Animal Interactions

Eco-Schools Topic:
Biodiversity
School Grounds
Objective:
Students will be able to:

- Understand, observe and appreciate how animals interact with one another and their habitat
- Understand the pattern of relationships between animals and available resources
- Begin to include human impact into the ecosystem and its individual parts

Key Questions, Attitudes, and Behaviors to teach:

- Name 3 things an animal needs to survive.
- Removing plants (like trees) from the food web will affect animals (like me!).
- I pay attention to how animals interact with each other and their environment.

Grade Level: Grades 1-8
Materials:

- *Oh Deer* lesson plan (see below)
- White Board
- White board markers
- Insect or local animal guidebook (or similar material)

Prep:

- Collect materials
- Print lessons
    - *Animal Adaptations* on our website, eslileaders.org
    - *Oh Deer* lesson plans available below
      (Provided by Adventure Links Hemlock Nature Center)
- *Optional:* Research animals and insects in your area

Format: 2 Rotations,
Time: One hour

Engaging Intro (7 minutes)

- Break into small groups.
- Ask your group: How do animals interact with one another? How do animals interact with the habitat around them?
- Facilitate a discussion about who eats what and who lives where.

Exploratory Activities (OUTSIDE) (40 minutes):
ROTATIONS (20 min at each station)

- ROTATION 1: Animal Adaptations
    - Lesson plan at eslileaders.org
- Oh Deer!
    - See instructions below

With a little bit of knowledge, we can ESLI make a difference

Meaningful Discussion: (5-10 minutes):

- One Minute Observations
    - What animal interactions and animal/plant interactions do you see in your schoolyard? See if you can think of your own food chains and food webs..
- Have students circle up in small groups and share any animal interactions they learned about or observed. Groups can start brainstorming about how humans play a role in these interactions.

OH DEER!

Project Wild *pg.36-40*

Intended Results: Identify ***food, water, shelter***, and ***space*** as four essential components of habitat.
Understand the importance of good ***habitat*** for animals and plants.
Discus the relation ship between an animal species and its resources.

Understand how changes in environmental conditions effect populations, and what factors lead to ***viable populations***, ***diseased populations***, ***extinctions*** and ***overpopulations***.

Timeframe: 20 minutes

Supplies: Dry Erase Board, Dry Erase Marker

Framing:
Ask students what they think some things are that determine of plant and animal species' populations. The four resources that all species need: ***shelter, food, space***, and ***water***, and that these form a ***habitat.*** Space means the area which a species needs to live on, ex. A bear could never survive in the same amount of space that a grasshopper needs. For the activity space is not included, but you can start a discussion with the student why it is important and how much of an issue it is today.

The Activity:
Pick three students from your group to be the deer for the first round, the rest of the students will be the Resources. (Smaller groups should start with only one or two deer.) The two groups should line up shoulder to shoulder facing the other group to start. Instruct the student that for each round each person will get to choose a resource; for deer it will be the resource that they want and the resources will choose what they want to be. The choices are Food, Water or Shelter.

SYMBOLS
Water: put your hands over your mouth.
Food: put both hands over your stomach.
Shelter: put both hands over your head in the shape of a tent.

OH DEER!

Project Wild *pg.36-40*

Once everyone knows the symbols, both lines turn to face away from each other. Each Deer and each Resource individual decides what they need or what they will be. Instruct the student to choose a symbol and on the count of three, turn around. The Deer walk/run to the Resource line and find the someone making a matching

symbol as their own. If a Deer finds someone and tags them first, that Deer is successful that year and they take the Resource back to the Deer line to become another Deer (reproduction). If a Deer unsuccessful, it dies and is recycled back into the Resource line.

- Be sure that the students do not change their symbol in order to succeed.
- Only one Resource per Deer and Deer per Resource.
- The Resources may not try to get away from the Deer, because in reality grass and leaves can't get away.

Record on your dry erase board the number of deer and habitat you started with and the number remaining after the first round. Take the opportunity after the first round to make sure everyone understands what they are to do and what they become. Now play several more rounds until a pattern starts to emerge or you run out of deer. Keep track of the data in the form of a bell curve chart. A fun way to end, whisper to the Resources that the habitat has been torn down in order to build a mini mall, so now they are all pavement and should lay down.

Processing:

- ❖ Gather your group in a circle and examine the chart showing the changes in deer relative to habitat. What seems to determine changes in population?
- ❖ Allow your group to explore population balance and what it means for a population to be in balance. What happens when a population becomes heavily out of balance?
- ❖ What are some other elements that affect deer that we did not have in the activity?
- ❖ From our look at the trees that had leaves at deer-level and this activity, where do you think the deer population at Hemlock Overlook is right now?
- ❖ What does this mean for the deer and resources in the future?
- ❖ Can anything be done to change this outcome?