wonderful way to explore an area that is either familiar or unfamiliar to a group. Focusing on finding objects, sights and sounds will encourage new discoveries for everyone! Be sure to include objects that allow for exploration with all senses, except for taste under most circumstances. A list is provided, but feel free to add any items of special interest to your environment. This activity can be repeated in different seasons for comparison with the same list or a new one.

OBJECTIVES:

After completing this activity, students should be able to:

1. Define Scavenger Hunt.
2. List items found using each of their senses.
3. Define and understand observation.

PROCEDURE:

1. Ask the children if anyone has ever participated in a scavenger hunt. What kinds of things were they able to scavenge? Now ask if anyone has ever done a nature scavenger hunt. What sorts of items would they expect to find on a nature scavenger hunt? Tell the children that a nature scavenger hunt will begin in just a few minutes.
2. Divide the group into even teams of about 4-5 children of varying ages, including one adult in each team. Each group should select a person to be the recorder, and make sure all the items on the list have been found. There should also be a collector who carries the bag and makes sure no items get lost in the excitement. Finally, one member will be responsible for explaining their loot with the rest of the group.
3. Hand out the scavenger hunt list, remind the children to be careful with the objects they collect, not to damage them, and put everything back into nature when the activity is over. Explain the boundaries of the playing area whether a small park or an entire neighborhood. Also, decide on a time limit and an agreed meeting place when everyone is done. If you want this to be a race, be sure to have small prizes for the winning team.
4. When everyone has returned, have each group share the items they scavenged. Some of the smelling or hearing items may need to be explained. So be sure to ask questions and encourage others to do the same.
5. If time allows, ask each team to group their items in some manner both natural and unnatural or plant and animal, etc.
6. Finally, return all items (except rubbings and litter) to their natural setting.

SUBJECT:

Life Science: Ecology
English

GRADE LEVEL:

K-5

Michigan Curriculum Framework Science Content Benchmarks:

Matter and Energy

(PME) IV.1.1 Classify common objects and substances according to observable attributes/properties.

Reflecting on Scientific Knowledge

(R) II.1.4 Develop an awareness of and sensitivity to the natural world.

GROUP SIZE:

Small groups
made up of 4-5 students

TIME:

1 Period, 50 minutes

TEACHING STRATEGIES:

Discussion
Cooperative learning

MATERIALS:

- Pencils
- Crayons
- Paper
- Bags
- Scavenger Hunt List
- Prizes (Optional)
- Camera (Optional)
- Sunflower Seeds
- Journal
- Weather Meter
- Tape Measure

PROCESSES:

Observe
Oral Communication

CAREERS:

Ecologist
Naturalist



Scavenger Hunt List

- Something green
- Something purple
- Something red
- A “natural” rubbing
- An “unnatural” rubbing
- Something that shouldn’t be there
- Evidence an animal has been in the area
- Something shiny
- Something rough
- Something smooth
- Drawing of an insect you found
- Something unique that no one else will have found
- Drawing of a flower you found
- Something you have never seen before
- Drawing of a worm you found
- Something that smells good
- Something that smells bad
- Drawing of an animal you saw
- A berry
- Piece of dead wood
- A feather
- A seed
- Something perfectly straight
- Something round
- Something sharp
- Something fuzzy
- Five pieces of man-made litter
- Three natural sounds

Three unnatural sounds

Mapmaking



OVERVIEW:

How well do you know your school environment? This activity allows everyone to explore their schoolyard in a new way. After the investigation, students can draw a map of their school. Mapmaking is an important tool for children to discover a sense of place in their home, neighborhood, school and city.

OBJECTIVES:

After completing this activity, students should be able to:

1. List identifying features of their school.
2. Draw a map of their schoolyard including these features.

PROCEDURE:

1. First, the group will go outside and investigate the schoolyard, answering the following questions:
 1. Where are your parks or greenspaces?
 2. Where do you like to play?
 3. Where would you like to play?
 4. Where do people in your school like to gather and talk?
 5. Where do you see animals and insects?
 6. What kind of animals and insects have you seen?
 7. If you could change anything, what would you change?
2. After these questions have been answered, return to the classroom to begin drawing maps of the schoolyard.
3. Begin by asking the children what is a map and why is it used.
Answer: A map is a drawing or picture showing what is in a particular area. Maps are used to help people find their way in an area.
4. Ask the children to draw a map of their school and/or neighborhood depending on their age.
5. Remind them to draw natural features (trees, gardens, etc.) and unnatural features (buildings, cars, etc.) on their map that will help others locate their school.
6. When everyone has finished drawing their map, encourage them to stand up and share their map with the rest of the group. Ask them to point out the special features on their map that mean a lot to them.
7. For spatial & logical learners, your students may want to use rulers and measuring tape to create a more scaled map.

