



# How Animals Meet Their Needs

## About the plan

<b>EDUCATOR'S NAME</b>	Elizabeth Langford
<b>SCHOOL</b>	Forest Elementary School
<b>DISTRICT</b>	Forest Municipal School District
<b>GRADE LEVELS</b>	1-2
<b>SUBJECT</b>	Science
<b>UNIT/THEME</b>	Animals Are Living Things
<b>COMPETENCY NUMBER</b>	<p>Process Strand--Science As Inquiry (abilities necessary to do scientific inquiry)</p> <p>Content Strand--Life Science</p> <ol style="list-style-type: none"><li>2. Develop an understanding that living and non-living things have identifiable characteristics. (L) (Review)</li></ol> <p>Content Strand--Life Science, Physical Science</p> <ol style="list-style-type: none"><li>2. Investigate the diversity of living things. (L, P)</li><li>3. Gather and organize information using a variety of resources and present it through writing, speaking, and various art forms. (R,W,S,L,V)<ol style="list-style-type: none"><li>1. c. Choose and organize information that has been gathered from one or more sources and present it either through writing, speaking, or a self-selected art form (drama, art, music, movement, etc.)</li></ol></li><li>10. Demonstrate continuous progress toward the use of penmanship, grammar, mechanics, and Standard English in the context of writing and speaking. (R,W,S,L,V)<ol style="list-style-type: none"><li>1. Interact for specific purposes with people in the classroom and school community.</li><li>2. Exhibit emergent knowledge of Standard English use in the context of writing and speaking.</li></ol></li><li>11. Use language to facilitate continuous learning, to record observations, to clarify thought, to synthesize information, and to analyze and evaluate language, as appropriate. (R,W,S,L,V)<ol style="list-style-type: none"><li>1. c. Begin to use oral and written language to exchange and explain ideas.</li></ol></li></ol>

**OBJECTIVES**

1. Explore animal surroundings by making a model of it.
2. Recognize that animals are found living in places where their needs are met.
3. Describe and name ways animals can stay safe.

The Living Environment (How living things function and interact)

1. Evolution of Life
2. Different plants and animals have external features that help them thrive in different kinds of places.

**INSTRUCTIONAL FORMAT**

Whole group and small cooperative groups

**PRIOR PREPARATION**

Build on prior knowledge--Animals Are Living Things; Mammals; More Animal Groups; Grow and Change; Getting Food; and Where Animals Live (food, air, water, shelter)

Using MAGNOLIA, click on to [EBSCO Animals](#) and [EBSCO Host Animals](#) to "Images."

There, download pictures of polar bears. Source: [Encyclopedia of Animals](#), Item Number: 9500300017.

Sleeping arctic fox in winter picture can be downloaded. Source: [Encyclopedia of Animals](#), Item Number: 9500100210.

At [Education World](#), search "polar bears." [www.polarworld.com](http://www.polarworld.com) is a website devoted to polar bears. It is kid-friendly with many pictures and an in-depth polar bear "Frequently Asked Questions" site for both teachers and students.

"Polar Bears Alive," "Polar Bears International," "Bear Facts," and "Arctic Map and Pictures" are listed at [Education World](#) as well.

**MATERIALS NEEDED**

(educational videos can be used for additional resources)

- Picture of polar bear in the Arctic
- Pictures of other animals in different environments (desert, grassland, forest, ocean, pond)
- Picture of young deer in leaves
- Picture of Arctic fox in winter and summer
- Globe
- Various books about polar bears
- Hand writing paper (story paper)
- Two cups of strong black coffee (cooled to room temperature)
- 2 clear jars
- 1 piece of white cloth
- 1 piece of clear plastic wrap
- 2 food thermometers
- 4 shoe boxes
- White cotton balls
- Epsom salt
- Construction paper
- Glue

	<ul style="list-style-type: none"> <li>• Crayons</li> <li>• Scissors</li> <li>• Newspaper</li> <li>• Different colored paper fish</li> <li>• Succulent plant</li> </ul>
<b>DURATION OF ACTIVITY</b>	4 days (40 minutes each lesson); Science Inquiry: 2 hours
<b>FORMAL ASSESSMENT</b>	Conduct a formal assessment. Students will use a book index from the school library to find specific information about animal surroundings. The student may formulate and research other questions about animals in Winter, Spring, Summer, and Fall. Using Ask ERIC from MAGNOLIA, students can click on to "Habitats" from Education World and work in pairs to play "Animals of the World: An Internet Scavenger Hunt."

