



Animalopolis



Teacher's Guide



Dear Educator,

ANIMALOPOLIS will take you on a voyage into the magical world of animals. A bit fanciful, a bit "Seussian" perhaps, a place of good natured humor, beauty and just plain fun for kids and their parents.

Whether going nose to nose with hippos as they graze upon nature's massive salad bar, or eye to eye with dancing bears, sea lions turning somersaults, an otter that prays, we are reminded that nature provides us with humor and wonder, everywhere.

ANIMALOPOLIS takes a light-hearted and imaginary look at a variety of animals including cheetahs that race like a Ferrari, bears that run their own fishing school, an operatic lion, scary crabs that hold a town hostage and even attempt to cuddle with children, and much more.

ANIMALOPOLIS will provide kids and their adults with a journey of smiles and chuckles.

www.animalopolisfilm.com



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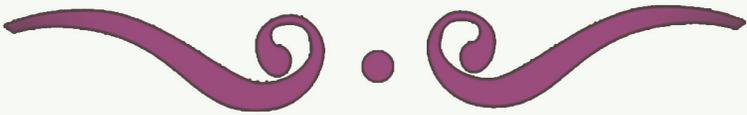
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**Special Thanks to
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Build a Bear-Habitat Style

Objective:

Children will learn about how animals must adapt to their environment.

Materials:

Boxes holding items to simulate two different species of bears.

Procedure:

Recall the various animals in “Animalopolis” and their particular habitats. Brainstorm the characteristics of those places. Make a list of other types of animals that live in those habitats. (See Animal Habitats worksheet) Discuss why particular animals are better suited to one habitat over others. See the books listed below for information and talking points on habitats and the animals that live in them.

The teacher will assemble boxes of items that will represent the various adaptations Polar Bears and Grizzly Bears have made to survive. Calling on two volunteers for this demonstration, the teacher will dress the students in the items collected while explaining each item’s purpose. Suggested items and their representation are listed. Other items could be used, substituted or added to the boxes.

Once the demonstration has been completed, students will have a basic, visual and probably hilarious understanding of adaptations and how they relate to the environments in which the animal lives.



Resources:

- Helbrough, Emma. Scholastic Printing, New York, New York, 2006. Usborne Beginners: Bears
- Owen, Oliver. Adbo & Daughters, Edina, Minnesota, 1996. Lifewatch The Mystery of Nature: Cub to Grizzly Bear
- Dr. Tony Hare. Checkmark Books, New York, NY, 2001. Animal Habitats: Discovering How Animals Live in the Wild
- Kalman, Bobbie. Crabtree Publishing Co. New York, New York, 1997. The Science of Living Things: What Is a Biome?

Build a Bear-Habitat Style

Habitat 1: The Arctic

Subject: The Polar Bear

- **Black t-shirt** – Polar bears have black skin under their fur. The skin absorbs heat from the sun. This helps the polar bear stay warm in the frigid climate of the Arctic.
- **White fake fur coat** – Polar bears need warmth and camouflage in the Arctic. Attach thin short white drinking straws to the fur to represent the hollow “guard hairs” that keep the polar bear’s fur from matting when swimming.
- **Two rackets** – Attach the rackets to students’ feet to serve as a Polar bears’ specialized feet that must walk on snow. The bottoms of their paws have little bumps, like a basketball to keep them from slipping on ice. Polar bears also have extra skin between each toe, like a duck to help them swim. Polar bears paddle with their front paws and steer with their back paws.
- **Small pillow** - Illustrates the fat layer, or blubber, that polar bears need to survive; attach to student using a belt or sash around their middle.
- **Mittens** – Representing the front paws, attach paper clips for claws. The claws are necessary for snatching seals as they come up for air in breaks of the ice in polar waters.
- **Small ears** – Polar bears have small ears, longer necks and smaller heads than other bears. Small ears lose less heat than long ears. Long necks help the bears keep their heads above water when they swim. You can create the ears by taking a small construction paper circle, slit halfway to the center and rolled into a small cone. Attach to a white ball cap.
- **Sunglasses** with small eyes pasted on the front - Illustrates that being diurnal (awake and hunting for food during the day) is more desirable since it is also the warmer part of the day. Remember, the polar summer has no nighttime and the winter has no sunlight.
- **Vampire teeth** - Carnivore adaptation for acquiring food. Polar bears eat seals, beluga whales, walruses, birds, fish, or reindeer. Unlike other bear species, Polar bears eat more in the winter because seals and other prey are harder to catch in the summer months.



Habitat 2: Temperate Forest

Subject: The Grizzly Bear

- **Brown fake fur coat** – Represents the bear’s camouflage in a temperate forest habitat.
- **2 Small pillows** – One represents the layer of fat accumulated for hibernation. Attach to student using a belt or sash. Attached the second pillow behind the neck to represent the large muscles found on grizzly bears that is necessary for digging roots, tubers and ground squirrels.
- **Mittens** for hands and feet with five paper clips attached to the outer edges. These animals spend many hours looking for food. They use sharp claws to dig or kill insects and small mammals. Grizzlies use their front paws for fishing or digging for clams.
- **Prominent snout** – Grizzly Bears have a keen sense of smell. Fold a construction paper cone. Flatten the point. Add a black nostril-shaped piece of construction paper to the end. Use yarn stapled to both sides and tied in the back.
- **Pom Tail** – All bears have very small tails. They are about 4 inches of a furry patch. Millions of years ago, bears did have longer tails but through evolution, the tail disappeared.
- **Small ears** – Attach construction paper ears to a brown ball cap. Grizzlies have small ears but an extremely strong sense of hearing.
- **Blanket** – Many bears hibernate during winter months. Grizzlies will sleep during the winter and wake in early spring. Bears also snore. The “Grizzly” student might enjoy a good snore at this point.

Build a Bear-Habitat Comparison Chart

List how these bears are different in some ways and the same in others.



Arctic Bears

Temperate Forest Bears

Both Bears

Name _____

Animal Habitats Worksheet

Brainstorm different types of animals and the habitats they usually live in. Notice some animals may live in more than one type of habitat. (Example: the salmon.)

