Educational Package of Suggested Activities for

GRADE TWO

WELCOME TO SAFARI NIAGARA

A class visit to a zoo or nature park such as Safari Niagara is an excellent learning opportunity for students in any grade level. For many grades the experience can fulfill program goals or expectations from Ministry of Education Curriculum Documents, notably Science and Technology 2007 and Social Studies 2004.

Even where, at a particular grade level, there is no direct link to the curriculum documents there are opportunities for you, the teacher, to connect pre visit, on-site and post visit classroom activities to the hands-on experience of the day.

The management of Safari Niagara recognized these direct and implied connections beginning with the inception and opening of the park. To assist you in planning for your visit we assembled a team of teachers at all grade levels to produce materials which will hopefully be of use to you. These curriculum materials have been upgraded several times as Ministry of Education documents were revised. However, the suggested activities remain essentially the same because good teaching ideas are forever!

You may note that the format of the attached materials can vary from grade to grade. This reflects the philosophy, experience and teaching styles of the writers. It is expected that in using the materials you will adapt them to your own classroom environment, picking and choosing those most suited to your style.

Regardless of how you plan to enhance your visit to our facility by classroom activities the fundamental truths remain. Zoos and nature parks today are becoming both a last refuge for many endangered species and a hope for their recovery at some point in the future. Humankind must accept the responsibility for the recovery of the planet. The closer we can get our students to physical contact with the real world and the wonders of nature the more they will, as adults, appreciate the gravity of this task.

GRADE TWO

UNDERSTANDING LIFE SYSTEMS, GROWTH AND CHANGES IN ANIMALS

Fundamental Concepts	**Big Ideas**
Structure and function	Animals have distinct characteristics
	Humans are animals
	There are similarities and differences among differed kinds of animals
	Humans need to protect animals and the places where they live

OVERALL EXPECTATIONS

By the end of Grade Two, students will:

- Assess ways in which animals have an impact on society and the environment, and ways in which humans have an impact upon animals and the places where they live;
- Investigate similarities and differences in the characteristics of various animals;
- Demonstrate an understanding that animals grow and change and have distinct characteristics

SPECIFIC EXPECTATIONS

1. **Relating Science and Technology to Society and the Environment**

By the end of Grade Two, students will:

- Identify positive and negative impacts that animals have on humans (society) and the environment, form an opinion about one of them, and suggest ways in which the impact can be minimized or enhanced
- Identify positive and negative impacts that different kinds of human activity have on animals and where they live, form an opinion about one of them, and suggest ways in which the impact can be minimized or enhanced

2. **Developing Investigation and Communication Skills**

By the end of Grade Two, students will:

- Observe and compare the physical characteristics and the behavioral characteristics of a variety of animals, including insects, using student generated questions and a variety of methods and resources
- Investigate the life cycle of a variety of animals, using a variety of methods and resources
- Observe and compare changes in the appearance and activity of animals as they go through a complete life cycle
- Investigate the ways in which a variety of animals adapt to their environment and/or to changes in their environment, using various methods
- Use scientific inquiry/research skills and knowledge acquired from previous investigations, to investigate the basic needs, characteristics, behavior, and adaptations, of an animal of their choice
- Use appropriate science and technology vocabulary, including life cycle, migration, adaptation, body coverings and classify, in oral and written communication
- Use a variety of forms to communicate with different audiences and for a variety of purposes

3. **Understanding Basic Concepts**

By the end of Grade Two, students will:

- Identify and describe major physical characteristics of different types of animals
- Describe an adaptation as a characteristic body part, shape or behavior that helps a plant or animal survive in its environment
- Identify ways in which animals are helpful to, and ways in which they meet the needs of living things, including, humans, to explain why humans should protect animals and the places where they live
- Identify ways in which animals can be harmful to humans

