toronto zoo

GRADE 1

CHARACTERISTICS AND NEEDS OF LIVING THINGS

TEACHER RESOURCE BOOKLET

TO THE TEACHER

Welcome! This resource guide has been designed to help you enrich your students' learning both in the classroom and at the Toronto Zoo. All activities included in this grade 1 booklet are aligned with the Understanding Life Systems strand of The Ontario Curriculum, Grades 1-8: Science and Technology, 2007. The pre-visit activities have been developed to help students gain a solid foundation about biodiversity before they visit the Zoo. This will allow students to have a better understanding of what they observing during their trip to the Toronto Zoo. The post-visit activities have been designed to help students to reflect on their Zoo experience and to make connections between their experiences and the curriculum. We hope that you will find the activities and information provided in this booklet to be valuable resources, supporting both your classroom teaching and your class' trip to the Toronto Zoo.

WHERE DOES IT FIT IN?

Strand: Understanding Life Systems **Topic**: Characteristics & Needs of Living Things

Specific Expectations Met:

Understanding Basic Concepts

- **3.3** identify the location and function of major parts of the human body, including sense organs
- **3.2** identify the physical characteristics of a variety of plants and animals (e.g., ways animals move, adaptations they may have)
- **3.5** describe how showing care and respect for all living things helps to maintain a health environment

Developing Investigation and Communication Skills

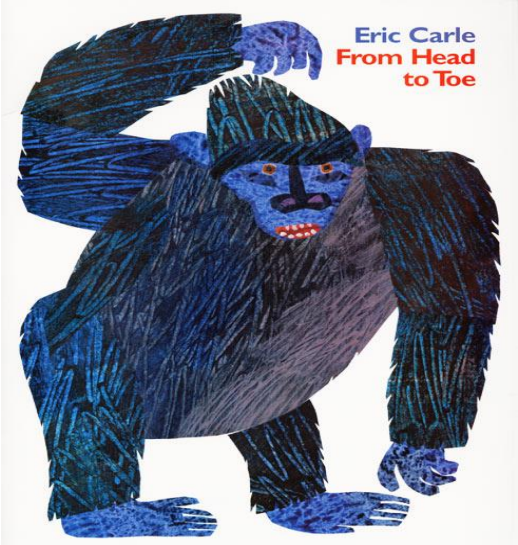
- **2.2** investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth, and space.
- **2.3** investigate and compare the physical characteristics of a variety of plants and animals, including humans.
- **2.5** investigate characteristics of parts of the human body, including the five sense organs, and explain how those characteristics help humans meet their needs and explore the world around them.

Relating Science and Technology to Society and the Environment

- **1.1** identify personal action that they themselves can take to maintain a healthy environment for living things, including humans.

PRE-WORKSHOP ACTIVITIES

1. ERIC CARLE – "FROM HEAD TO TOE"



This book is a great way to introduce your class to the topic of animal movement. While seated in your meeting /carpet area, encourage students to participate as you ask "Can you do it?" while reading to your class.

This book can be used as a lead in to discussing different ways animals move. Seals can "clap" their flippers, but what else do they use them for? What do other animals use to swim through the water?

Talk about and brainstorm with the class all the different ways that animals move. New terms can be introduced at this time. Examples include: walk, crawl, slither, gallop, jump, swim, leap and fly.

Tying It All Together
In the gym, allow a few moments for free movement as we see all the different ways we can move. Next, have students pretend they are animals and move as that animal would. Choose a student to model a movement and have other students copy the movement. Act out each of the different ways animals moved as discussed in class.

Variation: Make cards with the movement words (listed above) written on them. Ask students to sit in a circle. Give each student one movement card. As the students show their cards, the teacher reads the movement. The student will act out the movement and name an animal that moves in such as way.

Health and Physical Education: Movement Competence: Skills, Concepts, and Strategies
- **B1.3** perform a variety of locomotor movements, travelling in different directions and using different body parts
-**B1.2** demonstrate the ability to move and stop safely and in control, with an awareness of people and equipment around them
-**B2.1** demonstrate an understanding that different physical activities have different components, and apply this understanding as they participate in and explore a variety of individual and small-group activities.

