Unit # 2
Where do predators live?

Introduction & Materials:

Introduction:

Up to this point, most examples and discussions have probably been about large predators, which is our focus. But in your discussion about where we find predators, it is important to point out that there are predatory spiders, insects, snakes, even fish! This unit will teach students that you could find a predator of some type everywhere!

Materials:

- A map of the world or globe (optional)
- A large, open area inside or outdoors where it is safe to run around

Discussion:

Where do predators live:

1. Ask the students: "Where in the world do you think predators live?" They may start listing states, countries, continents or any variety of options. If this is the case, encourage them to keep going until they cannot think of any more. If they are not openly sharing, ask them some leading questions and feel free to be silly to engage them: **"Could a predator live…In a lake? Under a leaf? In the sky? No/Yes... What kind of predator would that be?"**

Then tell them the real answer: **EVERYWHERE!**

If you have a map or globe, here are some examples to point out:

American crocodile- swamps in southern Florida
Orca or Killer Whale- most of the world's oceans
Black-headed Python- Northern Australia
Tiger Hornets- Asia & Japan
Tiger- India

2. Now ask "What makes a polar bear able to live in the cold ice and snow and a snake able to live in the desert?" Whatever realistic answers you get, explain that these are all adaptations. This is a new word and they should record it in their books on page 16.

Adaptation- a physical characteristic that helps an animal survive in it's environment.

Explain to them, "Each adaptation allows animals to live in a specific habitat and that is why we find different animals in different parts of the world."

3. Now have them turn and talk to their neighbor(s) about what they think a habitat is. What makes up a habitat? When groups are done have them share their ideas with the rest of the group and record the definition in their book.

Habitat- the type of environment where a specific animal can survive.

Examples of habitats: Forest, Wetlands, Grasslands, Savanna, Shrubland, Desert, Marine, Caves **Showing images of these is useful for students to understand**

4. Following the definition of a habitat, the next question is: "What 4 things do all animals need in their habitat to survive?"

Give them a chance to brainstorm, and record any of the 4 that they guess. Help them if they get stumped.

1. Food 2. Shelter 3. Water 4. Space

Now ask them one component at a time, "Where do you think a small bird around our town would find...food, shelter, water, space?"

- Food- Bird feeder, berries, crop land, pine seeds
- Shelter- Bird house, tree branches, nests, barns
- Water- Bird bath, puddles, creek, pond
- Space- The forest, yards, parking lots, fields, along rivers

© 2014 The Cougar Fund

Unit # 2
Where do they live?

2

Activity: Habitat game

Adapted with permission from BirdSleuth K-12, Cornell Lab of Ornithology www.birdsleuth.org

Habitat game:

This game is very similar to the popular game blob-tag (student's familiarity with it may help you explain the rules). As the facilitator, it is important to remember our goal is to convey: 1) What 4 habitat components are needed to survive and 2) What happens when those components in a habitat are changed.

Ask for volunteers to play the roles of predators. If you have a group of fewer than 10 students, choose 2 predators; with 10 or more students, choose 3 predators; with 20 or more students, choose 4 predators. Assign the remaining students the roles of food, water, shelter and space, until every student has a role (there should be roughly equal numbers of each). **The object of the game is for each predator to "collect" the four habitat components it needs by tagging the appropriate person, and linking arms with him/her while together they continue to chase the remaining components needed.** While moving around, students who are **food** will make eating motions with their hands; **water** will make wave motions; **shelter** will keep their hands on their heads; **space** will keep their arms out to their sides. **Demonstrate each of these when explaining the rules**. Once a predator has collected one of all four components, the group can sit down.

Before starting the activity, set the boundaries of the playing field and explain:

"The predators are trying to survive. They have 5 minutes to find one and only one of each of the needed habitat components - food, water, shelter and space who are trying not to get caught."

Start a timer or check the time and begin the game.

At the end of the round, any predators who were able to collect all four components survive! Those predators get to reproduce (choose one of the students who previously played a habitat role to become a predator in the next round). Play again, with the increased number of predators.

In the following rounds, any "new" predator (those who are the result of "reproduction") that does not survive the round reverts to their original habitat component. If an "original" predators dies at any point, they choose a new role (i.e., food). At the end of the round, ask:

Q: What happened?

This question is just to keep them thinking about what is going on while they are having fun running around. Some good answers may include:

- **There was more competition between predators, which made it harder to collect all the components**
- **Some components were harder to catch because there were fewer of them**
- **Some predators collect their components first because they are faster or have strategy**

Time dependent, you can stop or continue with additional rounds. If you continue, change the roles of some students to different habitat components so there is an uneven number of resources. This will show that sometimes habitats are affected by change in available resources or number of predators.

You can use the different scenarios below.

- "People cleared a forest to raise cattle, but it was also a very rainy year." 1 space and 2 covers become water.
- "It's a dry year and the rivers are low, but prey species are doing well this season." 2 waters become food.
- "2 new predators move into the area at the same time there is contamination from a local factory ." 1 food and 1 water become predators.

Consider scenarios that might help stabilize and reset resource availability as well:

- "Additional land is set aside as a wildlife refuge and the resources are stabilized." Everyone return to his or her original role.

© 2014 The Cougar Fund

Activity: Habitat game continued

Debrief:

At the end, run through these questions:

1. **"What happens when there are more predators?"**

   A: It becomes harder for predators to collect their resources, but it's also harder for the resources to not get caught!

2. **"How do people affect the habitat?"**

   A: Pollution, removal of space, changing the water or food availability in the area.

3. **"If we wanted to help predators survive, what would be a simple way to do so?"**

   A: Do not negatively change their habitat and/or create more habitat for them.

Optional Extension:

Create a shoebox habitat! Have each student bring in a shoebox with the lid. Turn the lid upside-down and place the box on its side in the lid, such that the lid becomes an extension of the box for the ground of the habitat. Have each student choose a predator to research (not one of the predators of the day- Cougar, Grizzly, Wolf, Eagle, Osprey, Wolverine). **They should look for information about:**

- What the predator looks like (to create a sculpture/replica of the animal)
- What type of habitat it lives in (to create the mini habitat using any art supplies available)
- What prey species it will hunt, which should also be represented in the shoebox habitat
- Where in the world they are found
- Some fun facts to share with the class

This should be fun and simple, focusing on the 4 components of the habitat. Paint or tissue paper works great for creating a background and items from outdoors like small sticks or pebbles are good for props. Make sure you provide them with materials to represent all 4 components. When it is complete, have each student present his or her animal and the habitat they built for it complete with food, water, shelter and space! Predator research ideas:

- Any type of snake
- Ocean fish and mammals
- Reptiles and amphibians that eat insects
- Insects and spiders

Predator of the day:

#2: The Bald Eagle! Refer to the Predator of the Day packet

Photo Credit: Seth Heeter

© 2014 The Cougar Fund