

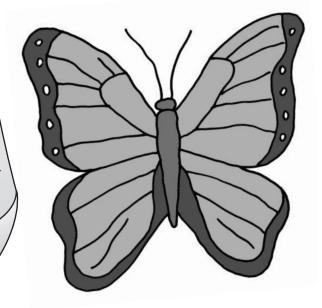
The following pages have been designed with you in mind. Dear Teachers,

Flip through this book to find exciting, hands-on ideas for teaching about animals and habitats with a pocket chart! (LER 2206) Pocket Chart Science — Animals and Habitats has been developed to provide creative teaching ideas and reproducible

activities to support the use of a pocket chart. Suggested activities are designed to attract all types of learners. They encourage listening, speaking, observing, and manipulating words and pictures to teach animal and habitat facts. In addition, this book contains 148 ready-to-use cards to aid you in teaching animals and habitats. The cards display illustrated pictures and/or words to use within each lesson, and are color-coded for handy organization. For easy reference, a Cards-At-A-Glance chart is located in the back of the book. It shows the picture and provides labels for the types of living things on each card. Also included is a Reading List to help you build a classroom library

This book quickly becomes a compact storage file! Tear out the filled with animal and habitat concepts. sheets of cards along the perforated lines. Laminate the cards for extra durability, cut them, and store them in the pocket provided on the back cover of the book. As you use them, tear out the blackline master pages for photocopying, then use the folder pocket on the inside front cover for storage.

Pocket Chart Science Animals and Habitats



## **Introduction Strategies:**

- Walk around school property. Identify different natural areas (lawn, woods, pond, and so on). List plants and animals children recognize. Use words to describe each area you visit, such as "grassy," "woody," and "wet."
- Name examples of different animals. For each, suggest the animal might be found in a very unlikely place (e.g., a whale might be found in a forest). As children correct you, challenge them to explain why animals don't just "live anywhere."
- Collect pictures of animals in outdoor settings. After you have completed the unit, challenge children to create a habitat display. They can label pictures, identifying each animal and its habitat. Children can also list ways in which each animal is adapted to its environment.
- Have children talk about their favorite animals and where they are found. Ask them to identify what makes a good home for an animal. You might have them think about the comforts of their own homes to generate ideas.
- As a class, generate a list of ideas and questions children have concerning animal survival. Consider such concepts as getting food, staying safe, and raising families. After you have completed the unit, revisit this list.



# Teaching Notes: Habitat, Sweet Habitat

## Cards needed: (blue 🔆 )

















living things

non-living things

### **Background information:**

Simply put, "habitat" is defined as the place where a particular plant or animal naturally is found. It can be thought of as a combination of living and non-living things, all of which contribute to how the habitat looks and functions. Living things include plants and animals. Non-living things include air, soil, water, and chemicals (minerals and nutrients found in soil and water, for example). Habitats are also shaped by weather patterns, or climate. Climate controls which vegetation will grow in a given habitat; plants, in turn, control which animals a habitat can support.

An animal depends on its habitat for energy (in the form of food and water) and shelter. Animals are designed for, or **adapted** to, the habitats where they live. That is, they have bodies and behaviors that help them to survive in their environment. Adaptations help animals get food, protect themselves, and reproduce.

## Presenting the concept:

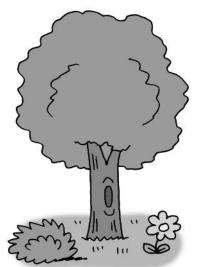
Point to an area outside the window (or refer to an area students are familiar with, if there is not a natural area visible). Ask students to describe the area. Which kinds of plants grow there? Which animals live there? What would students call this area to describe it to someone else? Tell students the area they just described is what scientists call a habitat. Place this word card in the pocket chart. Explain that habitats look different depending on what you find in them. When scientists study a habitat, they look at all the things that it contains.

Place the *living things* and *non-living things* title cards in the top pocket of the pocket chart. Arrange the picture cards on a table. Help students sort the cards into proper groups under each title card. Once you have finished, help students to explore how one habitat's mixture of living and non-living things compares to that of another habitat (from the woods to a pond, for example, or from a hot place to a cold place).

Complete the activity with a discussion about how animals depend on their habitat, so students recognize that an animal's habitat provides it with food, water, and shelter.

### Extending the activity:

Explain to students that backyards or city parks serve as habitats, too. Ask students to use what they have learned about habitats to describe their yard or a natural area near where they live. If possible, challenge them to take a survey of plants or animals in a chosen area, with an adult's help.