SUBJECT:

Life Science: Ecology

GRADE LEVEL:

K-5

Michigan Curriculum Framework Science Content Benchmarks:

Geographic Perspective

II.2.2 Describe the ways in which their environment has been changed by people, and the ways their lives are affected by the environment.

II.4.1 Draw sketch maps of the community.

Reflecting on Scientific Knowledge

(R) II.1.2 Show how science concepts can be illustrated through creative expression such as language arts and fine arts..

TIME:

1 Period, 50 minutes

TEACHING STRATEGIES:

Discussion

Cooperative learning

MATERIALS:

- Pencils
- Crayons
- Paper
- Markers
- Camera (Optional)
- Journal
- Weather Meter
- Tape Measure

PROCESSES:

Observe

Oral Communication

SUGGESTED BOOKS:

“Mapping Penny’s World” by Loreen Leedy. (2000)

“Me on the Map” by Joan Sweeney. (1998)

Senses Trust Walk



OVERVIEW:

Students will explore their senses with a partner.

BACKGROUND:

When one sense is taken away, our other senses are heightened. This activity allows everyone the chance to explore more deeply the senses of smell, touch, hearing and taste. Collect some everyday items that will be fun to explore using your senses and allow your group to make some guesses about what they are experiencing. Before blindfolding anyone, be sure to discuss proper methods of guiding people who can't see: (for example: tell them to step over holes or walk around tree stumps.)

PROCEDURE:

1. Discuss our five senses. Do the children know all five of them? Which ones do they use every day? Answer: All! Which one do they use the most? Explain they will be doing an activity to test their senses.
2. Divide the group into pairs, one child with one adult if there are enough adults. Have the groups decide who will be blinded first, and ask them to put on the blindfold. Make sure they can't see! There will be an opportunity to switch so that everyone gets a turn.
3. The first sense tested will be their sense of smell. Have the sighted partner choose two items from your collection of smelly things. Bring the objects back to their partner and, sitting in front of them, hold the first object to their nose. Ask them to guess what they smell. Write down the answer and then try the other object. Allow them to remove their blindfolds and see what they smelled. Have the partners switch places.
4. The next sense will be taste. Again ask the sighted partner to select two items for their partner to taste. Write down their guesses and then reveal the foods. Have the partners switch places.
5. Now that they feel comfortable with blindfolds on and trust their partner, the pairs are ready for the walking part of the activity. Have the sighted partner lead the blind partner to a specific spot like a tree or stump or shrub. Remind everyone to help their blind partners in every way to avoid injuries as they walk to the spot. The sighted partner should guide the blind partner's hands to an object they want them to feel. They can explore this object as much as they want because they will be challenged to find the object again by themselves. While in the one location, have the partners stop and listen to the sounds of that spot. Maybe the sounds will help

SUBJECT:

Life Science: Ecology

GRADE LEVEL:

K-5

Michigan Curriculum Framework Science Content Benchmarks:

[Elementary](#)
Reflecting on Scientific Knowledge
(R) II.1.4 Develop an awareness of
and sensitivity to the natural world.

TIME:

1 Period, 50 minutes

TEACHING STRATEGIES:

Discussion
Cooperative learning

MATERIALS:

- Blindfolds (one per pair of children)
- Paper
- Pencils
- Clipboard
- Items to explore (leaves, flowers, spices, fruits, soil)

PROCESSES:

Observe
Hypothesize
Classify
Oral Communication
Written Communication

CAREERS:

Ecologist
Naturalist
Forester

Senses Trust Walk



the blind partner find their way back again. When they are ready, guide the blind partner back to the starting place and remove their blindfolds. When everyone has returned, allow them to search out their special spot.

6. Have partners switch places.
7. When everyone has finished, sit in a circle and ask how it felt for them to be blind. Which position did they like better, guiding or being lead? Was it easy to recognize smells and taste? Which one was easier? Which part was the hardest to guess the answer? Discuss how animals might use their senses to find food and escape from danger.

	SMELL	TASTE	TOUCH
1			
2			
3			
4			
5			
6			

Exploration

Biodiversity Bingo



Instructions: Talk to your classmates to see what they know about their environment. When you find someone who can provide an answer, have him or her write his or her first name (or initials) in the box, along with the answer. Each classmate may sign your paper only once! See how many boxes you can complete.

Find someone who...

Can list four things all living things need to survive.	Can name Michigan's state tree.	Can name three kinds of trees that grow in Michigan.	Can name three lakes or rivers close to your school.
Can name Michigan's state bird.	Has a birdfeeder at their house.	Can name three wild animals that can be seen in your area at any time of the year.	Helps take care of a vegetable or flower garden.
Can list three reasons trees are important to people.	Knows someone who has been hunting or fishing.	Can name three signs of fall.	Knows where soil comes from.
Knows how to read a thermometer.	Can name three parts of a food chain.	Has gone hiking in the woods.	Can name three kinds of wildlife that migrate to and from Michigan each year.