Habitats

Animals

Desert	Hot, dry, sandy places where it hardly ever rains.	
Forest	Forests with trees that lose their leaves in winter.	
Polar	Very cold and frozen places at the top and bottom of the earth.	
Mountains	High, rocky places.	
Coniferous Forest	Cold forests with trees that stay green all year.	
Grasslands	Dry places covered with grasses.	
Lakes, Ponds, Rivers, Streams	Fresh water.	
Rainforests	Warm forests with lots of rain.	
Oceans	Salty water.	

Two excellent resources to help categorize animals with their habitats are: All About Animals by Dee Phillips, ticktock Entertainment Ltd, 2006 and Animal Habitats: Discovering How Animals Live in the Wild by Dr. Tony Hare, Checkmark Books, 2001. The descriptors for the habitats used above were, in part, from All About Animals.

Are You My Mommy?

Objective:

To match a baby animal to the adult animal while learning the correct term describing each.

Materials:

Adult and baby animal fact cards.

In the movie, "Animalopolis," we saw some adult animals and their young. In particular, we saw a family of lions. The lion's family unit is called a pride. It is composed of lionesses, cubs and a lion. Many animals have different names for the babies, younger animals and the adults.

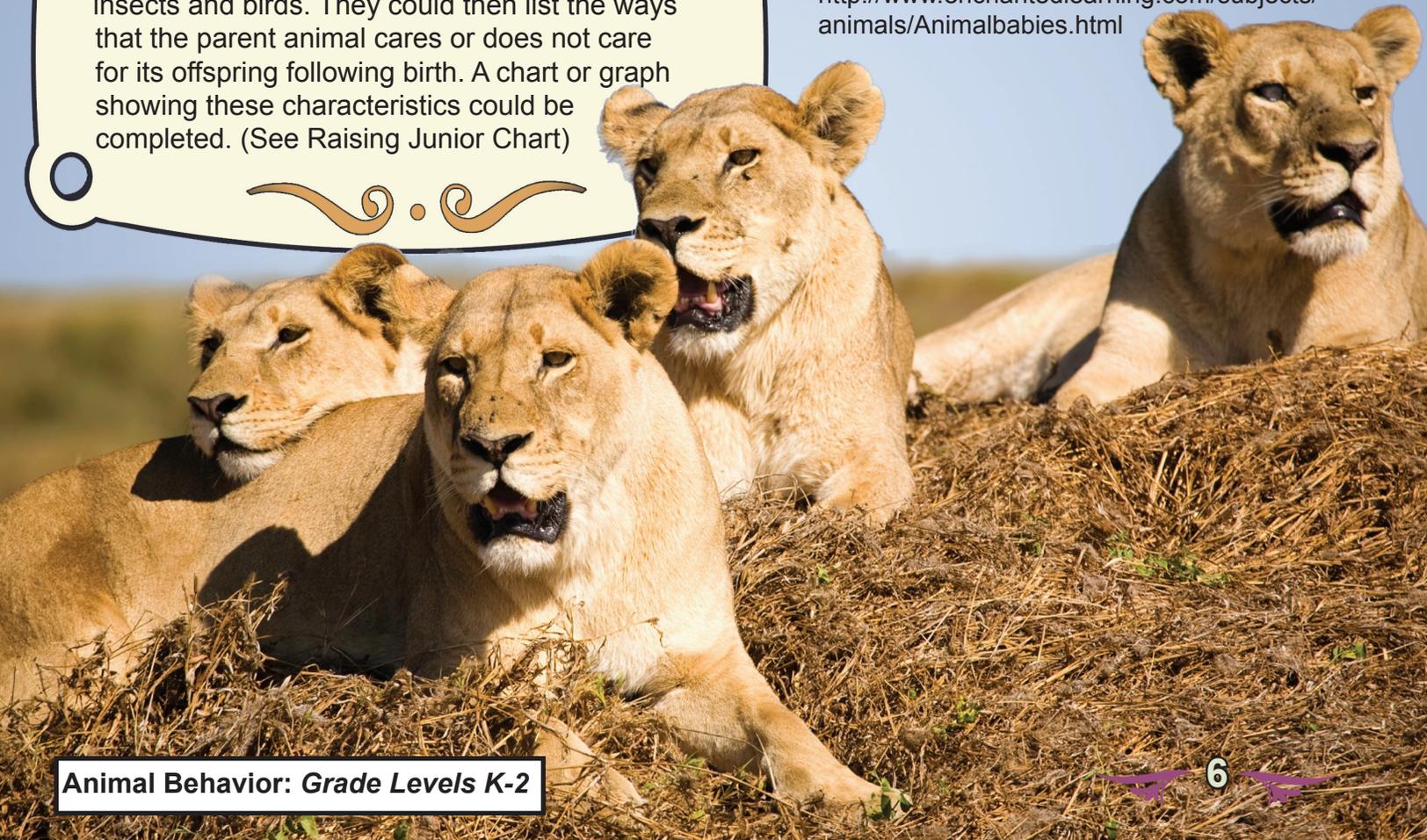
Procedure:

Read one or both stories and record the animals mentioned on chart paper. Preview the animal cards. Separate into categories of babies and adults. Next, match the babies to the adults. Read the information about each and record their names on chart paper. (See The Name Game.) After sorting and matching the cards, play a memory-style game. Cards are placed in a pocket chart behind numbered cards to block the animal cards from view. Children will take turns calling out two numbers to find the matches. Older learners will be required to name the adult term and the baby term to complete the match. For example, a male bear is a boar, the female a sow, the baby a cub. Older learners could also identify the term for the animal group, in this case called a sleuth. Younger children could limit the skill to common terms, for example the adult (bear) and baby (cub).