2. SENSORY CENTRES

Sensory centres are a wonderful activity for your students to practice using their senses in isolation from each other. At various stations throughout the classroom have sounds, tastes, visuals, smells and tactile experiences grouped for students to engage in. One suggestion would be to have a station for each of the senses. Have students identify objects that they are experiencing by using one or more of their senses.

Sight: Include close up photographs to identify everyday objects.

Sound: Pre-recorded sound clips can be used such as a train, animals, machines, or any other object that would be easily identifiable.

Smell: Place samples of spices, popcorn, wood shavings, vanilla in paper bags for children to smell. What happens if we plug our noses and try to smell?

Taste: Use bitter, sweet, salty and sour samples of items to taste. What happens if we plug our noses and try to taste?

Touch: A variety of common objects can be concealed in paper bags to see if students can identify them. Some suggestions include; wooden blocks, a carpet sample, play dough, wool and sand paper.

This activity can be used as a lead in on another day to discussing animal senses. How are they similar / different from ours?

3. KWL CHART – ANIMAL MOVEMENT AND SENSES

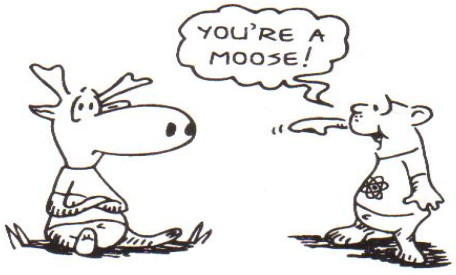
This activity will encourage students to practice making predictions and communicating their ideas to the class. It is an excellent opportunity for the teacher to assess the prior knowledge that students have regarding concepts covered in the workshop.

As a class, complete the first two columns of the KWL chart. The chart may be displayed in the class as a reminder of your upcoming visit to the Toronto Zoo.
The final "Learned" column can be completed as a follow-up activity to your visit.

What we **KNOW**	What we **WANT TO KNOW**	What we **LEARNED**

FOLLOW-UP ACTIVITIES

1. WHAT ANIMAL AM I? - (Science Is…. Pp. 99)



This activity will help build questioning skills in younger students. One person is chosen to be an animal, the instructor whispers to the student what animal they are. The "animal" returns to the group and answers questions from their classmates while they try to figure out what animal he / she is. For example; can you fly? Do you have fur? Do you eat meat? The animal can only answer yes or no.

2. SENSORY SCAVENGER HUNT

Pretend you are a wild animal exploring your territory. Go on a scavenger hunt around your schoolyard. What do you see? Hear? Feel? Smell? This is an activity that could be done at different points throughout the year to make note of seasonal changes.

If you are doing this activity within your classroom, you may wish to bring in other objects not normally found inside.

Tying It All Together
Students may be asked to create a journal entry by drawing a picture and writing about what they experienced while on their scavenger hunt.

3. ANIMAL YOGA - (Science Is…. Pp. 100-101)

Can you stretch like a cat? Sit like a frog? Let the animals give you a lesson in relaxation and body awareness. (A soft surface such as a carpet or gym mats will be required.) Try the positions found at the end of this booklet. Always move slowly and smoothly; never stretching muscles until they hurt. Each position should be held for a slow count of 3 – 10 seconds. Don't forget to BREATHE!!

WALK LIKE A MONKEY: Stand very straight. Bend forward until your hands touch the ground while your legs remain straight. Walk around on all fours, keeping your legs as straight as possible (don't let your knees touch the ground!). Stop. While you keep your legs straight, slowly push yourself upright, lift your hands off the ground. And return to a standing position.

4. GRAPHING ANIMAL MOVES

This activity is an excellent way to tie your animal unit into the expectations of the Data Management and Probability strands of the Mathematics curriculum (e.g., collecting, organizing and analyzing data as well as concluding and reporting on data).