OPPORTUNITIES FOR INTERGRATION

The Life Systems strand in the Ontario Curriculum of Science and Technology can be enhanced by a visit to SAFARI NIAGARA. The grade two topics of Growth and Changes in Animals, which focuses on patterns of growth and change, lends itself to investigations and explorations at the site. Also included are many pre-visit and post visit activities. These activities will also apple to many learning expectations across the curriculum that are included below

Science and Technology

Understanding Life Systems

- Identify positive and negative impact that animals have on human (society) and the environment
- Identify positive and negative impact that different kinds of human activity have on animals and where they live
- Observe and compare physical characteristics and the behavioral characteristics of a variety of animals;
- Use appropriate science and technology vocabulary
- Identify and describe major characteristic, or behavior that helps an animal survive in its environment

Structures and Mechanisms

- Describe, using their observations, the pattern of movement of objects

Social Studies

- Construct and read a variety of graphs, charts, diagrams, maps and models for specific purposes.

Language- Reading

- Read a variety of simple written materials for a specific purpose;
- Restate information in a short non-fiction text in their own words;
- Use and interpret some conventions of formal texts; (e.g. maps, pictures, graphics, etc.)

Language- Writing

- Communicate experiences for specific purposes
- Begin to use resources for correct spelling

Language- Oral and Visual Communication

- Listen to discussions on familiar topics and ask relevant questions
- Apply the rules of participating in a conversation and working with others
- View, read and listen to media works to obtain information and to complete assigned tasks

Mathematics- Number Sense and Numeration

- Select and use appropriate strategies to solve number problems involving addition and subtraction
- Pose and solve number problems with at least one operation

Mathematics- Data Management and Probability

- Sort and classify concrete objects, pictures and symbol according to specific attributes
- Collect first hand data from their environment
- Organize data using graphic organizers

The Arts- Music

- Sing simple, familiar songs in tune, in unison
- Recognize that mood can be created through music

The Arts- Visual Art

- Identify types of lines in art works and in the environment
- Produce two- and three- dimensional works of art
- Describe the relationship between an artwork and their own experiences

Health and Physical Education: Healthy Living

- Identify rules to be followed in the community

Health and Physical Education: Fundamental Movement Skills

- Travel and change from one kind of locomotion to another in a variety of ways changing pathways and direction
- Balance on a variety if body parts while stationary

Suggested Pre-Visit Activities

Science and Oral and Visual Communication

Set up a display in the classroom to peak children's interest. The display could contain books, magazines, models of animals, kits to make animals, puppets… etc.

Watch a video about a zoo or about a variety of different animals with emphasis on mammals and birds (These are two main classifications of animals at Safari Niagara). After watching the movie have the children draw a picture and write a sentence about something new they learned from the movie.

Science Brainstorming

For this brainstorming activity prepare experience chart paper and markers for groups of three or four students to record their comments. On experience chart write headings such as: What is a Zoo? , What kinds of animals have you seen in a zoo? Why do you think zoos are important to community?

Give the students 10-15 minutes to record their comments and then have each group of students report their ideas to the large groups

As students report, the teacher could complete a large chart combining all the ideas. When the chart is complete encourage discussion and add to the areas that may need further explanation (e.g. Why do you think zoos are important? May need more teacher input)

Language: Writing Activity

Read a story to the children about zoo animals. Using a story planner discuss with the children the topic of the story "If I Was a Zookeeper". In the story planner children might consider where the zoo would be, what the zoo would look like, what kind of animals would be in the zoo, and how people would travel around the zoo.

Encourage the children to use their imaginations while writing about a real zoo or an imaginary zoo perhaps in the future, in outer space or back in time when the dinosaurs lived.

See the activity page at the end of pre-visit activities.

Language: Reading Activity

To help children become more aware of some of the animals they will see at the zoo have them complete an alphabetical order page with some of the names of these animals. Read each

name with them and discuss whether they have seen that animal before or will be seeing it for the first time at Safari Niagara. See the activity page at the end of pre-visit activities.

Language: Oral and Visual Communication/ Sharing Time Science

For sharing time ask the children to bring a stuffed animal, toy animal or a picture on an animal they think would be seen at Safari Niagara.