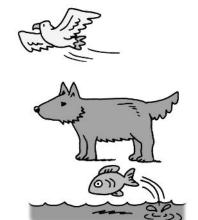
Name
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# Habitat, Sweet Habitat

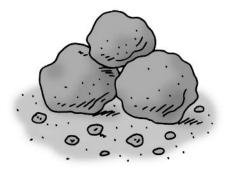
Directions: Label each picture L for living or NL for non-living. Below, write about how animals depend on their habitat.



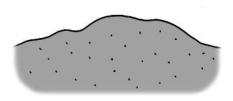








3. \_\_\_\_\_



T•
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How does an animal use its habitat?					



# Teaching Notes: At Home in Biomes

## Cards needed: (red 🔆)

























































biome

desert

tundra

taiga

tropical rainforest

grassland

temperate forest

freshwater

marine



## **Backaround information:**

Habitats are mainly classified according to their vegetation and their climate. Around the world, habitats with similar vegetation and climate form large regions called biomes. Scientists recognize more than two dozen types of biomes. The major biomes include:

- tundra
- desert
- taiga
- tropical rainforest
- temperate forest
- grasslands
- freshwater
- marine

Because animals are so adapted to the habitats or biomes where they live, many animals can be easily identified with the natural areas to which they belong.

### Presenting the concept:

Explain to students that habitats are identified based mainly on their plant life and their climate. Ask for any examples of habitats students might know of that have a certain type of plant life or a certain kind of climate. For example, a desert has few plants, such as cacti, and a hot, dry climate. Define the word biome and place this title card in the pocket chart. Explain that you are going to discuss eight main biomes found on Earth.

Arrange the biome cards shown above, so the word cards are positioned in a horizontal row at the top of the pocket chart, and the biome picture cards are positioned at the bottom of the chart, in scrambled order. Have student volunteers read each biome clue card. As each card is read, challenge the class to decide which picture goes with which title card. Ask volunteers to place the picture cards in the pocket below the correct biome word card.

Next, place the animal picture cards on a table. Challenge students to place the animal picture cards below their correct biomes, creating a column under each biome. As they do, discuss what it is about the animal's appearance or behavior that suggests it belongs in a particular biome.

## Extending the activity:

Challenge students to locate examples of all eight biomes on a world map. Have them choose one biome and create a postcard, with a drawing or photo of the biome on one side and a short description (written in letter format) on the other side.



Pocket Chart Science — Animals and Habitats © Learning Resources, Inc.



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# At Home in Biomes

Directions: Use the words in the Word Box to describe each biome. You will use some words more than once. Below, label each picture with its biome name.

### **Word List**

dry

wet

cold

warm

hot

dry-weather plants low-growing plants

tall trees, vines, leafy plants

snow sand/rocks

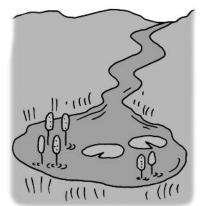
soil

Desert	Tundra	<b>Rainforest</b>







1. Biome \_\_\_\_\_

2. Biome \_\_\_\_\_

3. Biome \_\_\_\_\_



# Teaching Notes: Classes of Critters

## Cards needed: (orange ※)

mammals
We are covered
with hair.
We have a
backbone.
We are warm-
blooded.









insects

We have a hard, outer skeleton.
We don't have a backbone.
We are cold-blooded.
As adults, we have six legs, two antensae, three body sections, and usually wings.
We lay eggs.

arachnids

• We have a hard, outer skeleton.

• We don't have a backbone.

• We are cold-blooded.
• We have eight legs and two body sections.

• We lay eggs.

crustaceans

We have a hard out skeleton.

We don't have a backbone.

We are cold-bloodes;

We are cold-bloodes;

We have two catening hive in we will be a backbone.

We have two catening hive in we will be a backbone.

I was a backbone in the same a backbone.

reptile

mammal

bird

fish

amphibian

insect

crustacean

arachnid

Note: Also use all adult animal picture cards for this activity.

### **Background information:**

When studying animals, scientists group them according to similar characteristics and functions. This method of organizing animals is called **taxonomy**. One level of taxonomy involves organizing animals into classes, the most common of which include mammals, fish, birds, reptiles, amphibians, insects, arachnids, and crustaceans. One of the easiest ways to identify animals in each of these classes is by their appearance. Each class of animals has its own type of body covering (e.g., hair, scales, an exoskeleton, etc.) Other characteristics, such as being cold-blooded (having a fluctuating body temperature) versus warm-blooded (able to control body temperature), or laying eggs versus giving birth to live young, also help to distinguish members of one class from another.