Growing Shadows



OVERVIEW:

Students will learn that the length of shadows change with the time of the day and the angle of the sun

OBJECTIVES:

After completing this activity, students should be able to know:

- 1) Students will use a formula to measure their own height.
- 2) Students will use the same formula to determine the height of the trees their outdoor classroom.
- 3) Students will complete a chart of the data they collect and use it to determine the average height of their trees.

BACKGROUND:

On a sunny day, plan to look at shadows at least twice, i.e. at two intervals separated by two or more hours. Each time, take the children to the same place outdoors. Have them mark their spot for standing. On a lawn, the place can be marked by a small garden stake. On asphalt pavement, chalk can mark the spot. In a rocky field, a small pile of rocks may be used.

PROCEDURE:

1. The children should work in teams of three. The first child stands at a selected spot and observes their shadow.
2. The length of the shadow is measured by using a long string. A second child holds one end of the string to the tip of the standing child's shoe.
3. The third member of the team stretches the string to the end of the shadow and marks the string with the marking pen. Masking tape on the string is another way to mark the length of the shadow.
4. Have all the children compare the lengths of their strings. Taller children will have longer strings. Save these strings for comparison.
5. If the first observation is done at 9am, the second observation could be done at noon. The noon shadows will be much reduced in length, in comparison with the morning (or afternoon) shadows.
6. Have the children compare the length of their strings at the two different times of the day. Invite them to explain why the lengths changed.
7. If you are using sidewalk chalk, just have the students draw around the entire shadow each time. Make sure they stand in the same exact place.

SUBJECT:

Math & Science

GRADE LEVEL:

3-5

Michigan Curriculum Framework Science Content Benchmarks:

*Elementary
Waves and Vibrations
(PWV) IV.4.4 Explain how shadows
are made.*

TIME:

1 Period, 50 minutes

TEACHING STRATEGIES:

MATERIALS:

- String
- Sidewalk chalk
- Marking pen
- Chalk
- Ruler
- Flashlight
- Sundial

PROCESSES:

Observe
Hypothesize

AUTHOR:

David R. Stronck

FURTHER CHALLENGES:

1. Use rulers to measure differences in the length of the strings. Record these measurements. Compare the measurements at the same times of the day with different dates in the year. Note the seasonal changes of the sun's angle.
2. In a darkened classroom, use a flashlight to compare the length of shadows from a small object, e.g., a pencil. If the flashlight is held almost above the pencil, there will be a very short shadow. If the flashlight is held near the table top where the pencil is held, the shadow may be rather long. This demonstration shows how the angle of the sun's rays changes the length of the shadows.
3. Use a sundial to show the changing position of the sun. A simple sundial can be constructed by using a stick or pointer standing upright on a flat plane. On the plane, a piece of wood or cardboard can be used to mark the line of the shadow at different hours of the day. The pointer will be south of the plane (from south to north). The children can mark the lines along the shadows. They can return each day to note that the sundial is keeping correct time according to clocks.



Daily Observations



OVERVIEW:

Students will observe their outdoor classroom daily and report on data collected.

OBJECTIVES:

After completing this activity, students should be able to know:

1. How to use a thermometer.
2. How to describe plant and animal observations.
3. Observe the sky for changes in clouds, sun, precipitation, etc..

PROCEDURE:

1. Distribute Daily Observations chart to each student. Divide the group into four teams. Each team will check a different location each day.
2. Each team should receive a thermometer and a ground thermometer.
3. Have the team fill in their daily charts. In the morning, the teams will fill in the AM column and in the afternoon, they will fill in the PM column.
4. The teams will have 10 minutes to observe and 1 minute to report to the rest of the group.
5. This activity will be repeated every day to observe daily changes in the outdoor classroom.



SUBJECT:

Science & Language Arts

GRADE LEVEL:

3-5

Michigan Curriculum Framework Science Content Benchmarks:

Elementary

Constructing New Scientific Knowledge
(C) I.1.3 Manipulate simple devices that aid observation and data collection
(C) I.1.4 Use simple devices to make measurements in scientific investigations.

Atmosphere and Weather

(EAW) V.3.1. Describe weather conditions.

TIME:

1 Period, 50 minutes

TEACHING STRATEGIES:

MATERIALS:

- Observation Chart
- Clock
- Thermometer
- Ground thermometer
- Pencils
- Clipboards
- Rain gauges

PROCESSES:

Observe

Hypothesize

CAREERS:

Ecologist

Naturalist

Forester

Meteorologist

Daily Observations



DATE: _____

LOCATION: _____

TIME: _____

AIR TEMPERATURE: _____ C _____ F

GROUND TEMPERATURE: _____ C _____ F



CONDITIONS:

Circle one



PRECIPITATION:

Circle one



CLOUDS:

Circle one



EVIDENCE OF ANIMALS: _____

PLANT OBSERVATIONS: _____