Cut out approximately 40 pictures of animals from magazines. Working as a group, how many ways can you group they animals? Try classifying the animals by colour, how they move, what they have covering their bodies, or any other way that your students suggest.

Create a graphical representation of your findings as a whole class (i.e., bar graph). This would be a great lead in or review of graphing skills.

5. WORD SEARCH

A word search and answer key have been attached. Please feel free to copy and distribute this puzzle to your students. A suggestion for this activity may be for "busy work" for those who are looking for extra activities upon completion of assigned tasks.

The word search includes 15 vocabulary words that are tied directly to the workshop. There are **no** diagonal or backwards words included in the puzzle.

VOCABULARY LIST

basic needs The things that an organism must have in order to survive. Basic needs for a living organism include food, water, shelter, warmth, space, and air.

environment An area that includes living and non-livings thing, and includes the interactions of living organisms.

movement The way in which an animal travels from one location to another.

nocturnal active at night

prey an animal hunted or killed by another animal for food

predator an animal that lives by killing and eating other animals

senses how organisms learn about the environment around them. Through sight, hearing, smell, touch, and taste we take in our surrounding to find food, keep ourselves safe, and find shelter.

1. ***sight*** - The ability of our eyes to see those things around us.
2. ***sound*** - The ability of our ears to hear the sounds around us.
3. ***smell*** - The ability of our nose to smell all the different smells around us.
4. ***touch*** - The ability of our hands and skin to feel the things around us.
5. ***taste*** - The ability of our tongue to taste all the different foods around us.

shelter something that provides protection or cover (e.g. from the weather, or predators)

RESOURCE LIST

***S** = student friendly site
***T** = teacher friendly site

http://www.torontozoo.com/ExploretheZoo/Animals.asp **(T)**
These pages are jam-packed with facts and descriptions of many of our most popular animals. We often add fact sheets to the collection, so check back often.

www.nationalgeographic.com/kids/ **(S&T)**
National Geographic's site is geared towards children and is complete with games, homework help, and activities. Get to know some of the most interesting and unusual members of the wild world—from cheetahs to crocodiles and whales to warthogs. Dive into the Creature Feature for photos, video, audio, postcards, fun facts, and more!

http://www.pbs.org/kratts/world/index.html **(S&T)**
This site contains an interactive world map that links to animals that live in different parts of the world. Animal descriptions include a general profile, information about adaptations, interesting facts, and colour pictures.

www.greatsitesforkids.com **(S&T)**
This site is a great starting point for all kinds of websites geared towards children. The site is organized by curricular areas or you can submit your own search criteria.

http://school.discoveryeducation.com/teachingtools/teachingtools.html **(T)**
Quick and easy-to-use worksheet generators.

http://www.enature.com/home/ **(T)**
This online field guide with over 4000 photographs of North American animals and plants. Site is very well organized.

http://exchange.smarttech.com/details.html?id=e8370704-dffd-4243-98c9-4a823e3f253e
The above hyperlink will take you to an interactive Smartboard lesson about animal needs. Using Smart Exchange (exchange.smarttech.com), teachers can search and download lessons. Membership to the site is free. If you do not have access to a Smartboard, a laptop and projector will be effective as well.

Books

Bosak, Susan V. (2000). Science is…. 2nd Edition**.** Markam: Scholastic Canada Inc.
A source book of fascinating facts, projects and activities.

Grambo, Rebecca L. (1997). Eyes. Chicago: Kids Books Inc.
Find out about nature's most amazing animal eyes! From flies to eagles, from lizards to wolves, these eyes are big, bizarre, and powerful.

Swanson, Diane (1999). Noses that Plow and Poke**.** Toronto: Douglas & McIntyre Publishing Group.
Want to know who's nosy? Lots of animals are. They have noses for talking, noses for poking around – even noses for doing tricks.

Swanson, Diane (1999). Tails that Talk and Fly**.** Toronto: Douglas & McIntyre Publishing Group.
Tails are terrific. Animals use them in swimming, flying and talking.

