



## Duke Farms Living Habitats

### Lesson Plan: What Habitat is That?

An Instructor-Guided Lesson for Students Grades 1-3

#### NJCCS Addressed:

|   |  |           |   |
|---|--|-----------|---|
| 2 | Organisms interact and are interdependent in various ways; for example, they provide food and shelter to one another.        | 5.3.2.C.1 | Describe the ways in which organisms interact with each other and their habitats in order to meet basic needs.                |
| 2 | A habitat supports the growth of many different plants and animals by meeting their basic needs of food, water, and shelter. | 5.3.2.C.2 | Identify the characteristics of a habitat that enable the habitat to support the growth of many different plants and animals. |

#### Common Core Standards: English Language Arts: SL.2.1 - SL 2.6

#### Goal:

Using Eco-Kits, Duke Farms Field Guide and associated lesson plan, instruction sheets and activity sheets, provided by Duke Farms, instructors will guide students to three types of habitats where students will learn the type of habitat and the type of animals that can be found in that habitat.

**Objective:** Students will learn the proper use of field study equipment including, field guide, binoculars and nature journal.

**Objective:** Students will be able to identify various traits of specific habitats and name 3 types of habitat. (woodland, meadow, wetland)

**Objective:** Students will learn the 5 aspects of all habitats that make them suitable for life (food, water, shelter, air, space).

**Objective:** Students will learn what a habitat is and why it is important.

**Objective:** Students will be able to explain that different types of animals live in different types of habitat: Woodland habitat = Squirrels, Grassland Habitat = Ground Nesting Birds, Wetland Habitat = Frogs.

**Materials Needed:**

- Eco-Kits – 1 per student - Provided by Duke Farms (100% Refundable Deposit required)
- Duke Farms Field Guide – 1 copy per instructor (100% Refundable Deposit required)
- Whose Habitat is That? Lesson Plan
- Duke Farms Map – 1 Per instructor

**Duration:** This activity should take approximately 1.5 hours to complete.

**Distance traveled by foot:** 1.5 Miles

**Vocabulary:**

Habitat, woodland, wetland, meadow, binoculars, compass, field guide, nature journal, tree, water, grass, flower, leaf,

**Procedure:**

This lesson should begin in the Classroom Space or in front of the Habitat Display in the Orientation Center where materials and equipment can be distributed, rules can be covered and a brief orientation by Duke Farms staff can be completed.

***Introduction:*** (5 Minutes) Ask students where they eat and drink. Ask students where they sleep. Ask students where their brothers and sisters and mom and dad sleep. Ask the students where a squirrel sleeps, eats and where their family lives. Ask the students where a frog sleeps, eats and where their family lives. Ask the students where a bird sleeps, eats and where their family lives. Explain that where an animal or person finds food, shelter, air, space and water is called a habitat. In order to be a good home, this place needs to provide 5 things:

1. Food
2. Shelter (protective covering)
3. Air
4. Water
5. Space

If one of these things is missing, it does not make a good habitat. Ask the students to imagine their home without a roof. What would happen to them? What if there were no air? What if there were only one tiny room for your WHOLE family to live in?

***Introduction Activity:*** Habitat Simon Says (10 minutes)

Procedure:

1. Assemble students in a straight line arms length apart
2. Explain the rules of Simon Says (if Simon says – you do it, if he doesn't say – you DON'T do it) Explain that you will be Simon
3. Try a sample exercise: Simon says cover your mouth with one hand, Simon says uncover it. Cover your mouth again (Ooops! Simon didn't say!)

4. Ask the students to name the 5 parts of a habitat: Air, Food, Water, Shelter, Space.
5. Show a hand-motion for each of the 5 parts. You may make up your own but here are some suggestions:
  - a. Air – Fan your hand in front of your face – feel the air?
  - b. Water – make a wave motion with your hands
  - c. Food – rub your stomach
  - d. Space – Spread your Arms open wide to the side
  - e. Shelter – create a roof over your head with your arms
6. Have the students practice along with you.
7. Now play the game of Simon Says. There are no winners or losers in this game. It is just a way to get students to remember what to look for when they are out searching for habitats.