Extension: Have students sort the fact cards into groups of mammals, reptiles, amphibians, insects and birds. They could then list the ways that the parent animal cares or does not care for its offspring following birth. A chart or graph showing these characteristics could be completed. (See Raising Junior Chart)

Resources:

- Are You My Mother? by P.D. Eastman
- Is Your Mama a Llama? by Deborah Guarino and Steven Kellogg
- <http://www.enchantedlearning.com/subjects/animals/Animalbabies.html>



The Name Game

Animal Common Name	Female	Male	Offspring	Group Name
Example: Lion	Example: Lioness	Example: Lion	Example: Cub	Example: Pride

Raising Junior Chart

Animal cares for offspring
after birth

Example: **Bear**

Animal does not care for
offspring after birth

Example: **Salmon**

Salmon Run

Objective:

Children will learn about the concept of food chains and how each animal in the chain is an important link to the survival of other species

Materials:

A large playing field or gymnasium; paper cups; spices such as clove, nutmeg, cinnamon, garlic, or scents such as vanilla, or perfume, vinegar.

The caddisfly is an essential food for the salmon. It's presence in streams and lakes signifies a healthy waterway. An abundance of caddisfly is necessary for the survival of many fish species. It, in turn, requires a body of water free from heavy silt, pollutants, and contaminants. In areas that are experiencing deforestation, nearby rivers and lakes become depositories for run-off, which causes a decrease in the caddisfly population.

The salmon require sufficient food for its journey from its spawning grounds to the ocean. Once it reaches the estuary where fresh water converges with salt water, the salmon undergoes a change that allows it live in an ocean environment. The salmon remains in the ocean for several years. At about age seven, it swims against current to return to the body of water where it hatched. Scientists believe salmon can find their way back to their original spawning grounds through their senses of taste and smell. They have stored a great deal of fat prior to this time and do not eat on the return journey. (Complete salmon life cycle chart.)

Their connection to the grizzly bear in the food chain happens on this return trip. Since the fish are swimming upstream, they often leap out of the water to get to the next level or past an obstruction. Hungry bears wait in the water or on rocks to catch the fish as they leap. They catch the fish and strip them of their fat and nutrient rich skin. This hunt must be successful for the bear to survive the upcoming winter months.

Procedure:

The children will conduct guided Internet searches on the caddisfly, the salmon, and the grizzly bear. Make a KWL chart prior to investigation listing what the children know about these animals. After research, revisit the chart and list what they now known about these animals. Special attention should be paid to the interdependency of the animals as part of a food chain. Introduce the concept of food chains. Explain that even little changes in habitat can have big consequences in life cycles.



Salmon Run

Upon returning to spawning grounds, the female salmon lays and distributes thousands of eggs at a time. The male salmon spreads milt over the eggs, which fertilizes them. Once hatched, many are eaten by other fish or animals. Of those thousands, only a few hundred will make it to the parr stage. When they are old enough to swim to the ocean, less than one hundred will make the trip. Less than ten will make the return trip. And only two will make it back to the original spawning grounds seven years later. Those two will die shortly after laying and fertilizing eggs. But the life cycle has started again with thousands of eggs.

To emphasize the co-dependency of these animals, the following game is one where the salmon must find the way to its home grounds to spawn.

Game Rules

This game will have the children serving as alevins and fry and then later on, if they survive, adult salmon. Alevins and fry are the first two stages in a salmon's life following the egg stage.

- The teacher will place identical cups around the classroom filled with specially scented cotton balls. The children will be assigned a certain scent to represent their particular spawning grounds. Examples of scents could be spices or perfumes.
- Some of the children will be fishermen or hazards such as rock ledges or water turbines for electrical plants. Building blocks or cubes are to be scattered around the room to represent caddisflies. Some of the cups should hold balls soaked in vinegar to represent habitats that have become polluted.
- The teacher assigns children their roles, a scent if they are a salmon, and a number. The teacher then draws an action card from a fish bowl announcing particular circumstances. For example, an action card could state that the salmons holding numbers one two and twelve, were caught and eaten by raccoons. Those salmon must leave the game. Other actions could range from a certain number getting caught in a turbine; some being eaten by larger fish, or a forest being cut down causing

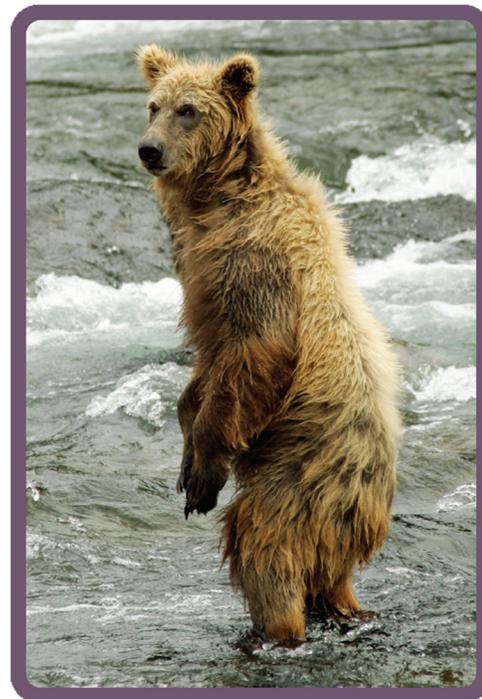
the caddisfly population to be limited. (A smaller number of these insects mean some salmon will not be strong enough to make the journey to the ocean.) The children must find at least twenty caddisfly cubes each to avoid starving. After about

ten minutes of actions being called out, (some should be positives) the teacher tells the remaining fish that they have survived seven years of ocean life and it is now time to swim to their home "lake" and find their scent. If they successfully find their particular scent, they can lay their eggs. Those that do not find the correct scent die. The teacher should reveal the correct scents after children have made their choices. One or two cups should have been secretly excluded and substituted with vinegar cups prior to the game to symbolize the polluted water streams.

- There are no winners or losers in this game. The entire object is to demonstrate the difficulty of several species to survive given the many factors that could affect the food chain. To conclude the activity, note how many salmon were actually able to return to their spawning grounds. Compare to how many started the journey. Discuss what would happen to the bears if there were fewer salmon. Discuss how fewer caddisflies affected the salmon. Create a "Now We Know" summary document to display.