Send a note to parents asking them to help the child tell an interesting fact about the animal they have chosen. (Send the note home a week before you want to share and give the parents time to help)

When all the animals have been presented sort them into groups. The attributes for sorting will have to be decided once all the animals are shown. Ask the children do you notice any animals that have similar characteristics? Can we group these animals? How would you group them? (E.g. animals that live in the jungle/animals that live in the desert) You could also do this as a mystery. During sharing time when the children bring their animal in a bag or box, give three clues about the animal and the others try and guess what the animal is.

Science: Life Systems/Brainstorming

The day before your trip to Safari Niagara have the children suggest questions that they would like answered while investigating there. Record the questions to be used during the trip.

Some examples of questions might be:

- What do the animals eat?
- What are animals' coverings?
- What is the lemur?
- What animals have camouflage?
- How does the animal move?
- Where does the animal live in the wild?

Science: Life Systems Health

Discuss with the children expected behavior on the trip to show awareness for the proper respect for the animals and other visitors at Safari Niagara

The Arts: Music

Teach the children the song “Going to the Zoo” by Tom Paxton, Cherry Lane Music Company. The song can be found in Music Builders1, A Hardie Mason Project

My name is _____.

“If I was a Zoo Keeper”

-

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

My name is _____.

Put each group of words in alphabetical order.

1. Monkey, Iguana, Zebu, Ostrich

_____ , _____ , _____ , _____ .

2. Pheasant, Llama, Cockatoo, Eland

_____ , _____ , _____ , _____ .

3. Owl, Lion, Emu, Yak

_____ , _____ , _____ , _____ .

1. Goat, Gnu, Goose, Giraffe

_____ , _____ , _____ , _____ .

Suggested On Site Activities

Science: Life Systems

Before going on the trip divide into four groups (depending on class size) each group should have an adult supervisor. Distribute a small notebook to the adults and a digital camera or ipad. In each notebook compile a list of pictures each group should take. These pictures will be used later for a bulletin board and sorting and classifying activities. Adult supervisors can assist the children in taking the pictures. An example of how you could divide the animals for each group might be cat family, domesticated animals, birds and North American animals. See list of animals included in the package.

Science: Life Systems

The questions suggested by the children in the above pre visit activities should be included in the adult supervisor's notebook so that they can remind the children what they are investigating while visiting Safari Niagara.

Language: Reading

While visiting some of the animals ask the children to give some descriptive words about the animal. The adult supervisor could record the name of the animal and the children's suggestions. These words could be used later during story writing or on a bulletin board with pictures of animals.

Art: Visual Arts

The children can observe the many sculptures around the park. Note material used, line, shape and movement of these structures.

Physical Education: Fundamental Movement Skills

During a break or after lunch in the open space near the pavilion have the children move then freeze and to make the shape of a sculpture they can see, staying stationary and maintaining balance.

Suggested Post Visit Activities

Social Studies: Map Marking
The Arts: Visual Arts

Make a large scale map of Safari Niagara on two big classroom tables, using paper and paint after listing all the features the children can recall (e.g. ponds, pathways, amphitheatre etc) Locate directional symbols N,E,S,W on map. Before beginning the animals and sculptures to be located on the map discuss appropriate scale with the children showing some teacher made examples (one too big and one too small and one just right)

Children should then choose animals they would like to create from paper or model from plasticine or play dough. Sculptures and trees can be made from paper and pipe cleaners and small scraps of wood. Animals in cages could be small dioramas. Also have available for the children some found materials such as stones, twigs, moss, leaves, etc to add details to the map.

Science: Life Systems

This activity may take place over several days. Using the pictures taken during the trip, create a bulletin board, placing the pictures in a position that makes it easy to manipulate them. If possible use a bulletin board at the children's eye level, this will allow the children to sort and classify the animals by observable characteristics, If you did not take pictures at Safari Niagara you could use magazines, trade or internet pictures.