#### Eco-Kit Review and Distribution (5 minutes)

1. Explain to the students that they will be looking for habitats around Duke Farms. They will be using some of the same tools that scientists use to look for habitats. Go through the Eco-Kit, telling the students the names of the tools and how they will be used out in the field. When the time comes in the field you may have to explain this again and guide the students in their use.
2. Explain to the Students that we are borrowing these kits, they do not belong to us and we must be very careful to make sure we bring them back exactly as we borrowed them.
3. Distribute the Eco-Kits. Ask the students to refrain from opening them until they get to their first stop on the hike.

#### **Activity: Habitat Hike (1.5 hour)**

##### Procedure:

1. Depart the classroom, make sure all students use the rest room before proceeding.
2. You will walk with your group to the pedestrian entrance. ( it should take about 5 minutes – you can review the parts of a habitat while you walk!)
3. Once you cross through the pedestrian gate you will be on Central Way. Follow this to Habitat Lane (gravel) and make a left onto Habitat Way.
4. Shortly on the left hand side of Habitat Lane you will find a habitat Hide. Begin your search for habitats here. Explain to student that you are in front of a wetland habitat. Ask them what makes this a wetland. Discuss the features that make this habitat different from others. Hint: WET LAND!! Ask what types of animals they think live in this habitat?
5. Do they see Air? Water? Space? Food? Shelter? Where?
6. Use the binoculars to find animals that live in this habitat. What do they see? Make notes or sketch in the field journal.
7. Can they find what they see in the field guide?

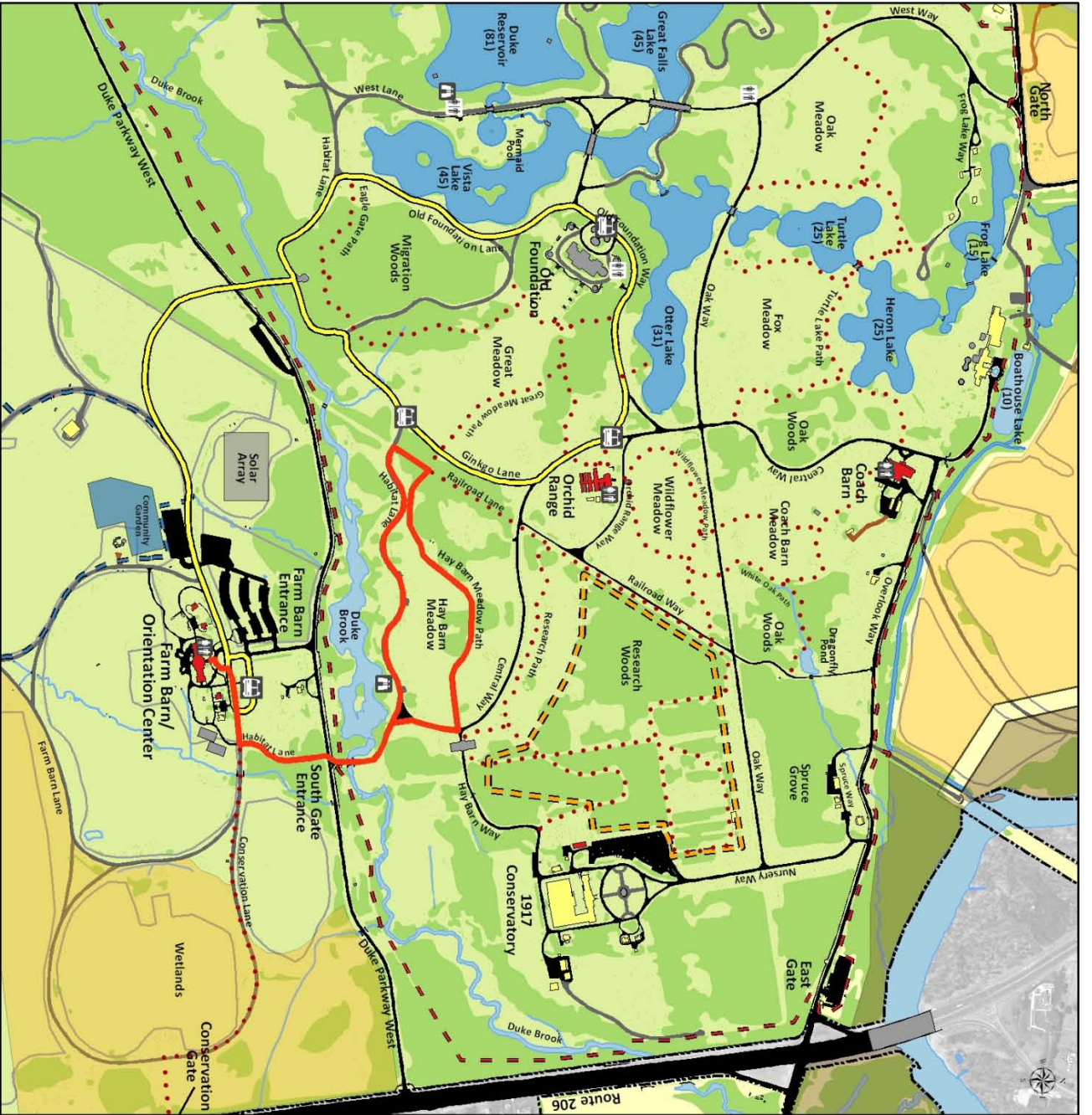
8. Students can then turn around and look at the Meadow habitat behind them. What is different between the wetland and the meadow?
9. What makes this a meadow habitat? Ask them what makes this a meadow. Discuss the features that make this habitat different from others.
10. Can they see any animals using the meadow as habitat? Make notes or sketch in the field journal.
11. Do they see Air? Water? Space? Food? Shelter? Where?
12. Continue along Habitat Lane. Stopping at a wooded Area. This habitat is called a woodland. What makes it different than a meadow? A wetland? Ask them what makes this a woodland. Discuss the features that make this habitat different from others.
13. Do they see Air? Water? Space? Food? Shelter? Where?
14. Use the binoculars to find animals using the woodland as a habitat. What do they see? Make notes or sketch in the field journal.
15. Are these the same or different animals than what they have seen in the other habitats?
16. Keep following Habitat Lane in the same direction. Make a right on Railroad Lane and then a right on Hay Barn Meadow Path. As you walk observe the changes in the types of habitats. What is the same? What is different? What types of animals do you see in each one? Make a right on Central Way and return back to the gate through which you entered.