Resources:

- Ganeri, Anita. Food Chains. Heinemann Library, Chicago, IL, 2004.
- Kalman, Bobbie. What Is Migration? Crabtree Publishing Company, New York, NY, 2002.
- Hughes, Monica. Nature's Patterns: Migration. Heinemann Library, Chicago, IL, 2004.
- www.nwf.org/grizzlybear
- www.nwf.org/salmonandglobalwarming

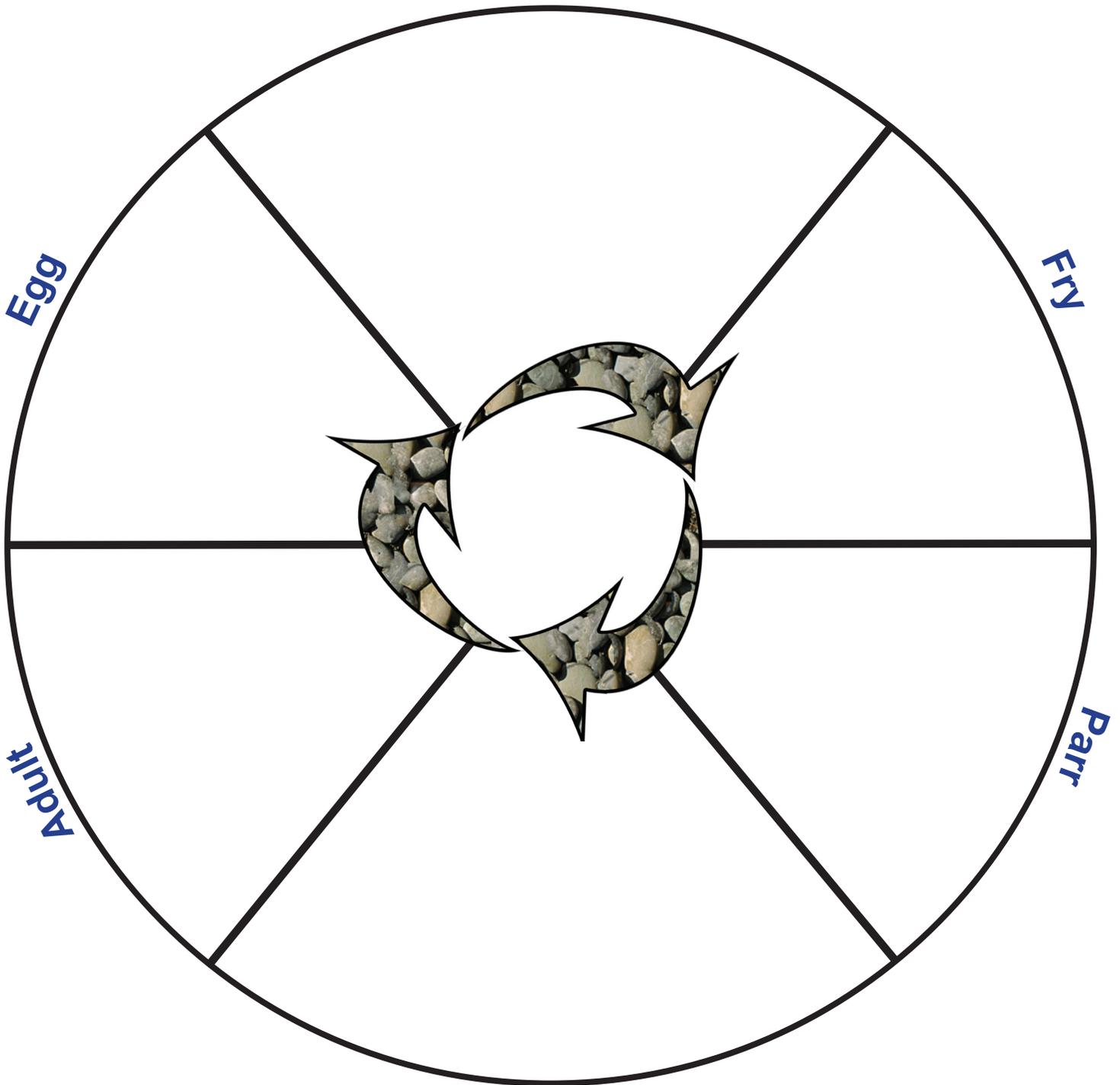


Name _____

Life Cycle of the Salmon

Illustrate the life cycle of a salmon

Alevins



Visit this website for detailed information and pictures:

<http://www.cf.adfg.state.ak.us/geninfo/research/genetics/kids/salstory.php>

Natural Selection

Objective:

To demonstrate how animals depend on several factors such as food, health, and habitat to survive.

Materials:

Building blocks, cubes, or other small objects that are readily available, easy to collect and large enough to see; a large playing field or gymnasium.

Procedure:

The movie, "Animalopolis" showed several different animals running away from a pride of lions. Read and discuss information found on the Wildebeests featured in the film. Explain that these are hooved mammals living on the African savannah. The savannah is a hot, dry area of land with a scarcity of food and water to support the numbers of animals that live there. Wildebeests are constantly on the move looking for nourishment. Lions follow the wildebeests, which are their food source.

The children will play a game to demonstrate how not all wildebeests are able to survive such harsh conditions. The animals that survive will be the strongest, healthiest animals. Some children will serve as the young, the very old and the injured wildebeests.

The object of the game is to collect "food," grass and water represented by the blocks or cubes. Status of the players, either young, old, weak, healthy, etc. can be determined by allowing children to pull a physical characteristic from a hat. The teacher may emphasize the status by using blindfolds or crutches for the ill wildebeests, the young may be required to crawl, the old may be encouraged to walk slowly. Three children are designated as lions. The "food" is spread over a wide area. At a signal, the wildebeests will be told to gather their food. They should be reminded to stay in character. A signal is given to the lions who begin to stalk the wildebeests. Once they have captured an animal, they may roar and all the other animals are to run off to a "safe" area with their collection of food.