On the first day classify the animals by type- birds or mammals. The children should identify the characteristics of a bird- has feathers, has a beak and no teeth, most can fly, etc. and the characteristics of a mammal- has fur or hair, usually born live, feeds its young milk, etc…

On the next day have the children sort and classify the animals as carnivores (meat eaters), herbivores (plant eaters) or omnivores (plant and meat eaters) To begin this activity have the children look at their own teeth and find flat teeth and sharp teeth. Then sort the pictures by recalling what they were feed at Safari Niagara or guessing what they would eat by looking at the teeth. Also discuss how other body parts help the animal get and eats its food.

On the following day have the children classify and sort animals by where they live in the environment. Do they live where it is cold, warm, in a desert, in a jungle, in a forest, do they migrate, etc?

Next you could sort by the type of home they live in, their habitat. Do they make their own home or do they use natural parts of the environment or do they move into homes other

animals have left behind? At this time also discuss how the zookeeper tried to make the animals Safari Niagara Habitats like the animals natural habitats

You could also sort by the way the animal moves and identify the body parts that help move this way. (E.g. Claws for climbing, long legs for running etc...)

Science: Life Systems

When you have completed the previous activity allow the children to choose an animal that they would like to investigate and have them complete a research project. It will depend on how much experience they have had with research how you approach this activity. You may want to work with the teacher librarian or complete the project in the classroom or send it home as a homework assignment.

Directions to the students should include:

- Choose your animal
- Describe your animal (size, colour, features etc)
- Make a picture or find a picture of your animal
- What types of food does your animal eat?
- How does your animal get food?
- Where does your animal live?
- Any unusual things about your animal

When the project is complete have the children present their project to the class or another class and be prepared to answer questions about the animal (you may want to save this project and let the children do a research project about the other four animal types that they children study in grade two- reptiles, amphibians, insects or fish)

Language: Reading

For this activity you will need the Basal reader “Step Out” from Nelson Language Arts series. Children read the story “Canada’s Creatures” by Susan Hughes. When they have read the story complete the activity page of matching the beginning of the sentence with the correct ending

See the activity page at the end of Post Visit Activities

Language: Writing

The day after the trip compile a class book. As a group, children recall the sequence of events on the day of the trip. List the events as children recall and then assign one event to each child. The child should illustrate the event and describe what is happening perhaps using some adjectives (describing words) that they suggested with the adult supervisor during the onsite activities. When the book is completed, laminate and coil the book so it can be sent home daily so parents can enjoy the trip and the child can discuss and read /his/her work and the work of classmates,

Language: Reading and Writing

Prepare an experience chart with this poem.

Animal Mix-up

"Wouldn't it be funny if an elephant had claws?
If a tiger had hoofs and a pig had paws?
Oh my, oh me, what a mix up it would be
If a squirrel lived in the ocean and a seal lived in a tree"
~Anonymous

Then prepare the next experience chart as follows:

Wouldn't it be funny if a_____ had _____?
If a _____ had _____ and a _____ had _____?
Oh my, oh me, what a mix up it would be
If a _____ lived in the _____ and a _____ lived in _____.

Take suggestions from the children on how to finish this poem and then the children could write their own poem using the above as a model.

Language: Reading

Complete a word search that contains the names of several animals the children saw at Safari Niagara.

See the activity page at the end of Post-Visit Activities

Math: Problem Solving

After discussing steps to problem solving have the children complete the Safari Niagara related problems. Problem solving steps include:

- Understand the problem
- Make a plan
- Carry out the plan
- Communicate the plan
- Communicate the solution
- Check the answer

See the activity page at the end of Post-Visit Activities

Math: Graphing

The children should devise questions that can be graphed. This activity should be done after classification and sorting activities of the observable characteristics of the animals

E.g. Some children may just choose three animals and ask other children which animal of those three they liked the most.