**Conclusion:**

1. At the Farm Barn Orientation Center have the students list the 5 parts of every habitat.
2. Select a few students to display what they entered into their field journal and explain what they drew or wrote.
3. Ask the students the 3 types of habitats they saw today.
4. Ask the students if they saw the same animals or different in each habitat.
5. Ask students if they think a frog could live in a woodland or a squirrel in a wetland. Why or why not?
6. Explain to students that each type of habitat is important because each one supports different kinds of animals.
7. Collect the Eco-Kits and return to Front Desk Staff in the Orientation Center.







**Do this at Home or at School:**

1. Take a look around your school or your home. What type of habitat do you see there? Woodland? Wetland? Meadow? How do you know it is that type of habitat?
2. What types of animals do you see in the habitat? Are they same or different than the animals you saw at Duke Farms?
3. Keep your own Nature journal and write down or draw what you see in the habitats near you!
4. Don't forget to teach your family or friends the Habitat Simon Says game!



# What Habitat is That?

Grades: 1 - 3

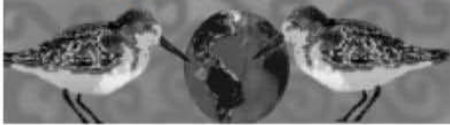
-  Walk Route
-  Tram Loop
-  Tram Stops
-  Habitat Hides
-  Composting Toilets
-  Indoor Toilets

**Distance:**  
1.50 Miles Roundtrip

- Route:**
- Front of Farm Barn to Pedestrian Entrance
  - Habitat Lane to Railroad Lane
  - Railroad Lane to Hay Barn Meadow Path
  - Hay Barn Meadow Path to Central Way
  - Return down Habitat Lane to the Orientation Center







## How to Use Binoculars

*This information is adapted from the Sister Shorebird School Arctic Nesting Curriculum.*

### Teacher

Usually, we must account for a difference in eye strength when using binoculars. Center-focusing binoculars have an adjustment to compensate for eyes of unequal strength or vision. You will notice that only one eyepiece is independently adjustable, and it has a scale marked off in diopters, the optical measuring unit for spherical power. Note that the individual eyepiece setting, once adjusted, can be considered permanent. The scale reading should be noted and checked occasionally as it may be accidentally moved by handling or in moments of excitement.