The class will now meet to evaluate what they were able to collect and who will survive the next few weeks, months or season. For example, the animals that collected ten or more blocks will survive for at least six months. The animals that collected five to nine blocks will survive two months. The animals that collected three to four blocks will not survive more than two weeks. Those that collected less will die in a few days. Of course, the animal that was captured did not survive. Discuss whether this animal was one of the young, old or ill animals. Discuss why that might have caused the animal to be captured.

**Resources:**

- Crossingham, John. Kalman, Bobbie. What is Migration? Crabtree Publishing Co. New York, NY, 2002.
- Hughes, Monica. Nature's Patterns. Heinemann Library. Chicago, IL, 2004.

Animal Poetry

Objective:

To experiment with a variety of poetry styles.

Materials:

Roar and More by Karla Kuskin, chart paper, markers, primary lined handwriting paper, pencils, computer and printer (optional).

Procedure:

Recall how the movie, “Animalopolis” was written in rhyme. Discuss various styles of poems and how they can be funny or serious, long or short. Read from a selection of children’s poetry to show various styles. Some excellent resources are listed on the next page. Next read the book Roar and More by Karla Kuskin. Discuss how the author wrote poems to describe various animals. She then illustrated the sounds they make by using different styles of type.

Brainstorm animals to write about. Consider the animals used in “Animalopolis.” such as the sea otter, the red crab, the grizzly bear, the ostrich, the cheetah and the sea lion.

After brainstorming, discuss the vocalizations each animal makes. What would that look like if you were to write the word describing its sound?

So, what sound does a sea lion make? Can you find animal sounds by conducting an Internet search? Here is an example of a site for animal sounds:

<http://www.seaworld.org/animal-info/sound-library>

This is an example from Kuskin’s book:

“If a lion comes to visit
Don’t open your door
Just firmly ask ‘What is it?’
And listen to him roar.”

roar

Animal Poetry

Some animals make little or no noise. How would you illustrate that? The ostrich makes a drumming noise but does most of its communication using movement. The cheetah does not roar. It purrs, growls, or chirps. Use this link to hear its sounds. <http://www.cheetah-spot.com/sounds.php>

List the animals discussed and words to describe their sounds as well as words that rhyme with the sounds. Or divide children into small groups and have them come up with a list of descriptors for the animals they choose. (See "Animal Vocalizations" recording chart.)

For older children, discuss and choose a style of poetry. Here are some descriptions of popular styles:

Cinquain

Poetry with five lines. Line 1 has one word (the title). Line 2 has two words that describe the title. Line 3 has three words that tell the action. Line 4 has four words that express the feeling, and line 5 has one word that recalls the title.

Couplet

A couplet has rhyming stanzas made up of two lines.

Free verse

Poetry written in either rhyme or unrhymed lines that have no set fixed metrical pattern.

Haiku

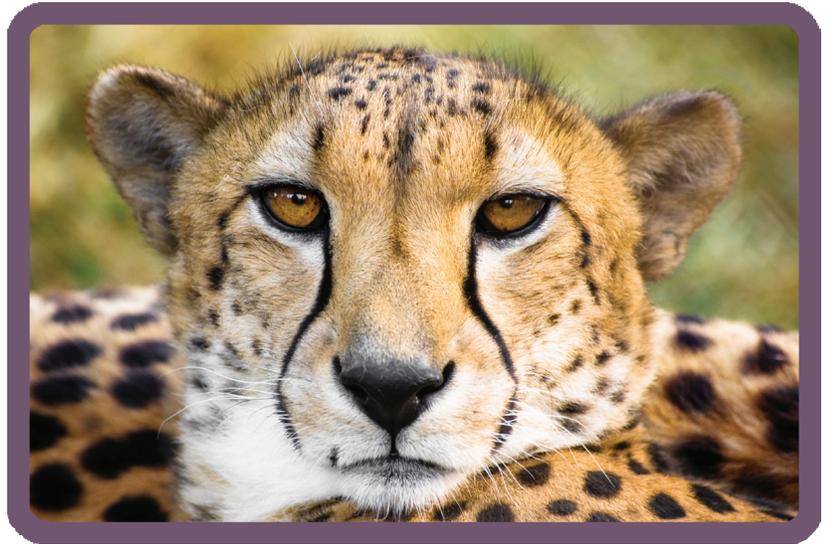
A Japanese poem composed of three unrhymed lines of five, seven, and five syllables, usually about some form of nature.

Quatrain

A stanza or poem consisting of four lines. Lines 2 and 4 must rhyme while having a similar number of syllables.

Rhyme

A rhyming poem has the repetition of the same or similar sounds of two or more words, often at the end of the line.



For younger children, after completing the vocalization chart together, create a class poem using the simple rhyme style.

Vocalizations can be illustrated either through free-hand drawing, or, if using a word processing program to create the poem, by experimenting with various computer fonts.

Resources

- The Listening Walk. Paul Showers. HarperCollins Publishers, Mexico, 1961. New Edition.
- Animal Snackers., Betsy Lewin. Scholastic Inc. 1980.
- Animals Animals. Eric Carle. Penguin Putnam Books, 1989.
- Mommy Mine. Tim Warnes. Scholastic, New York, NY, 2005.
- <http://falcon.jmu.edu/~ramseyil/poeform.htm>

If We're Quiet

(Sung to the tune, "If You're Happy and You Know It")

This is a circle time listening game. The teacher will select one child to be in the middle of the group. Two other children are secretly selected to play the parts of animals mentioned in the first verse of the song. The person in the middle must listen, with eyes closed, for the animal noises, then identify the children who made the noises. The game continues with the teacher selecting other children to be listeners or animals for each verse.

For an extension, children may write their own verses using animals they saw in "Animaloplois."