Or provide the children with cards contacting the names of animals from Safari Niagara. Use the activity page and have the children cut out the names of the animals. This child doesn't have to use all of the cards provided but at least 15. Scramble the cards and stack them face down. Then the child decides what characteristics he/she is looking for to complete the graph such as herbivores, carnivores, omnivores or animals that have fur, hair or skin, or animals that have a tail or don't have a tail, etc. Then child draws a card and records the data on the graph.

The Arts: Visual Arts

Using blocks suggested in the resource list such as Robert Bateman and Glen Loates (Canadian Artists) or the "Animals in the Wild" kit, discuss the techniques the artists have used to pain or create their pictures. Have the children observe the textures used to illustrate the fur or the feathers etc. or how the artist drew the habitat for the animals. Also observe the colours used in the painting and how the colours help to create a mood in the picture e.g. peaceful, active, wild, etc. The children should then be encouraged to experiment first with the paint brush to create different textures by dabbing, using short strokes, long strokes, wavy lines, criss0cross hatching, etc… (Use of acrylic paint if available) Then have the children complete a picture of an animal they saw at Safari Niagara.

The Arts: Music

Using the music “Carnival of the Animals” by Saint-Saens have the children listen and imagine what animals are depicted through the music. This music includes “ The March of the Lions”, “Tortoise”, “Kangaroo”, “Swan” and “Aquarium”/ “Carnival of the Animals” can be found in Music Builders 1, A Hardie Project.

Physical Education: Fundamental Movement Skills

After the children have observed the ways the animals moved at Safari Niagara encourage he children to move like many different animals during warm up activities. Vary the speed and the levels at which they move. Allow the children to interpret first; then have them do the following movements together:

- **Camel Walk** -Stand with one foot ahead of the other. Bend forward at the waist and raise your hands behind you to lock fingers. This is the camel’s hump. As you take a step, raise and lower your head. Can your camel walk backwards, sideways; go down on his knees; gallop?
- **Kangaroo Hop**- Bend your arms, holding your hands limply in front of you at chest height. Lean forward, bend your knees, and jump forward and upwards to land lightly on your feet. Continue to “bound along “in this way. Can you hold a “joey” in your pouch near your belly button as you move?
- **Gorilla Walk**- Start on all fours. Turn your hands inward to each other. Walk like a gorilla. Can you sound like a gorilla?

Play the zoo game: Form a large circle with everyone facing the centre. Choose one child to be the Zoo Keeper. Have everyone think of an animal that you might find at Safari Niagara. When the zookeeper calls your name come into the circle tell the name of your animal, do the actions and make the sounds of your animal. Then the other children will do the actions you did. Then the child that is the zookeeper calls another child’s name to imitate other animals. A variation would be to not tell the name of the animal and have the children guess what the animal is being imitated.

You could also use the music from “Carnival of the Animals” for creative movement.

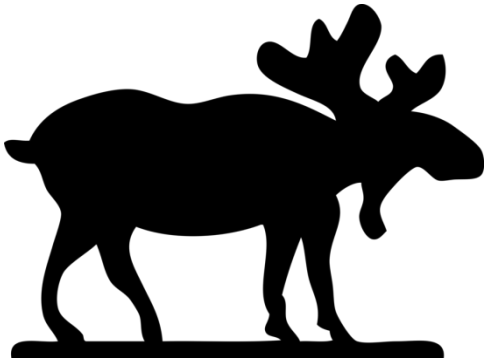
My name is: _____

Canada's Creatures

Match the beginning of the sentence with the correct ending. Cut and Paste

Moose have large antlers	
Mountain lions hunt	
Loons are very good swimmers	
The black bear eats plants,	
There are not many mountain lions	
Loons build their nests	
Black bears come	
The moose is the largest member	

but do not move well on land.	**at the edge of the water.**
at night.	**in many different colours.**
roots and berries.	**made of solid bone.**
left in eastern Canada	**of the deer family.**



My name is: _____

Can you find these animals in the word search?

