We're looking forward to seeing you at

Swan Haven

Dear Teacher,

We're glad you will be bringing your class to Swan Haven Interpretation Centre this April. Here are some ideas to present to your class before and after the trip, along with a background of the interpretation centre and M'Clintock Bay.

Included in this package is your *Registration Confirmation* with a map to Swan Haven. There is also a helpful *Thank You Swan Haven Chaperone* card of instructions that you may copy and distribute to your chaperones. Finally, the *Kit List* can be copied and given to each of your students to take home to their parents before their visit to Swan Haven, so that they come to school that day prepared for their field trip.

When you arrive at Swan Haven, interpreters will divide the students into three groups. Each group will have an interpreter to guide them through the three activity stations:

1. Inside Swan Haven
2. Along the lakeshore
3. The outdoor play area

Please remember that you must have at least **1 teacher/chaperone for every 10 students.** Though the building itself is heated, be aware that there is no running water and only outhouses as toilets.

If you intend to have lunch at Swan Haven, you must book the space ahead of time (e-mail: wildlife.viewing@gov.yk.ca or call 667-8291). We have been short on space in the past, and will let you know if another class has already booked the facility. Note that Sprucewind Girl Guide Camp is across the road and available to rent as a picnic space, free of charge. An indoor facility is also available for rent at the camp for a small charge. Please contact the Girl Guide office at 667-2455 to book that facility.

If you have any questions about your visit, please contact Scott Cameron, the Wildlife Viewing Technician, at 667-8291.

We look forward to seeing you at Swan Haven!

The Wildlife Viewing Program

NOTE: All the materials in this package are also posted online under "School Programs" at www.swanhaven.gov.yk.ca. If you misplace any of the sheets or materials, feel free to download them from the website.

Before, During and After your Visit
Activities for Grade 3

Before your visit to Swan Haven

Before you visit Swan Haven, get your class thinking about swans, other waterbirds, and wetlands with the **Wetlands Wordsearch**. This will bring other swan learning into focus before the big event. We've included the word-search and answer key in this package.

At Swan Haven

- **Station #1 Inside Swan Haven**

This activity station includes a grand view of the bay with spotting scopes mounted on the upper deck. Here interpreters will share some of the features that make this place so great! Back inside, discover the sounds and sites of swans up close, and try out a **Keroppi Word Puzzle** with a secret message. Students can also view and vote for their favourite piece of student art.

- **Station #2 The outdoor play area**

It's time for some active fun! **Predator/Prey Predicaments** is the game where we well-fed humans get a glimpse into what it would be like to live in the outdoor world's food web. Prepare for a bit of mud for this activity.

- **Station #3 Along the lakeshore**

Here is the place for some quiet looking and listening. Your interpreter will guide your group for a closer look at the birds with binoculars and spotting scopes for a really close-up look. This is where you'll get to use your **Swan Haven Birding Passport** as we search for some of the birds featured there. Mitts, hats, warm boots and a coat make this a more comfortable viewing experience.

After your visit to Swan Haven

After you visit Swan Haven, when your class is thinking about swans, try the **Swan Nests** exercise. This will get your class thinking about bird populations and what it takes for them to grow, and will make a good link to what they learned about recovering swan populations when they were on their field trip. The Lesson Plan and silhouette cut out sheet are included in this package.

WETLAND WORDSEARCH

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

WETLAND WORDSEARCH KEY WORDS

1. The common group name for swimming birds such as ducks, geese, and swans is **WATERFOWL**.
2. The method of feeding that swans, geese, and some ducks, such as mallards and wigeons use is called **DABBLING**.
3. The method of feeding that mergansers, loons, and some ducks such, as goldeneyes and buffleheads use is called **DIVING**.
4. **TRUMPETER** swans have a wedge-shaped bill with a red border on the lower mandible.
5. **TUNDRA** swans have a concave bill with a yellow tear-drop shaped marking near the eye.
6. **INVERTEBRATES** are animals that lack a backbone.
7. The **WATER FLEA** is one species of invertebrate eaten by swans and ducks in M'Clintock Bay.
8. One species of aquatic plant that swans feed on in M'Clintock Bay is called **PONDWEED**.
9. One part of the plant that the swans are feeding on is **TUBERS**.
10. **ROOTS** are the other part of the plant that swans are feeding on.
11. **PREENING** is the name for the activity which all birds engage in to groom their feathers.
12. **DOWN** is the type of feather that provides waterfowl with insulation from the cold.
13. The process whereby a bird sheds its feathers is called **MOULTING**.
14. Waterfowl such as swans and ducks eat **AQUATIC** plants.
15. The name for a young swan is **CYGNET**.
16. The depressions in the mud caused by feeding swans are called **CRATERS**.
17. **NEST** is the name of the structure built by a bird to hold its eggs and young.
18. A female bird lays **EGGS** in the nest.
19. **FEATHERS** cover and protect a bird's body?.
20. Waterfowl have **WEBBED** feet.
21. **WINGS** are the appendages that enable birds to fly.
22. **SWANS** are among the largest flying birds alive today.
23. M'Clintock Bay is a spring **STAGING** area for migrating waterfowl.
24. The name for a place in which an animal or plant lives and grows is called **HABITAT**.
25. Many bird species **MIGRATE** every spring and fall from one climatic region to another.
26. A Northern Pintail is a species of **DUCK**.
27. Dabblers feed in **SHALLOW** water.
28. When a river flows into a lake or ocean it forms a **DELTA**.
29. Migrating waterfowl stage at M'Clintock Bay in **SPRING**.
30. **FEEDING** is one of the activities of waterfowl at M'Clintock Bay.
31. Another activity of waterfowl at M'Clintock Bay is **RESTING**.