## Activity

### Day 1 (whole group)

Review the needs of living things. Ask children how animals get these needs met. (food, air, water, shelter)

Using the picture of the polar bear in the Arctic, tell children that polar bears live in the Arctic. Show children where the Arctic is on the globe. Ask:

- *What can you tell about the Arctic from the picture?* (cold, snowy, icy, no trees)
- *Where do you think a polar bear gets food?* (Let children speculate. Accept all reasonable answers.)

Read a book about polar bears. Ask:

- *Where do you think a polar bear gets food?* (They get their food from the ocean and on land.)
- *What do they eat?* (They eat seals, fish, birds, and reindeer meat.)

Make a model of where a polar bear lives, using shoe boxes, construction paper, white paint, glue, Epsom salt, crayons, and scissors. (Work in small groups.)

### Day 2 (whole group)

Use pictures with the desert (with lizard); grassland (with horses); and the forest (with owl). Show the succulent plant. Break off a small leaf and show children how water is stored in the leaves. Ask:

- *How does a lizard get food and shelter in the desert?* (Possible answer: It eats plants or insects; it finds shelter under rocks or under the sand.)
- *Where do land animals live?* (desert, grassland, forest)
- *What do the horses get from the grassland?* (food)
- *What else might they find in the grassland?* (water, shelter)
- *What does the owl get from the tree?* (shelter)
- *What else might the owl find in the forest?* (food and water)
- *Why can these animals live here?* (They get the food, water, or shelter they need to live here.)

Using pictures with the oceans, ponds, and streams (with animals), ask:

- *Where do water animals live?* (oceans, streams, and ponds)
- *What do these animals get from where they live?* (food and shelter)

Ask questions about each animal seen in each picture as above for the desert, grassland, and forest animals.

### **Day 3** (whole group)

Using a picture with a young deer in leaves, ask:

- *Do you see a young deer in the leaves?* (Yes, but it is hard to see it.)
- *What makes it hard to see?* (the color and spots)

Using a picture with an arctic fox in winter and summer, ask:

- *Do you see the fox in the snow?* (Yes, but it is hard to see it.)
- *What makes it hard to see?* (the color of his fur)

*(Newspaper with paper fish in yellow and purple glued to it)*

- 1- Look at the newspaper for one minute. Which fish do you see?
- 2- Count each kind of fish. Record how many you saw.
- 3- Which fish were easy to see? Why? (Infer what made some fish hard to see.)

### *How Do Polar Bears Stay Warm in the Freezing Cold of the Arctic?*

Pour one cup of strong black coffee (that has cooled to room temperature) into each of the two clear plastic wraps. Put both jars in the sun for an hour or more. Use a food thermometer to check the temperature of the coffee in each jar.

- *Which is warmer?* (the jar with the clear plastic wrap)
- *Can you explain why?* (White reflects sunlight and the heat that comes from it. The clear soaks up light and warmth from the sun.)

Now for the polar bear's secret: Polar bears are not really white. If they were, they could not stay warm in their Arctic habitat. The hairs on a polar bear's coat are clear. The hollow center of each hair soaks up light from the sun, and the light filters out the sides. That's what makes polar bears look white. Each clear hair carries heat from the sun down to the polar bear's skin. Its skin is black, which means it soaks up heat to keep the bear warm. A polar bear is like the plastic-covered coffee in the experiment. It is clear on the outside, black on the inside, and plenty warm!