**There's a lion in the grasslands,
Hear it ROAR.
There's a bear in its cave,
Hear it SNORE.
No matter what the sound,
There are animals all around.
If we're quiet, we will hear what we have found!**

**There's an otter in the sea,
Hear it SPLASH.
There's a hippo on the shore,
Hear it CRASH.
No matter what the sound,
There are animals all around.
If we're quiet, we will hear what we have found!**

**There's a buffalo on the savanna,
Hear it BELLOW,
There's a zebra on the plains,
Hear it BRAY.
No matter what the sound,
There are animals all around.
If we're quiet, we will hear what we have found!**



Vocalization Brainstorming Chart

Animal	Sounds	Rhyming Words
Example: Cheetah	Example: Chirp, growl, purr	Example: Slurp, burp, prowl, howl, grrr, fur

Animal Olympics

Objective:

To learn animal facts in a fun, hands-on environment.

The movie, “Animalopolis” featured many animals and their various ways of moving from one place to another. Animal Olympics features several events to illustrate how different types of animals move. These activities can be done as a culmination of a single classroom’s animal unit. The stations would also work for a school’s field day program.

Prior to Animal Olympics, the teacher will distribute an Olympics Passport (see “Animal Olympics Passport”). As children visit each station, a volunteer will stamp passports to show an activity has been completed. See the following instructions for each Animal Olympic activity.

Animal Olympic Events

Run Like a Cheetah

Objectives:

Compare resting vs. running heart rates and how much energy and recovery time that takes.

Materials:

Animal Fact cards, course-marking cones, Stop watches, calculators, stamp pad, animal stamps, clipboards, pencils, passports, several adult or older student volunteers.

Procedures:

Prior to the activity, the teacher will discuss with children resting and running heart rates. Children will practice taking their own heart rates. The school’s Physical Education teacher could also have

the children practice this beforehand during gym class.

The teacher will show animal fact cards about the cheetah and will discuss its ability to run short distances at up to 65 MPH. Compare this to a car's driving speed.

Set up a marked 50-yard dash with cones. Students are to take their resting heart rate twice for 30 seconds, average it and record in their passports. Students will race the course. The volunteers will record the time each child took to run 50 yards. This will be recorded in the passport. Students will take their running heart rate immediately after completing the dash. This should be done twice as above for comparison purposes. Record the results in passports.

Explain that the cheetah, although it is the fastest land animal, is able to run this speed for only a short distance and must rest for up to thirty minutes to recover.

Puffling Fling

Objective:

To understand how people can help animals.

Materials:

Several weighted gallon milk jugs or liter pop bottles, (sand works well in the bottles), several small cardboard boxes, passports, stamp pads, animal stamps, clipboards, volunteer helpers.

Resources:

- Nights of the Pufflings by Bruce McMillan
- Find information on puffins and the Project Puffin at www.audubon.org/bird/puffin/virtual/ppuffin.

Procedure:

Prior to this event, the teacher is to read McMillan's Nights of the Pufflings. Information on puffins is available on fact cards and at various web sites such as the one listed above.

The children will decorate milk or pop bottles to resemble pufflings. The bottle "pufflings" are to be spread around a large area such as a playground or park by volunteers. On a signal, the children

are to collect as many "pufflings" as they can and place them in their boxes. Children may work as teams or individuals. After a set amount of time, the teacher will blow a whistle; children will stop their gathering and return to the starting area. Points will be awarded to the team or individual with the most "pufflings." This will be recorded in individual passports.

The second step in "Puffling Fling" will have the children line up in single file across a set line. On a signal, each child will take one "puffling" and toss it as far as possible. Be sure to practice the tossing as shown in McMillan's book. The child whose "puffling" is tossed the furthest will receive credit in his/her passport.

Crab Walk

Objective: Animal movements; migration; reproduction.

Materials:

Stamp Pad, Animal stamps, cones for marking the course, passports, volunteers.

Procedure:

Prior to this event, the instructor will discuss how crabs move. Using a fact card, teacher will discuss the migration of the red crab from October to December on Christmas Island. Use the following link to see this migration: http://www.metacafe.com/watch/80129/christmas_island_red_crabs

The following site also offers information on Christmas Island: www.environment.gov.au/parks/christmas/nature-science/fauna/red-crabs.html

To play the game form two even teams. The first players on each team get into crab-walk position on their hands and feet with their stomachs pointing toward the sky. Put a shoe on their stomachs to raise the level of difficulty.

On "go," they have to crab walk forwards from the starting line to the end of the cone-marked course. Then, they have to return to the starting line crab walking backwards. If the shoe falls off, they must stop and retrieve it. The next person in line repeats the walk. The first team to finish

wins. Points are given and noted in passports. This can also be played as an individual event rather than a team race.

Sea Lion Bubbles

Objective:

To compare breathing times of sea animals and humans.

Materials:

Stop watches, stamp pads, animal stamps, passports, several volunteers. Prior to the activity, the teacher may read from fact cards about sea lions. See the link below for more facts about sea lions. http://www.sandiegozoo.org/animalbytes/t-sea_lion.html

Procedure:

Using stopwatches, volunteers will time children on how long they can hold their breaths. The time is recorded in their passports. Children may try for the best time out of three tries. Discuss why this is an important adaptation for the sea lion. Point out that a sea lion can stay submerged for up to forty minutes. What would happen to a human for that length of time?

Elephant Weigh-In

Objective:

To compare larger and smaller amounts; to predict an outcome based on given information.

Materials:

Bathroom scales, marbles, large jar, Hap Palmer's CD "Early Childhood Classics" song, "The Elephant," CD player, roving yarn lengths of approximately 1 foot per child, stamp pads, animal stamps, clipboards, passports, pencils, volunteers.

Procedure:

Teacher will discuss animal fact card information with children about elephants. Resource: www.sandiegozoo.org/animalbytes/t-elephant.html

Teacher will discuss that the average male elephant weighs in at 11,000 pounds and a female

at 6,000 pounds. Volunteers will weigh children and divide their weight by the appropriate number to determine how many of themselves it would take to make one elephant. Record that number in their passports. For example, if a boy weighs 70 pounds, there would need to be 157 other children weighing 70 pounds to equal one male elephant.

To continue the activity, using marbles, show the children how many marbles it would take if one marble weighed 100 pounds. Play Hap Palmer's "Elephant" song and practice walking in a line with each "elephant" holding the next elephant's yarn "tail."