32. The coast of Vancouver and Vancouver Island is **WINTER** habitat for Trumpeter swans.
33. Swans, geese, and ducks are heading to their **NESTING GROUNDS** when they leave M'Clintock Bay.
34. One feature which makes M'Clintock Bay an important spring staging area for migrating waterfowl is **OPEN WATER**.
35. The other type of bird, besides swans and ducks, that belongs to the waterfowl group is the **GOOSE.**
36. The **BILL** is the beak-like mouth-part of waterfowl.
37. A duck **WADDLES** when it walks.
38. Swans use different neck postures for **COMMUNICATION**.
39. **CONTOUR** feathers provide waterfowl with a waterproof covering and are necessary for flight.
40. The feathers which provide waterfowl with buoyancy and insulation are called **SEMIPLUMES**.
41. A **BOBBING** head motion is used when two or more swans are communicating.
42. Birds feel for food in their bill because they have a poor sense of **TASTE**.
43. **AVIAN** is the word that means "all birds."

WETLAND WORDSEARCH ANSWER SHEET

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

SWAN NESTS

Grade: 3

Subjects: Science, math, art, language arts.

Skills: Art skills, counting, comparing, predicting, drawing conclusions.

Duration: One 45 minute session.

Group size: Individual.

Setting: Indoors.

Vocabulary: Clutch, population, declining population, extinct, production.

Background:
This activity introduces students to a population of swans as it changes in size through births. Students will observe the capacity of small and large populations to grow through births each year. A consequence of the birth rate of a population is the ability to build up from small numbers. As long as a population is relatively large, animals that die are replaced each year when young are born and grow up. Wildlife managers are concerned about small wildlife populations because they may be in danger of going extinct. If populations are small or have declined to low numbers, people may need to make efforts to help the population grow or recover.

Objectives:
1. Learn that animal populations grow through births.
2. Observe the relationship between population size and the number of young that are born each year.

Activity:
Students simulate a population of nesting swans and analyze the results.

Materials:
Paper cups or 250g yogurt containers (one per student)
Photocopies of swan pair silhouettes
Cotton batting
Beans or plastic eggs
Dry Erase board
Tape

Procedure:

1. Pass out the paper cups, and make the cotton batting and beans available to the students. Tell the students that they will each be making a swan nest by inserting the cotton batting in the cup.
2. After the students have made the nests, give each student the swan illustrations and have them cut out pairs of swans.
3. Tell the students that each pair of swans will produce 5 eggs each year. Have each student place five beans in their nest.
4. Create a large chart on the poster paper with two columns. Label the left-hand column "Pairs of Swans" and the right-hand column "Number of Eggs" (see illustration). Explain that a swan population will have a certain number of pairs.
5. Begin filling in the chart. Start with "one pair of swans." Ask a student to bring up a swan pair silhouette. The swans can be taped or glued to the chart. Move to "two pairs of swans." Again ask the students to bring the pairs up. Continue until all students have brought up their swan pairs.
6. Explain to the students that the number of eggs laid by each pair varies; but for the purpose of this activity, each swan will lay five eggs. Begin with "one pair of swans" and draw a nest (circle) containing five eggs. Ask the class to count the number of eggs in the egg column and write that number down. Continue this process for the increasing number of pairs.
7. Compare the number of eggs laid by the largest population with those of smaller populations.