*Write and illustrate about their experiment. Display their work.*

### **Day 4** (whole group)

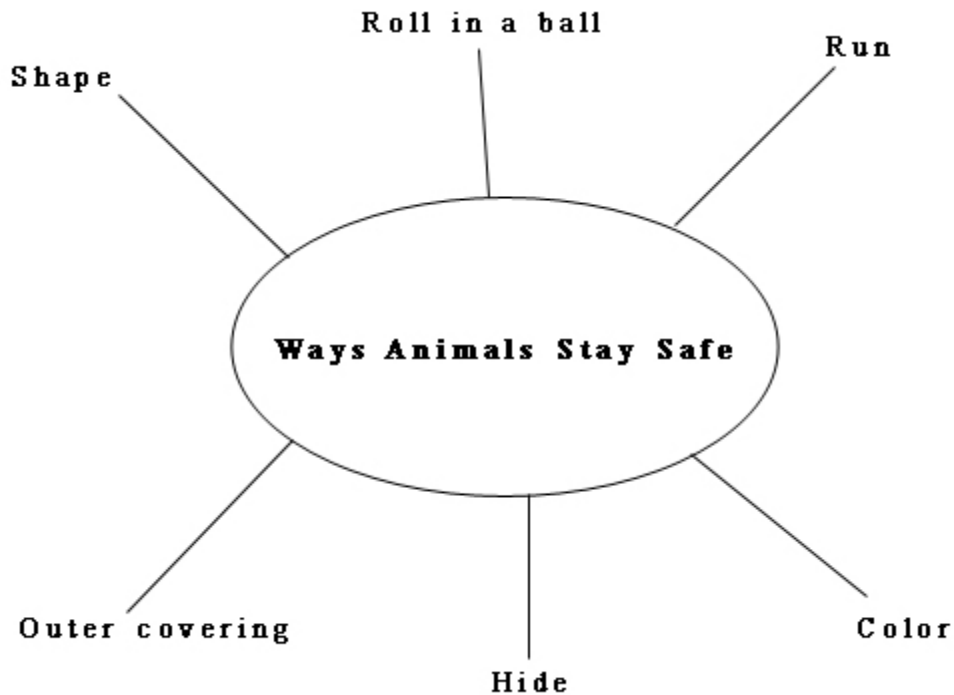
**Exploring:** Ask children to tell what things animals can do that might help them stay safe. List all words offered on the board (run, hide, go underground, or fly away).

**Developing:** Talk about where the deer and prairie dog live and the things they do that help them stay safe. Add words to the list as appropriate.

### **Review:**

1. The color and shape of some animals prevent other animals from seeing them.
2. Some animals move or hide to get away from other animals where they are in danger.

Use a story web to summarize the lesson:



## Explore activity

This listening/speaking exercise will help students get to know one another. Students interview classmates and then introduce their partner to the class. Students will work in pairs. They will then take turns interviewing each other, using the following questions as a guide. Teacher will encourage students to create more of their own questions and obtain more details with respect to answers given. The whole class will discuss the characteristics that determine a good presentation of a speech. Students will help their partners prepare speeches for the class by providing information, helping with the editing of the draft copy, and then providing encouragement for the speech preparation.

Individual students will be academically evaluated, based upon their written submission of the interview and speech, and upon their oral presentation of the speech. Each pair of students should meet after the speeches have been completed and determine two things they did well together in preparing for this activity, and one thing they could improve upon. The whole class will discuss what they learned about interviewing, speaking, and listening to one another.

## Directions for students

Interview your partner, using the following questions as a guide. Feel free to add your own questions. Then, individually write the draft copy of a speech you will use to introduce him/her. Once your draft copy has been completed, sit down with your partner and help each other edit your work for the final copy. Then do your final copy. Practice what you are going to say with your partner. Then you will be ready to present your introduction to the class.

- When were you born? Where were you born?
- How many people are members of your family?
- Have you ever had any accidents? If so, what happened?
- What do you like to do in your free time?
- What is your favorite subject in school? Why?
- What is the most exciting thing that ever happened to you?
- If you could make any dream come true, what would you do?
- What would you like to do when you get older?
- What is your favorite time of year? Why?

### Things I Like

### Things I Don't Like

	Things I Like	Things I Don't Like
<b>Food</b>		
<b>Movies</b>		
<b>TV</b>		
<b>Sports</b>		
<b>Colors</b>		
<b>Smells</b>		