KANGAROO	MARMOSET	WALLABEE	GIRAFFE
TIGER	BUFFALO	GOOSE	CAMEL
JAGUAR	LYNX	PEACOCK	
COUGAR	EAGLE	BOBCAT	

K	A	B	C	D	J	A	G	U	A	R	E
A	F	W	A	L	L	A	B	E	E	G	H
N	I	J	K	L	P	E	A	C	O	C	K
G	M	N	O	L	Y	N	X	T	P	Q	Z
A	R	T	S	T	U	V	E	A	G	L	E
R	W	L	X	Y	Z	S	A	B	C	D	E
O	F	G	H	C	O	U	G	A	R	I	D
O	J	E	K	M	L	M	I	O	N	O	O
P	Q	R	R	S	T	U	R	V	O	W	N
X	C	A	M	E	L	Y	A	Z	A	S	K
B	M	C	D	B	U	F	F	A	L	O	E
E	F	G	H	I	J	K	F	L	M	N	O
B	O	B	C	A	T	E	Q	R	S	T	T

My name is: _____

Don't monkey around! Solve these Problems.

Remember to show your work!

1. **At the zoo 27 children rode on the tram. When the tram stopped 13 children got off. How many children were left on the tram?**

   _____

   _____

   _____

2. **It was spring, time for ducks to be born at the zoo. The zoo had 32 ducks and 24 new ducks were born. How many ducks are now at the zoo?**

   _____

   _____

   _____

3. **The tigers eat a lot of meat each day. The zoo had 16kgs of meat left for the tigers. The tigers eat 38kgs of meat each day. How much more meat will they need for the tigers??**

   _____

   _____

   _____

4. **It cost $6.00 to get into the zoo. If three children were going to the zoo, how much money would they need?**

   _____

   _____

   _____

Animal Graph Cards

Cut out these cards to complete the graph.

LYNX	**DEER**	**SHEEP**	**OSTRICH**
GOAT	**MONKEY**	**CAMEL**	**LEMUR**
GIRAFFE	**BUFFALO**	**WOLF**	**EMU**
PEACOCK	**HIPPO**	**TIGER**	**RABBIT**
DONKEY	**LEOPARD**	**OWL**	**PARROT**
HAWK	**LION**	**MOOSE**	**GOOSE**
BOBCAT	**BLACK BEAR**	**WALLABEE**	**MACAW**
RHINO	**FLAMINGO**	**EAGLE**	**ZEBRA**

My name is: _____

Animal Graph

Use the cards you cut out to records on the graph the animals that have the characteristics that you are looking for:

10			
9			
8			
7			
6			
5			
4			
3			
2			
1			
Characteristics	_____	_____	_____

Resource List

Information for Teachers

Hands On Science- Level Two: Peguis Publishers, email: books@peguis.com

Life Science Series, Growth and Change in Animals, S&S Learning Materials

Books

Title	Author
Arnosky's Ark?	**Jim Arnosky**
The Art of Robert Bateman	**Robert Bateman**
Animals Live Here	**Muriel Batherman**
Does a Kangaroo Have a Mother, Too?	**Eric Carle**
The Magic School Bus Gets Cold Feet	**Joanna Cole**
The Greatest Zoo on Earth and New at the Zoo	**Frank B Edwards**
Animals Eating: How Animals Champ, Chew, Slurp and Swallow	**Pamela Hickman**
Animals	**Penny King**
Animals	**Sue Lacey**
Glen Goates: A Brush with Life	**Glen Goates**
Animal Babies	**Harry McNaught**
At the Zoo	**Amy Moses, Phil Martin, Penny Dann**
Zoos	**Miriam Moss**
Animals	**Parramon Ediciones**
Going to The Zoo	**Tom Paxton and Karen Schmidt**
Animals (how to make animals)	**Caroline Pitcher and Louisa Nevitt**
Wild Babies	**Seymour Simon**
Amazing Animal Disguises	**Sandie Sowler**
Animals Eat the Weirdest Things	**Diane Swanson**
50 Facts About Animals	**Ron Taylor**