Bird Flap

Objective:

To experience air flow and resistance.

Materials:

Bird wing cutouts made from oak tag, toile (netting), cardboard, stopwatches, stamp pads, animal stamps, passports, several volunteers.

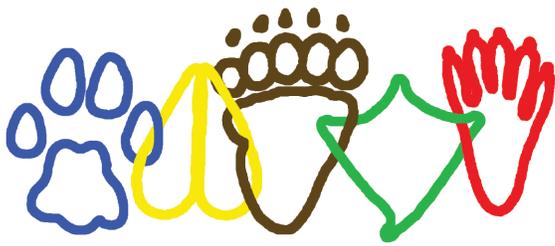
Procedure:

Teacher and students will discuss fact cards about birds focusing on their wings and feathers. Students will make one of three kinds of wings. One group will make wings from oak tag and oak tag straps. Each wing will be tapered and have slits cut into the oak tag to lessen wind resistance. The second group will make wings from cardboard with no slits. These can be secured to arms with yarn threaded through the cardboard. The last group will make wings using an oak tag frame with nylon netting or toile glued over the frame. This can be secured to arms using yarn.

After the wings have been assembled, the students are to predict how many times they will be able to "flap" their wings in 30 seconds. Compare the number of times for each type of wing. Determine which wing is the most aerodynamic. Discuss why that might be so.

Summary:

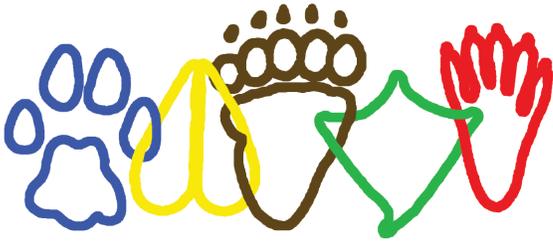
Post the results of each event in Data graph form. (See appendix)



Animal Olympics

Data Gathering

Run Like a Cheetah	Puffling Fling	Crab Walk	Sea Lion Bubbles	Elephant Weigh-In	Bird Flap
Fastest Runner:	Most Pufflings Collected by an Individual (or Team):	Fastest Crab Walker:	Longest Attempt at Breath-holding:	Largest Number of Marbles in Jar:	Most Beats per cardboard wings:
Best Recovery time:	Least Amount of Pufflings Gathered by an Individual (or Team):	Fastest Crab Walking Team:	Longest 1st Try at Breath-holding:	Largest Number of Children to Elephant:	Most Beats per Oak Tag Wings:
	Farthest Puffling:			Smallest Number of Children to Elephant:	Most Beats Per Netting Wings:



Animal Olympics Passport

Cheetah Run

Resting heart rate: BPM

Running heart rate: BPM

50 Yard Dash time:

Bird Flap

I could flap my oaktag wings _____
times in 30 seconds.

I could flap my net wings _____
times in 30 seconds.

I could flap my cardboard wings
_____ times in 30 seconds.

Elephant Weigh-In

It would take _____
of me to equal one adult elephant.

Sea Lion Bubbles

I could hold my breath for
_____ seconds.

A sea lion can do the same for up
to forty minutes.

Puffling Fling

Number of Pufflings rescued:

Number of feet tossed:

Crab Walk

First

Second

Third

Name _____

Animals on the Move

Objective:

Observe, recall, discuss animal locomotion, behavior, or distinguishing trait.

Materials:

Chart paper and marking pen.

The movie, "Animalopolis" featured several animals in motion. The red crabs were scurrying, the cheetah was racing, wildebeests were stampeding. This activity will be based on the book, Animal Action ABC, written by Karen Pandell, and the movie, "Animalopolis."

Procedure:

Children are to make a list of animals with a distinguishing movements. (See Animal Movement Brainstorming Chart.) The children will then act out those movements together for a guessing game.

Animals in the movie "Animalopolis" and suggested movement or characteristic:

Cheetah: Stretch out body, then run very fast for a short distance.

Sea Lion: With body dragging, use stiff arms and hands to slide across the floor. Roll to side and flap hands together.

Red Crab: With stomach and head facing ceiling, walk on hands and bent legs in a sideways motion.

Lions: Yawn, cat stretch, roll over, go back to sleep.

Children may choose other animals and act out their movements.

Horse: Gallup, canter, or trot.

Elephant: Lumber with trunk swinging.