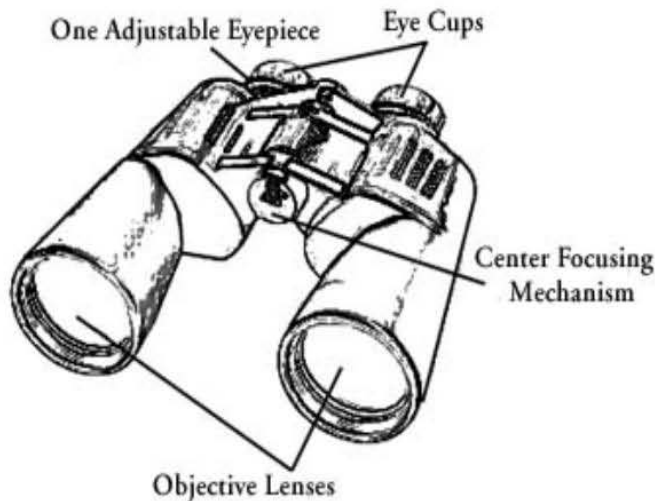
To adjust binoculars for any difference in the strength of your eyes, first, using the lens cover or your hand, cover the objective lens (the outer, big lens) which is on the same side as the adjustable eyepiece. With both eyes open to avoid distortion by squinting, look through the binoculars and, using the central focusing mechanism, focus on a distant object until it is sharp and clear. Now transfer the cover to the other objective lens. Again with both eyes open, but this time using the adjustable eyepiece, focus on the same object until it is clear.

Your binoculars are now properly focused for your use. Now, all you have to do is use the central focusing mechanism to focus for objects at various distances from you.

Focusing on moving objects and focusing quickly on something that is about to fly or move out of view are real challenges. If you practice, over time you will be surprised to find how your coordinated use of eyes and binoculars improves. Be patient and practice, practice, practice.

Another challenge is finding and focusing on objects in the sky. This is because the sky has depth, and there is not a background of objects (trees or horizon line) to use as reference points which both find your object and figure out what distance it is at.

Note that many binoculars have rubber eye cups which can fold down for use with glasses or sunglasses.



# Teaching a Student to Use a Compass

Begin by teaching children the four basic directions: north, east, south and west. An easy way to help children remember these is to use mnemonic device, such as "Never Eat Shredded Wheat" or "Never Eat Soggy Waffles." Show children how each letter in the phrase stands for a direction (the "n" in "never" represents "north"), and teach them that the order of the directions in the mnemonic device is the same as the rotation of a clock's hands.

Show children a basic map, and introduce the compass rose (a one-dimensional representation of a compass typically featured in the corner of a map). The compass rose marks both the four directions and the four intermediary directions (northeast, southeast, southwest and northwest). Provide opportunities to practice reading intermediary directions on the map.

Show children a compass and explain that it will always point to the north. Allow children to practice turning their bodies in different directions and moving the compass to various locations, noting which direction the compass points each time.

Practice finding directions other than north. South is the easiest to find, since it's simply the opposite of north. If you want to go south, you just go the opposite of the way the compass is pointing. To find east, go to the right of the direction the compass points. To find west, go to the left of the compass arrow. You can play a "Which Way?" game in which you have children take three steps in one particular direction, then three steps in another direction, and so on, ending in a special predetermined location.

Once children are proficient at reading basic maps and using a simple compass, they can combine the two skills and begin using the compass to get from one location to another. This can be done by creating imaginary treasure hunts or embarking on trips to "mystery destinations" in the car, or through other fun practice games.