### Presenting the concept:

Explain to students that a single habitat can be home to many different kinds of animals. Place the animal picture cards on a table for students to observe. Tell them all these animals can be found in a freshwater biome called a wetland. Ask students to identify how the animals look different from each other, and how they look similar. Bring the discussion to focus on animal "outsides," or body coverings (hairy, slimy, scaly, feathery, and so on). Explain that one of the ways scientists group animals together is by the way they look and how their bodies work. These groups of similar-looking animals are called classes. Tell students they will learn about eight classes of animals that should be familiar to them.

Arrange the title cards so they are positioned in a horizontal row at the top of the pocket chart. Have student volunteers read each animal class clue card aloud (remind them not to read the class name at the top, which is the answer). As each card is read, challenge the class to decide which class of animal is being described. Have volunteers place the clue cards below their matching title cards. (Note: As the terms "warm-blooded" and "cold-blooded" are introduced, define them if necessary.)

Next, arrange the picture cards on a table. Have students take turns placing cards in their appropriate place below each title card. As they do, ask them what it is about each animal that proves it belongs in the class chosen.

When you are done, choose a few other biome cards to display in the pocket chart. Ask students to provide examples of animals from different classes that live in each biome. Discuss why these animals do well in the biomes where they live.

### Extending the activity:

Have students make mobiles that feature one animal from each of the eight taxonomic classes. They might draw or paste a picture on one side, and write facts about the animal on the other side.





# Classes of Critters

Directions: Use the clues and words from the Word List to solve each animal riddle.

Below, label each animal's picture with the name of the class it belongs to.

#### **Word List**

mammal
bird
reptile
amphibian
fish
insect
arachnid
crustacean

- **1.** I am hairy. I am warm-blooded. I give birth to live young. Who am I?
- 2. I am feathery. I can fly. I lay eggs.

Who am I? \_\_\_\_\_

**3.** I have slimy scales. I live in water. I breathe through gills.

Who am I? \_\_\_\_\_

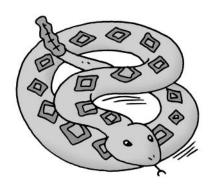
4. I have a hard, outer skeleton. I am cold-blooded.

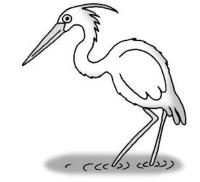
I have eight legs.

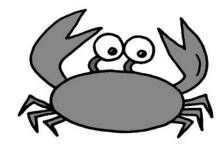
Who am I? \_\_\_\_\_

5. I have dry scales. I breathe with lungs. I am cold-blooded.

Who am I? \_\_\_\_\_







- 6. Class: \_\_\_\_\_
- 7. Class: \_\_\_\_\_
- 8. Class: \_\_\_\_\_



# Teaching Notes: Animal Diets

## Teaching Notes: Cards needed: (pink 🔆)















herbivore

carnivore

omnivore

producer

consumer

predator

prey

food chain

Note: Also use all adult animal picture cards for this activity.

### **Background information:**

All animals need energy to grow and stay healthy. Animals called **herbivores** eat plants for energy. Animals called **carnivores** eat other animals for energy. Animals called omnivores eat both plants and animals for energy. An animal that hunts other animals for food is a carnivore. The animal it kills and eats is its prey.

Animals are **consumers**. They must get their energy from other living or once-living things. Plants are **producers**. They make their own food, using energy from the Sun. Plants are essential to life on Earth, because they form the first link in all food chains. A food chain shows how energy passes from one life form to another. The first two links in a food chain are a plant and the animal which eats it. They are connected by arrows, which show the direction in which energy flows through the food chain. From this point on, links are formed by carnivores and omnivores. A single animal is linked to many food chains on the basis of its diet, and as a result, food chains connect to form what scientists call food webs.

#### Presenting the concept:

Discuss what various animals eat for food. Define "herbivore," "carnivore," and "omnivore." Place these title cards in a row at the top of the pocket chart. Place the animal picture cards on a table. Challenge volunteers to place the animal cards below the correct title cards. (Note: A code indicating diet appears next to each adult animal picture card on page 32.)

Remove the cards from the chart and arrange them on the table. Define "predator" and "prey," and place these titles at the top of the pocket chart. Have volunteers place each card in the following pairs under the appropriate title: bumblebee/bat, deer/grizzly bear, squirrel/wolf, caterpillar/toad, bluegill/heron. Discuss the direction of energy transfer in the examples.

