

Islandwood Lesson Plan Draft  
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## Animals Conservation by Measuring Forests

Goals:

To appreciate the difference in forest trails at Islandwood  
To mentally connect the habitat requirements of organisms to conditions on the ground  
To generate a baseline data set of simple structural measurements

### INTRODUCTION

-**Conserving animals?** Why? How?

-**Habitat management vs single species management.** Which is better? Which is easier? Which are people more interested in?

-**Habitat links:** Where do you find dolphins? Cave crickets? Mountain goats? Snakes? Worms? Eagles? Monkeys? All are associated with a habitat type.

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-Today, as student scientists, we'll studying the animals AND the habitats!

-Ready for more detail? A basic idea in ecology is patterns- and you are going to be using those patterns as tools. Instead of **LOOKING** for patterns, we are going to **USE** the patterns to make decisions and predictions.

-Each one of you will represent an **ANIMAL**. We will give you a card with information about that ANIMAL and a description of what sort of habitat it lives in. These habitat **LINKAGES** are the patterns.

-We are then going to walk two of the **TRAILS** here at Islandwood and **MEASURE** the **HABITAT** for specific characteristics. These **TRAILS** are the environment which we are going to assess with our patterns.

-We will use our **HABITAT MEASUREMENTS** to make a prediction about which **TRAILS** are good for which **ANIMALS**. We are going to save your data and add it to the Islandwood Scientist in Residence Trail Habitat and Animal Linkage Long Term Data Recording Super-Secret Archive!

### ANIMALS

-Distribute animal profiles (includes info such as status, tidbits) with habitat **LINKAGES** (matches **TRAIL COUNTS**)

-Select whimsical common names for real animal types

-Choose a physical action as a reminder of how different each animal is.

### TRAILS

-Distribute data sheets (includes metadata such as recorder, weather, date, school)

-Show map with trails marked

-6 measurements total

-3 standardized "COUNT" measurements (matches **LINKAGES** on animal profiles)

-3 student-selected "COMPARISON" measurements: Invite students to describe a specific thing they would recognize about a forest. These **COMPARISON** measurements are only relative between the two trails.

-We are sure that you are going to be much better at observation after your first trail. But we don't want that to confound our data. So we will flip a coin to choose which trail we go on first!

**-On trail:** For first few minutes, point out features as we pass them. Hopefully we'll have this scouted before we go out the first time. Ask students to describe what they are seeing about each measurement, and to point them out to the other students. Remember to distinguish COUNT absolute values from RELATIVE comparison values.

**-Combine data:** We have a very special way of correcting our errors! We have more than one brain between us, so we will combine our data to create an AVERAGE value that is more accurate than just a single look. Collect COUNT measurements at trails end and create an average. Bring calculators for students to do the arithmetic.

**-Interpretation:**

Did we see any of the animals (probably not!)? Can we say for sure they are here (No!)? But we can say which trails are better for which animals, and we can say which trails are unlikely to have a specific animal. So we aren't studying the animals directly, we are studying the habitats and using previously observed PATTERNS to make decisions and predictions. But things won't always be clear, and sometime we will have to either make an educated guess, or reserve our judgment for the time being. Remember we have only one timeframe for this observation, and we are only studying two trails on one island. So we must be careful of how far we can stretch our observations.

Each student reminds others of their ANIMALS habitat linkages. With the average MEASUREMENTS as a reference, that student will then make the decision as to which trail would be better for that animal, and report that as a concise statement to the group.

-Possible COUNTs, with units:

Dead trees, # of

Dead branches across trail, # of

Exposed tree roots, # times encountered

Trees shorter than tallest students, # of

Flowering plants, # of plants in flower

-Possible ANIMALS

Squirrels: need live trees

Owls: need dead trees

Beetles: need dead branches

Burrowing mice: need exposed roots

Butterflies: need flowering plants