Extension:

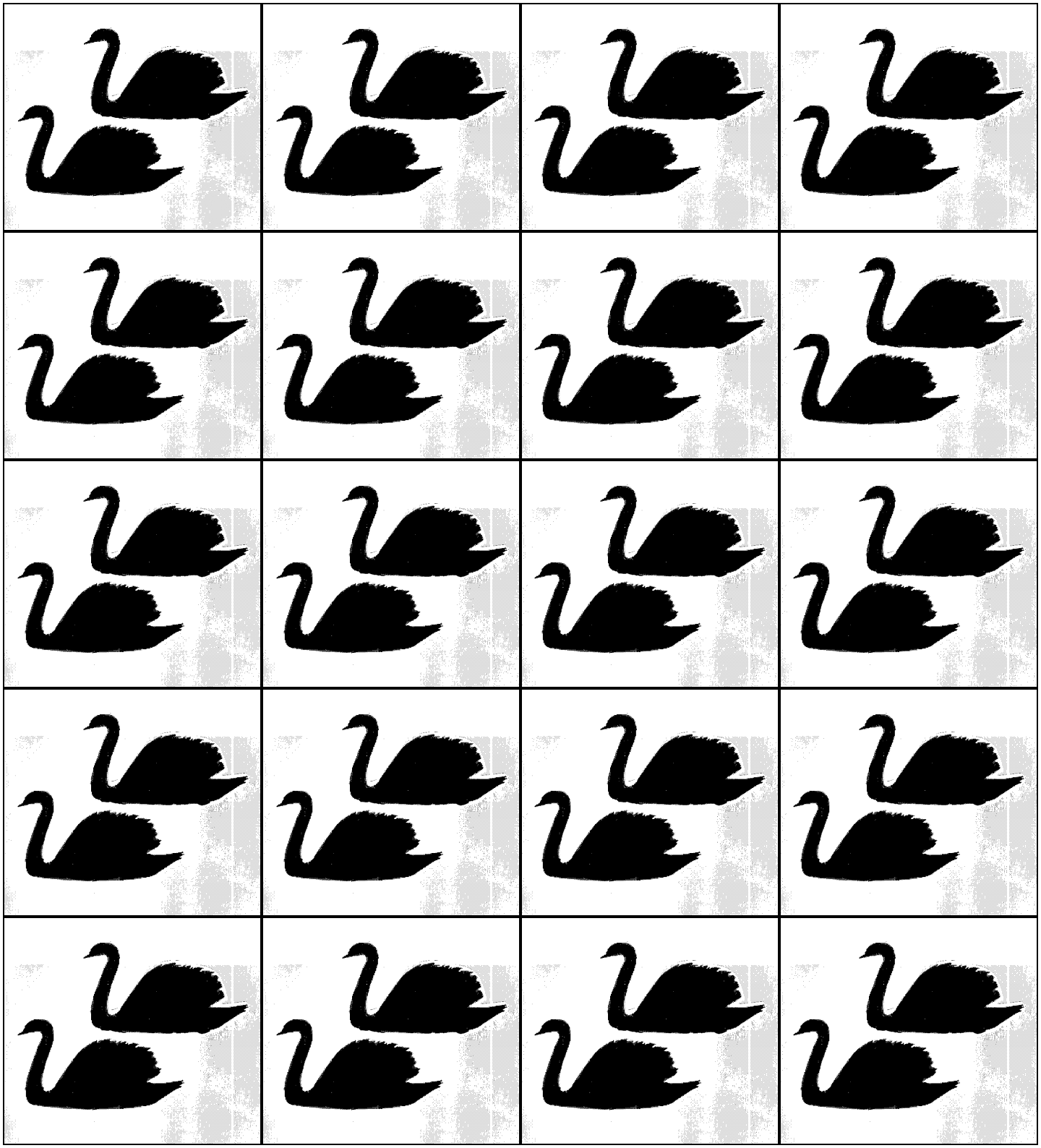
The activity assumed that all female swans lay the same number of eggs. Explain that female swans do not always lay the same number of eggs. Each student should choose between 3 and 7 beans to place in their nest. Hide the nests around the room or outside, and then have the students conduct a nest search and count the total number of eggs.

Evaluation:

Encourage the students to think of things that could happen to swans so there would be fewer swans in the population (eg. eaten by predators, die from accidents, starvation, disease, etc.). Which population would recover quickest if each population lost ten swans (the smallest population would become extinct; other small populations would take a long time to recover because there would be fewer eggs each year compared to the larger populations)?

Explain that people are concerned about small wildlife populations because they may be in danger of going extinct.

References:

"Don't Put All Your Eggs In One Basket," Wildlife For The Future, Alaska Department of Fish and Game and Alaska Natural Resources and Outdoor Education Association, Juneau, Alaska.

Swan Pair Silhouettes