Remove the cards from the pocket chart, and spread them out on a table again. Place the arrow cards and the plant picture cards on the table as well. Place the titles *producer* and *consumer* at the top of the pocket chart. Define these terms. Have students identify producers and consumers and place them in the pocket chart under the correct titles. Place the title *food chain* in the chart. Have volunteers set up a few of the following examples of food chains. Discuss each example, and have children identify the animals in each chain as herbivores or carnivores, and predator or prey (plants are not considered prey).

flower → bumblebee → bat fruit → deer → grizzly bear nut → squirrel → wolf leaf → caterpillar → toad

algae → bluegill → heron



Help children create the remaining examples listed above, as well as their own examples, using the remaining animal picture cards. Remove the cards from the pocket chart.

#### Extending the activity:

Discuss what happens when one link in a food chain disappears due to overpopulation, extinction, disease, depletion of resources, and so on.



Name \_\_\_\_

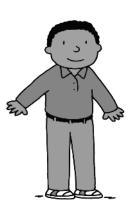
## Activity 4

# **Animal Diets**

Directions: Choose the word that correctly completes each sentence.

Below, draw a line from each animal to its correct diet.

- 1. Animals that eat plants are called \_\_\_\_\_\_.
- 2. Animals that eat other animals are called \_\_\_\_\_\_.
- **3.** Animals that eat both plants and animals are called \_\_\_\_\_\_.
- **4.** Plants are \_\_\_\_\_ that make their own food.
- **5.** Animals are \_\_\_\_\_ that take in food.



carnivore omnivore

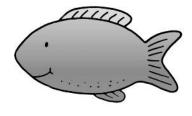


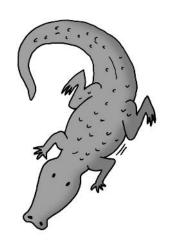
herbivore



Place an "X" through a predator. Circle its prey.







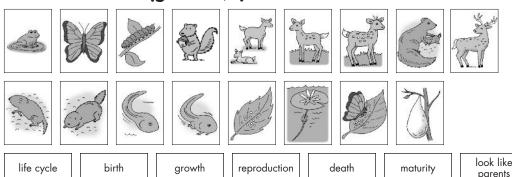
look different

from parents



# Teaching Notes: Animal Life Cycles

## Cards needed: (green 🔆 )



## Background information:

All living things complete a series of steps known as the **life cycle**. These steps include: birth, growth, maturity (reaching adulthood), reproduction, and death. The time that passes from birth to death is known as the **life span**. Some animals are born looking like smaller versions of their parents. Their anatomy and appearance are very similar at birth to the way they will look as adults. This is the case with mammals, fish, birds, and reptiles, for example.

Other animals look very different from their parents at birth. Their bodies go through distinct changes as they grow. This process is known as **metamorphosis**. First, the young animal hatches from an egg. In the case of insects, it may be a worm-like **larva** or a wingless **nymph**. In the case of amphibians, it is an aquatic, legless tadpole. As the young animal grows, its body changes. An insect larva like a moth eventually encloses itself as a pupa inside a cocoon, and then it emerges as an adult. The nymph then develops wings and other adult body structures. The amphibian tadpole loses its tail, grows legs, and develops organs for life on land.

### Presenting the concept:

Place the title *life cycle* at the top of the pocket chart. Define the term and its stages. Ask students which stage they are at in their life cycles. Ask them to describe how they began their lives and how they looked. Explain that many animals look like their parents when they are born, while others look different. Place the title cards *look like parents* and *look different from parents* at the top of the pocket chart. Place all the adult animal picture cards on a table. Have students sort the pictures and place them below the correct title cards in the pocket chart (you may need to help them with less familiar species). All mammals, birds, reptiles, arachnids, and crustaceans pictured in the cards look like their parents when they are born. The insects and amphibians go through metamorphosis.

Define the term metamorphosis and its stages. Explain that insects, amphibians, and some water animals undergo metamorphosis.

Remove the cards from the pocket chart. Place the life cycle stage title cards in a row at the top of the pocket chart. Place the picture cards shown above on the table, in random order. Have students sort the cards into life cycles for individual animal species. Then, have volunteers line up the cards in the pocket chart in the correct order, showing the steps in proper order below the matching title card. If possible, have students identify the egg, larva/tadpole, pupa, and adult stages for the butterfly and frog life cycles.