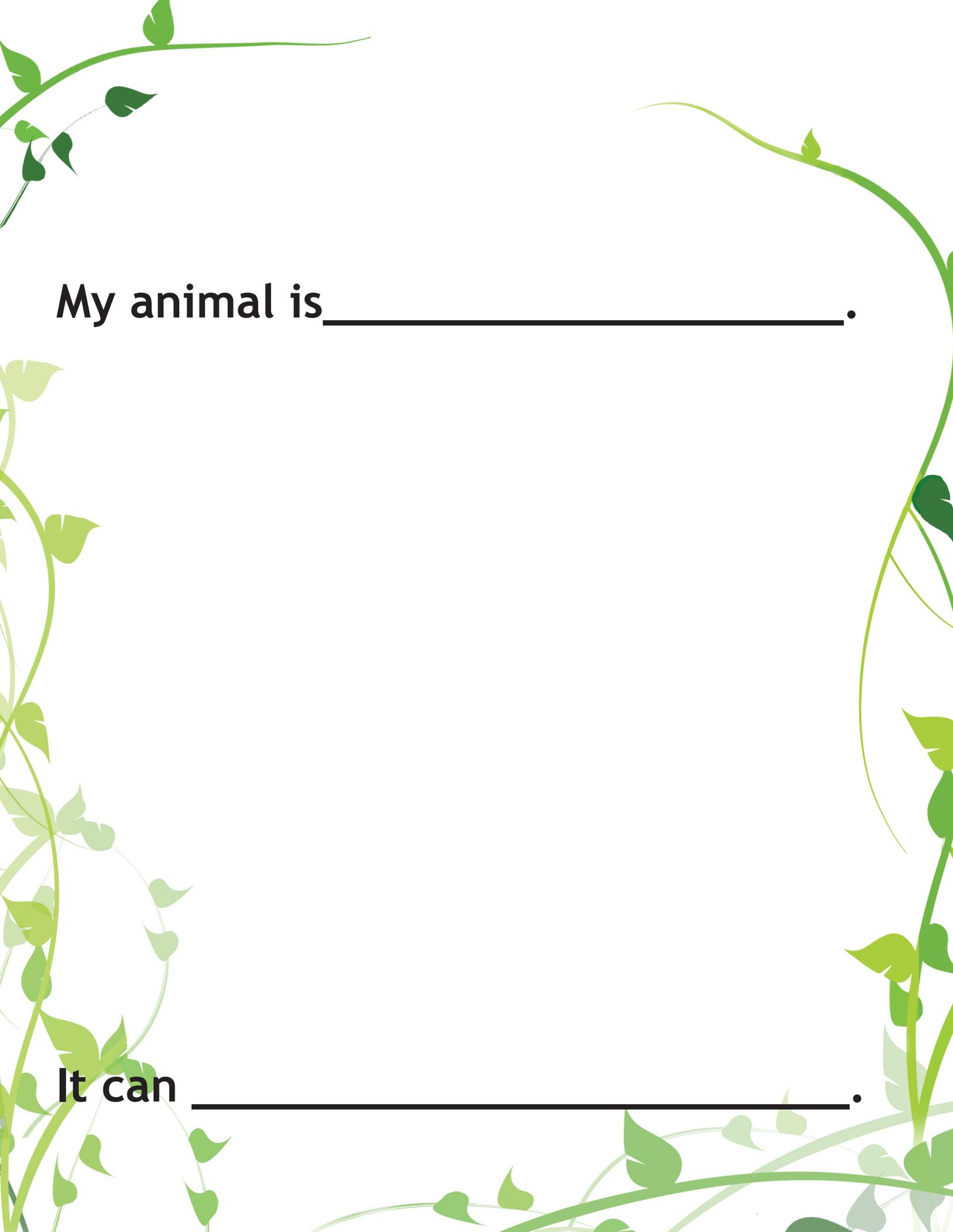
Monkey: Simulate swinging through trees.

Frog: Hop and flick tongue.

After a short time, children will begin making their own suggestions for animals and their method of locomotion or movement. Have individuals try to get the other children to guess which animal they are imitating. To access understanding, children may illustrate their animals and write the movement descriptor word under their illustration. Or see Animal Movement Story handout for a suggested story writing format.

Resources:

- Pandell, Karen. Animal Action ABC. Scholastic, INC. New York, NY, 1996.
- Jenking, Steve & Page, Robin. What Do You Do With a Tail Like This? Scholastic, INC. New York, NY. 2003



My animal is _____.

It can _____.

Animal Movement Brainstorming Chart

Animal Example: Cheetah	Movement Example: Running

Name _____

Hey, Li-On, What's the Ti-om?

Objective:

To promote the concept of predator/prey while enjoying physical activity.

Materials:

A large open area such as a playing field, or gymnasium.

Procedure:

Children will participate in a game of tag that involves a lion and animals of prey. After explaining that a lion stalks its prey and can take several hours to do so, introduce a new way of playing tag.

One child is chosen as the lion. The other children will be the prey such as wildebeest, zebras, and antelope. The animals of prey will be gathered around an area to be designated as the "watering hole." With their backs to the lion who is several yards behind, the children will call out, "Hey, Li-on, what's the ti-om?" The lion will call out a time such as 5 o'clock, 10 o'clock, etc. The children (animals of prey) will count out the number while the lion takes that many steps toward them. Still with backs to the lion, play continues until the children call out, "Hey, Li-on, what's the ti-om?" and the lion calls out, "Dinner Time!" followed by a very loud roar. The animals of prey are now able to turn toward the lion and run to shelter or "home" which is the place from where the lion started. The first person tagged is "eaten" and now "it." If everyone makes it home safely, the lion is still "it."

What we're learning: This game shows how the lion is able to stalk its prey. In the wild, animals are more susceptible to attack when they are not as focused on their surroundings as they are to their nourishment. Lions tend to hunt at dawn or dusk when light is diminished. Their keen sense of vision enables them to see in the poorest of light. Their ability to move quickly and quietly, and their patience in stalking make them effective, deadly hunters.

The lionesses are the more successful hunters. The males are much bigger and not as agile. After a successful hunt, the males of the pride will eat first, the lionesses next and the cubs last. The animals will not eat again for a few days.



Resources:

- Animal Lives: Lions. Sally Morgan. QEB Publishing, Laguna Hills, CA, 2005.
- Getting to Know...Nature's Children: Lions. Elizabeth MacLeod. Scholastic, INC. New York, NY, 1988.

National Science Education Standards

	Structure & Function	Reproduction & Heredity	Regulation & Behavior	Populations & Ecosystems	Diversity & Adaptations	Systems, Order & Organization	Evidence, Models & Explanation	Change, Constancy & Measurement	Evolution & Equilibrium	Form & Function	Science as Inquiry	Popultions, Resouces & Environment	Science & technology in Society	Natural Hazards	Science as Human Endeavor	Nature of Science	History of Science
Activities	I. LIFE SCIENCE					II. UNIFYING CONCEPTS AND PROCESSES					III. SCIENCE AS INQUIRY	IV. SCIENCE IN PERSONAL & SOCIAL PERSPECTIVE			V. HISTORY & NATURE OF SCIENCE		
Build a Bear-Habitat Style																	
Are You My Mommy?																	
Salmon Run																	
Natural Selection																	
Animal Poetry																	
If We're Quiet																	
Animal Olympics																	
Animals on the Move																	
Hey Li-on What's the Ti-om?																	

A Graphic Films Production. Produced by Paul Novros. Directed by Tim Huntley.
Distributed by K2 Communications.



A New Giant Screen Film

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