Swanson, Diane (2000). Feet that Suck and Feed**.** Toronto: Douglas & McIntyre Publishing Group.
Feet are neat. Some are built for special jobs, such as climbing, jumping, swimming, or racing.

ANIMAL YOGA POSITIONS

FLY LIKE A BIRD: Hang your arms loosely at your sides. Lean forward and slowly lift your arms up behind you as high as possible. Hold, then relax in a standing position.

RELAX LIKE A JELLYFISH: Lie on your back. Shut your eyes and relax all the muscles in your body. Pretend your body is made of jelly. Breathe slowly and deeply for several minutes.

KNEEL LIKE A CAMEL: Kneel on the ground with your right hand resting on your right heel and left hand on your left heel. Raise your chest up, bend your head back, push your chest toward the sky, and hold. Return to a kneeling position and take your hands off your heels. Bend back slightly. Move one arm up over your head and hold it straight. Then try your other arm. Relax in a kneeling position.

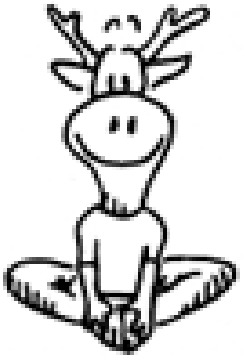
YAWN LIKE A LION: Sit on your feet. Put your hands on your knees. Lean forward while opening your eyes and mouth wide. Stick out your tongue as far as possible. Let out one loud roar! Sit back and relax.

ANIMAL YOGA POSITIONS

BALANCE LIKE A STORK: Stand up straight with your arms at your sides. Slowly lift up one leg and balance on the other leg. Slightly bend the leg you're balancing on; bring your index fingers from both hands to your nose. Then lift up your bent arms. Hold. Return to a standing position and reverse legs.

STRETCH LIKE A CAT: Stand on all fours, with your back straight. Slowly raise your back up high and hold. Lower your back. Stretch out one leg until it's straight and hold. Then stretch the other leg. Relax on all fours again.

POSE LIKE A COBRA: Lie on your stomach. Move your hands under your shoulders. Push up on your hands and lift your head up and back. Push up until your arms are straight. Hold, then relax.



SIT LIKE A FROG: Sit with knees bent out and the soles of your feet touching each other. Use your hands to gently pull your feet in toward your body. Keep your back straight and flex your knees downward. Relax and sit comfortably.