### Extending the activity:

Help students to choose a species and research its life cycle, then make a display about it. Students can include information such as how many young the animal usually has, what kind of parent it is, how long it lives, and so on.





Name

## Activity 5

# Animal Life Cycles

Directions: Unscramble the words to find the word that completes each sentence. Use the words in the Word Box for help. Below, use the numbers 1 through 4 to place the stages of the frog's life cycle in the correct order.

#### **Word List**

metamorphosis like life cycle stages reproduction

Αl	animals	s comple	te a		·	fe	li I	leccy
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An animal goes through different \_\_\_\_\_ in its life.

## sgates

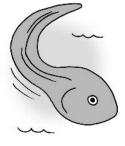
\_\_\_\_\_ takes place when an animal has young.

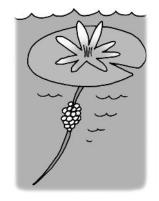
## rproniodcteu

Some animals go through big changes or \_\_\_\_\_\_as they grow. **ossipmtmearch** 

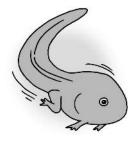
Some animals are born looking \_\_\_\_\_ their parents. leki

#### **Frog Life Cycle**











# Teaching Notes: Animal Homes

## Cards needed: (purple 🔅)



































Ask students what they think about when they hear the word "home," and place this title card in the pocket chart. In addition to describing a building, students may mention their neighborhood or town as part of their home.

Discuss what benefits having a home provides (such as a place to store things, to eat or rest, to stay safe from the weather, to be with family, or to play). Next, ask students to describe some types of animal homes. If students mention habitat as home, that's a valid answer. Students will also likely describe places like burrows or nests, which are types of shelter.

Tell students that an animal's shelter or home makes things safe and comfortable for all who live there, just like people's homes. Point out that, unlike people, animals cannot choose their building materials. And, some animals choose to live in a shelter only part-time. They may live in a home when they are newborns or when they are raising a family. Some animals even skip having a home at all. They might hide in different places for short times.

Tell students animals and their homes fall into three general groups: 1) Builders make their own homes 2) Borrowers use naturally sheltering spaces in the environment 3) Brave ones do not have a place to call home. They take shelter wherever they can, whenever they need to.

Place the home picture cards in a row at the top of the pocket chart. Place the animal picture cards on the table. Ask student volunteers to match each animal to its home. For each example, discuss the following questions:

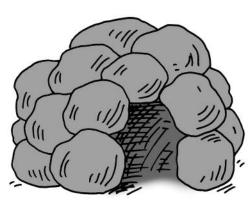
- Is this home built or borrowed or neither? (If it's built, how was it made?)
- Could a family live here?
- Is this a full-time home?
- Does this home store food?
- What else can you say about this home?

When students have matched all the cards, you might wish to place additional animal cards on the table and challenge students to guess which animals live in which types of homes.



Go on an animal home scavenger hunt. It can take place outdoors, or indoors, through the use of the Internet, and printed materials. Challenge students to find one example of each home shown on the home picture cards.







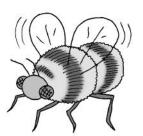
Name	

# Animal Homes

Directions: Draw a line from each animal to its home. Below, write about how animals find and use homes.















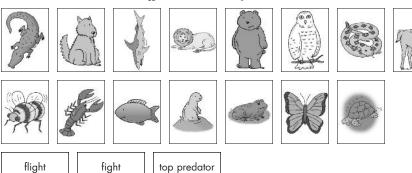






# Teaching Notes: Animal Defenses

## Cards needed: (yellow 🔆 )



## Presenting the concept:

Explain to students that wild animals face many dangers. They must work hard to find food to survive. At the same time, they must work hard to avoid being killed and eaten by other animals! Animals also fight each other, and this can be dangerous, too. As students learned, having a safe place to hide can help an animal protect itself. Animals have other tricks for protecting themselves, too. These tricks fall into two groups: fight or flight. Animals that fight have weapons such as teeth, claws, sharp beaks, stingers, or tough shells. Often, these animals are predators; they use their hunting weapons for defense when needed. Animals that choose flight use speed to escape. Or, they may hide until danger passes. Many times, these animals are prey animals.