One authentic way to practice compass-reading skills is in the car. Have children determine the direction the vehicle is heading at each turn, and also in the context of the trip as a whole. For example, you might ask, "If we have to drive east to get to the school, which way will we drive to get home?" With large groups of children, you may put students in pairs or triads and have them share a compass, completing activities together while you facilitate discussion

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Read more: [How to Teach Children How to Use a Compass | eHow.com](http://www.ehow.com/how_4841689_teach-children-how-use-compass.html#ixzz1xg2eYsFm)  
[http://www.ehow.com/how\\_4841689\\_teach-children-how-use-compass.html#ixzz1xg2eYsFm](http://www.ehow.com/how_4841689_teach-children-how-use-compass.html#ixzz1xg2eYsFm)



**Duke Farms**  
Living Habitats

# What Habitat is That?

## Activity Sheet

1. Draw a line from the habitat to what you will find in that type of habitat:

a. Woodland



b. Wetland



c. Meadow



F L T F D L Q P J P K D T S W  
 N T K S I N X Q V B N N M K O  
 P L E R E E A V I G Z A K T D  
 O S T A M I L L T Q Y L W S A  
 J A Z L G L C D D C G T E K E  
 G Y X U C E V Q G O C E I D M  
 U L X C P A X D R U O W Z Y W  
 M J M O R F J E O S I W N T U  
 G Y P N P E W C V O Z D A R K  
 K V R I C O T P Q E F T E R D  
 Z C C B L E S L Q J I D K E I  
 G T T F B D C D E B X T N T P  
 T S E R O F W A A H F M B A O  
 F X A A I R I H P B S B O W W  
 H S O E R B M S F S F D B U T

*Circle the Following  
Words in when you  
find them in the Box:*

AIR  
 BINOCULARS  
 FIELD GUIDE  
 FLOWER  
 FOOD  
 FOREST  
 HABITAT  
 LEAF  
 MEADOW  
 SHELTER  
 SPACE  
 WATER  
 WETLAND  
 WOODLAND



RATWE

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RIA

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RHTEELS

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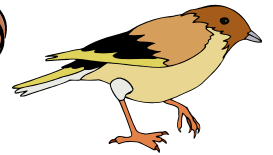
DOFO

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**Directions: Unscramble each of the clue words.**

**Copy the letters in the numbered cells to other cells with the same number.**

|   |   |          |   |   |   |   |
|---|---|----------|---|---|---|---|
|   |   | <b>B</b> |   |   |   |   |
| 1 | 2 |          | 3 | 4 | 5 | 6 |



**Circle the animal above that would live in the woodland.**

**Circle the type of Habitat that is near your School:**

**Wetland**

**Woodland**

**Meadow**

**Circle the type of Habitat that is near your Home:**

**Wetland**

**Woodland**

**Meadow**

**Glossary:**

**Binoculars** - An optical instrument with a lens for each eye, used for viewing distant objects.

**Compass** - An instrument containing a magnetized pointer that shows the direction of magnetic north and bearings from it

**Field guide** - A book for the identification of birds, flowers, minerals, etc. in their natural environment.

**Flower** - The seed-bearing part of a plant, consisting of reproductive organs (stamens and carpels) that are typically surrounded by a brightly colored corolla (petals) and a green calyx (sepals)

**Forest** - A large area covered chiefly with trees and undergrowth

**Grass** - Vegetation consisting of typically short plants with long narrow leaves, growing wild or cultivated on lawns and pasture, and as a fodder crop

**Habitat** - A particular type of environment regarded as a home for organisms.

**Leaf** - A flattened structure of a higher plant, typically green and bladelike, that is attached to a stem directly or via a stalk

**Meadow** - A meadow is a field vegetated primarily by grass and other non-woody plants (grassland).

**Nature Journal** – a place to write or draw observations while in nature.

**Tree** - A woody perennial plant, typically having a single stem or trunk growing to a considerable height and bearing lateral branches at some distance from the ground

**Water** - A colorless, transparent, odorless, tasteless liquid that forms the seas, lakes, rivers, and rain and is the basis of the fluids of living organisms

**Wetland** - Land consisting of marshes or swamps; saturated land

**Woodland** - Land covered with trees, forest

**\*\*DISCLAIMER\*\***

Duke Farms serves as a habitat for native plants and animals . Care should be taken when exploring the grounds. Hazards such as open waterways, roadways with bicycles, poison ivy and stinging and biting insects are present on the property. Adults are responsible for the minors in their care. Precaution should be taken to avoid prolonged exposure to the sun as well as to biting and stinging insects. Participants should bring water with them. Participants should familiarize themselves with potential hazards and act accordingly. This is a carry-in, carry-out facility so all garbage created during your program should be taken back with you to your school.