Animal Movement and Senses

*** There are no diagonal or backwards words in this puzzle!*

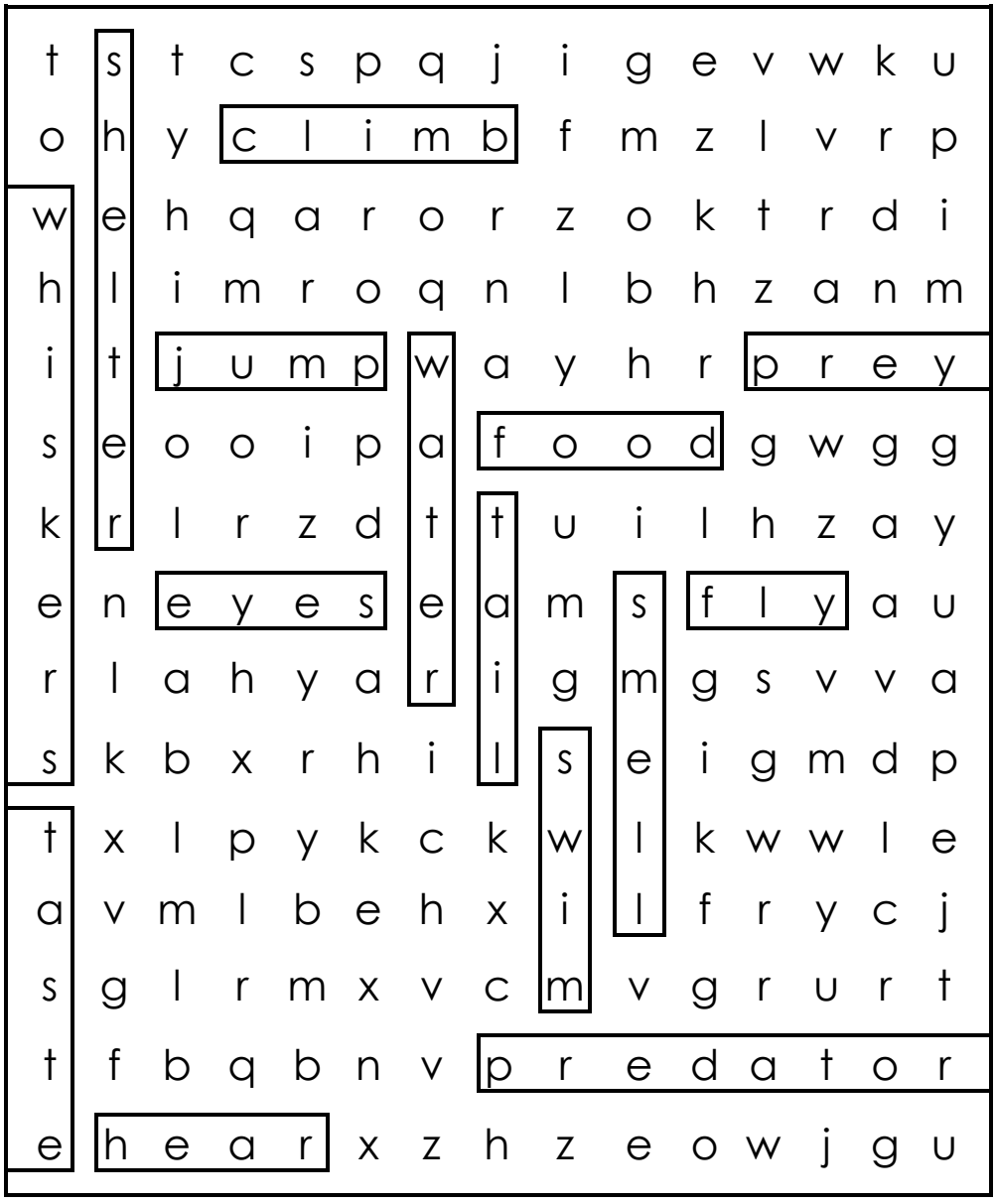
t	s	t	c	s	p	q	j	i	g	e	v	w	k	u
o	h	y	c	l	i	m	b	f	m	z	l	v	r	p
w	e	h	q	a	r	o	r	z	o	k	t	r	d	i
h	l	i	m	r	o	q	n	l	b	h	z	a	n	m
i	t	j	u	m	p	w	a	y	h	r	p	r	e	y
s	e	o	o	i	p	a	f	o	o	d	g	w	g	g
k	r	l	r	z	d	t	t	u	i	l	h	z	a	y
e	n	e	y	e	s	e	a	m	s	f	l	y	a	u
r	l	a	h	y	a	r	i	g	m	g	s	v	v	a
s	k	b	x	r	h	i	l	s	e	i	g	m	d	p
t	x	l	p	y	k	c	k	w	l	k	w	w	l	e
a	v	m	l	b	e	h	x	i	l	f	r	y	c	j
s	g	l	r	m	x	v	c	m	v	g	r	u	r	t
t	f	b	q	b	n	v	p	r	e	d	a	t	o	r
e	h	e	a	r	x	z	h	z	e	o	w	j	g	u

climb
eyes
fly
food
hear
predator
shelter
swim
prey
shelter
smell
tail
taste
water
whiskers

Word Search

Animal Movement and Senses

*** There are no diagonal or backwards words in this puzzle!*



climb
eyes
fly
food
hear
predator
shelter
swim
prey
shelter
smell
tail
taste
water
whiskers