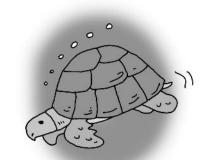
Place the titles *fight* and *flight* at the top of the pocket chart. Choose one place in the room for students to stand if they represent "fight" animals. Choose another place for "flight" animals. Place the picture cards on a table. Have students choose one card and decide where they should stand. Ask each student to explain how he or she made her decision. Challenge students to choose animals that might encounter each other in the wild, and talk about how they might respond. (For example, a prairie dog might see an owl. The prairie dog would escape down its hole.) Finally, have students place the cards under the correct title in the pocket chart.

When students have finished placing the cards, discuss which animals are predators and which animals are prey. Students should recognize that most of the "fight" animals are predators, and most of the "flight" animals are prey. Point out that some of the "fight" animals would rarely need to defend themselves against other predators. This is because they are "top predators." They are at the top of the food chain, and they have no natural enemies.

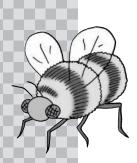
Place the title *top predator* in an empty space the pocket chart. Challenge students to move animals from the "fight" category to the "top predator" category. Students should choose wolf, shark, lion, grizzly bear, snowy owl, alligator, rattlesnake. If you wish, you can discuss humans as top predators (and as possible enemies of many of the other top predators).

### Extending the activity:

Challenge students to design their own animal with its own defenses. Encourage children to be as creative as possible. For example, their animals might incorporate "fantasy" features such as a suit of armor, or rocket boosters. Children should label each defense on their imaginary animal and explain what it helps protect.







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# Animals and Habitats Crossword Review

Directions: Read the clues below to help you fill in the crossword puzzle.

3	4					6 7	othe other o	erground that the for refles and these micals alive.)	t hun nals newbo d fish are th int: T	rn frog are c lought hey ar	g overed
5 6				7			Wal	טוע-וווו	oueu		
						J	11				
8		9	10								
						I					
					1						
12					1						
					J	13					
Across 3. name for one who takes in food	1	14		Τ							
4. name for hot, dry, sandy biome	_			•				1			
<ul><li>5. big change some growing animals g</li><li>8. describes energy flow from one living another that eats it</li><li>10. place where plants and animals are</li><li>12. name for a group of animals that living animals that living animals of the second of the secon</li></ul>	ng thing to		fligh non-	cycle	c ł	chain at					

desert

predator

mammal

consumer

tadpole

scales

13. way to avoid danger by escaping from it

14. living things complete this from birth to death



# Reading List

<u>Crinkleroot's Guide to Knowing Animal Habitats</u>
Jim Arnosky
Aladdin Paperbacks, NY: 2000

The Magic School Bus Hops Home: A Book About Animal Habitats Patricia Relf

Scholastic, NY: 1995

What is a Biome? Bobbie Kalman

Crabtree Publishing, NY: 1998

All Kinds of Habitats
Sally Hewitt

Children's Press, NY: 1998

All Kinds of Animals Sally Hewitt

Children's Press, NY: 1998

The Hunt for Food Anita Ganeri Millbrook Press, CT: 1997

<u>How Animals Protect Themselves</u> Michel Barre Garth Stevens Publishing, WI: 1998

Animal Defenses Etta kane

Kids Can Press, NY: 1999

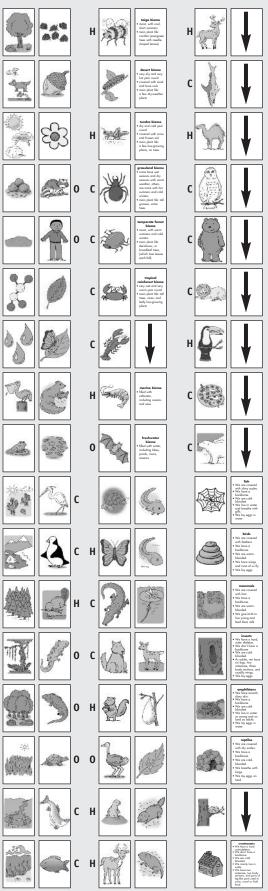
Animal Homes
Illa Podendorf

Children's Press, NY: 1982



## Cards-At-A-Glance

Cards are shown as front-to-back pairs. Labels indicate animal diets. See key below.



C

habitat	birth					
living things	life cycle					
non-living things	reproduction					
desert	growth					
tundra	maturity					
taiga	death					
temperate forest	look different from patents					
grassland	look like parents					
freshwater	flight					
marine	fight					
mammal	carnivore					
bird	herbivore					
fish	consumer					
reptile	omnivore					
amphibian	food chain					
insect	producer					
arachnid	predator					
crustacean	prey					
biome	top predator					
tropical rainforest	home					

Key C: Carnivore H: Herbivore O: Omnivore