

BIRDS OF UTAH LAKE

This lesson plan has been created as a resource for fourth grade teachers to teach the new core standards to their students. It integrates language arts, social studies, and science standards in a meaningful and fun way. To see which specific standards are addressed, please refer to them below.

OBJECTIVE:

The students will research and complete a report about one bird species found around Utah Lake.

STANDARDS ADDRESSED:

4th Grade Language Arts

4.W.2 Writing Standard 2

Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

4.W.7 Writing Standard 7

Conduct short research projects that build knowledge through investigation of different aspects of a topic.

4th Grade Science

Standard 5: Students will understand the physical characteristics of Utah's wetlands, and deserts and identify common organisms for each environment.

Objective 2: Describe the common plants and animals found in Utah environments.

Describe how the organisms have adapted to their environment.

- a. Identify common plants and animals that inhabit Utah's forests, wetlands, and deserts.
- b. Cite examples of physical features that allow particular plants and animals to live in specific environments (i.e., duck has webbed feet; cactus has waxy coating).

Objective 4: Observe and record the behavior of Utah animals.

- a. Observe and record the behavior of birds (e.g., caring for young, obtaining food, surviving winter).
- b. Describe how the behavior and adaptations of Utah mammals help them survive winter (e.g., obtaining food, building homes, hibernation, and migration).

4th Grade Social Studies

Standard 1: Students will understand the relationship between the physical geography in Utah and human life.

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Objective 1: Classify major physical geographic attributes of Utah.

- b. Examine the forces at work in creating the physical geography of Utah (e.g., erosion, seismic activity, climate change).

TEACHER BACKGROUND:

Birds are a group of animals with very specific characteristics. They are warm blooded, have feathers, hollow bones, and lay eggs. All birds have wings, but not all birds fly. Each bird's beak determines the kind of food it eats.

Common birds in Utah include the red-tailed hawk, barn owl, lark, robin, pinyon jay, magpie, and crow. Many other birds live here, as well as those that migrate through Utah on their journeys to warmer climates in the winter, or returning north in the spring.

Bird Island Information:

Utah Lake contains a small island, Bird Island, located about 2.25 miles north of the Lincoln Beach boat ramp near its south end. The island has a few trees and is somewhat visible from Lincoln Beach. During high-water years, the island may be completely submerged, the trees being the only indication it is there. It is a popular destination among fishermen seeking walleye, white bass, and channel catfish.

TEACHER MATERIALS:

- *Utah Lake: Legacy* Video Clip—Chapter 4 ([YouTube Link](#))
 - The chapter has been split in two parts to fit with the proposed lesson plan. (Feel free to adapt the lesson plan as appropriate.)
 - Part 1: Entertainment at Utah Lake (first 5:37 of Chapter 4)
 - ([YouTube Link](#)) ([UEN Link](#))
 - Part 2: Bird Island/Fishing (remaining 7:07 of Chapter 4)
 - ([YouTube Link](#)) ([UEN Link](#))
- Bird Island pictures (pgs 6-8)
- SS Sho-Boat picture (pg. 9)
- *What Bird Am I?* activity
 - Cue Cards (pg. 10)
 - Pictures (pgs. 11-16)
- Bird report forms (pg. 17)
- *My Beak Holds More Than Yours* activity
 - Instructions (pgs. 18-19)
 - Activity sheet (pg. 20)
- [Maps of North American Migration Flyways](#)
- See Additional References section below for more materials about birds in Utah County.

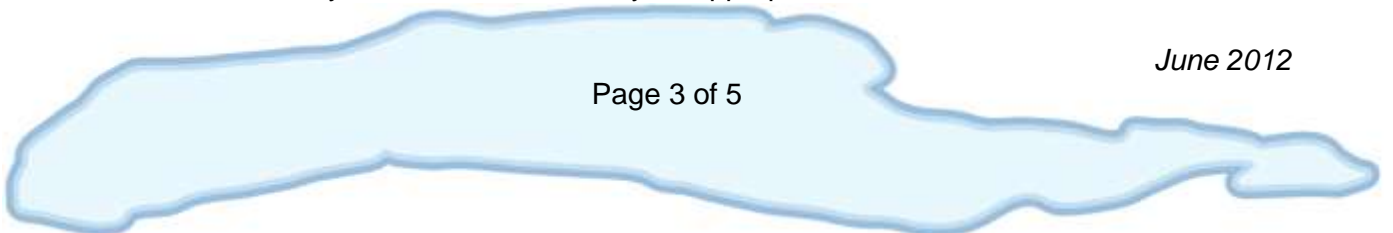
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STUDENT MATERIALS:

- Bird report worksheets for report (pgs. 17-18)
- Information on one bird species found at Utah Lake
- Paper for report

PROCEDURE:

1. Show the Chapter 4, Part 1 video clip from *Utah Lake: Legacy*. Explain that the SS Sho-boat would take passengers to Bird Island. The people would wander the island and the birds would cover the people in bird droppings during their visit to the island.
2. Explain Utah Lake has changed over the years. Show the three different pictures of Bird Island (pgs. 6-8) and compare the differences that have taken place over the years.
 - a. Show the picture in the early 1900s, with people visiting the Bird Island as a part of the SS Sho-boat trip.
 - b. Show the Chapter 4, Part 2 video clip from the *Utah Lake: Legacy* about Bird Island.
 - c. Show the picture from the later 1900s, which shows the island still being occupied by the birds, and the island is still a good size.
 - d. Show the last picture taken in July 2010. Bird Island has greatly decreased in size. Many years, Bird Island is totally immersed in water and not seen at all.
3. Discuss with the students why the appearance of Bird Island changes. When the water level is high, much of the island is not seen because of the more-than-normal amounts of water received during the year. When the water level is low, the island is seen because of the lower-than-normal amounts of water received during the year. During extremely dry years, water is pumped into the Jordan River for irrigation purposes. This is one of the factors lowering the Lake level.
4. Discuss with the students over 200 bird species are found near Utah Lake.
5. Discuss with the students the lakes of Utah are an important part of bird migration. See Teacher Materials for a link to maps of bird migration paths and patterns.
6. Play the game “*What Bird Am I?*” (see pgs. 10-16)
 - a. Display the pictures of the birds.
 - b. Read the clues to the students. Start with the clues you feel are the hardest, and work toward the easiest clues.
 - c. Have the students guess which bird you are describing. Give a reward to the student who guesses the name of the bird.
 - d. Use any variation of this activity as appropriate.



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7. Conduct the activity “*My Beak Holds More Than Yours.*” (see pgs. 19-21)
8. Bird Beak Matching Worksheet.
 - a. Using the cards, read each clue, then have the students guess what bird they think is being described.
 - b. After the students have guessed the bird, show them a picture of the bird and ask if they have ever seen it before.
9. Tell the students they will now become an expert on a bird species found around Utah Lake. Have the students choose a species from the list of the 30 species provided (see “Additional References” below). Have the students research information concerning the species and complete the research worksheet called “Bird Report.” Once the worksheet has been completed, the students should use the information they gathered to write their bird report. When the bird reports are finished, they can be shared with the class.

ASSESSMENT:

Evaluation of the bird report and observation during activities.

EXTENSIONS:

1. Use the information gathered to produce brochures or PowerPoint presentations about each bird.
2. Compile the reports and make a class book.
3. [Bird Migration/Wetlands Activity from the 4th Grade Utah Core Academy](#) – See pgs. 14-9 through 14-12.
4. Bird Watching: Several agencies throughout the state have sets of binoculars available for checkout. Some of these are:
 - Utah Society for Environmental Education (USEE)
 - Utah Audubon Society
 - Utah Division of Wildlife Resources/ Wildlife Education Program
 - National Park Service
 - Forest Service
 - Bureau of Land Management

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ADDITIONAL REFERENCES:

- Supplementary Materials file (see link online)
 - List of 30 bird species common to Utah Lake (pgs. 1-16)
 - List of 200 bird species found in Utah County (pgs. 17-20)
 - A Bird's Paradise image [Utah Lake State Park], (pg. 21).
- www.utahbirds.org
- *Birds of Utah Field Guide* - ISBN# - 1-59193-019-7
(Adventure Publications, Inc., 820 Cleveland St. S., Cambridge, MN 55008
Phone: 1-800-678-7006)

BIRD ISLAND – EARLY 1900s



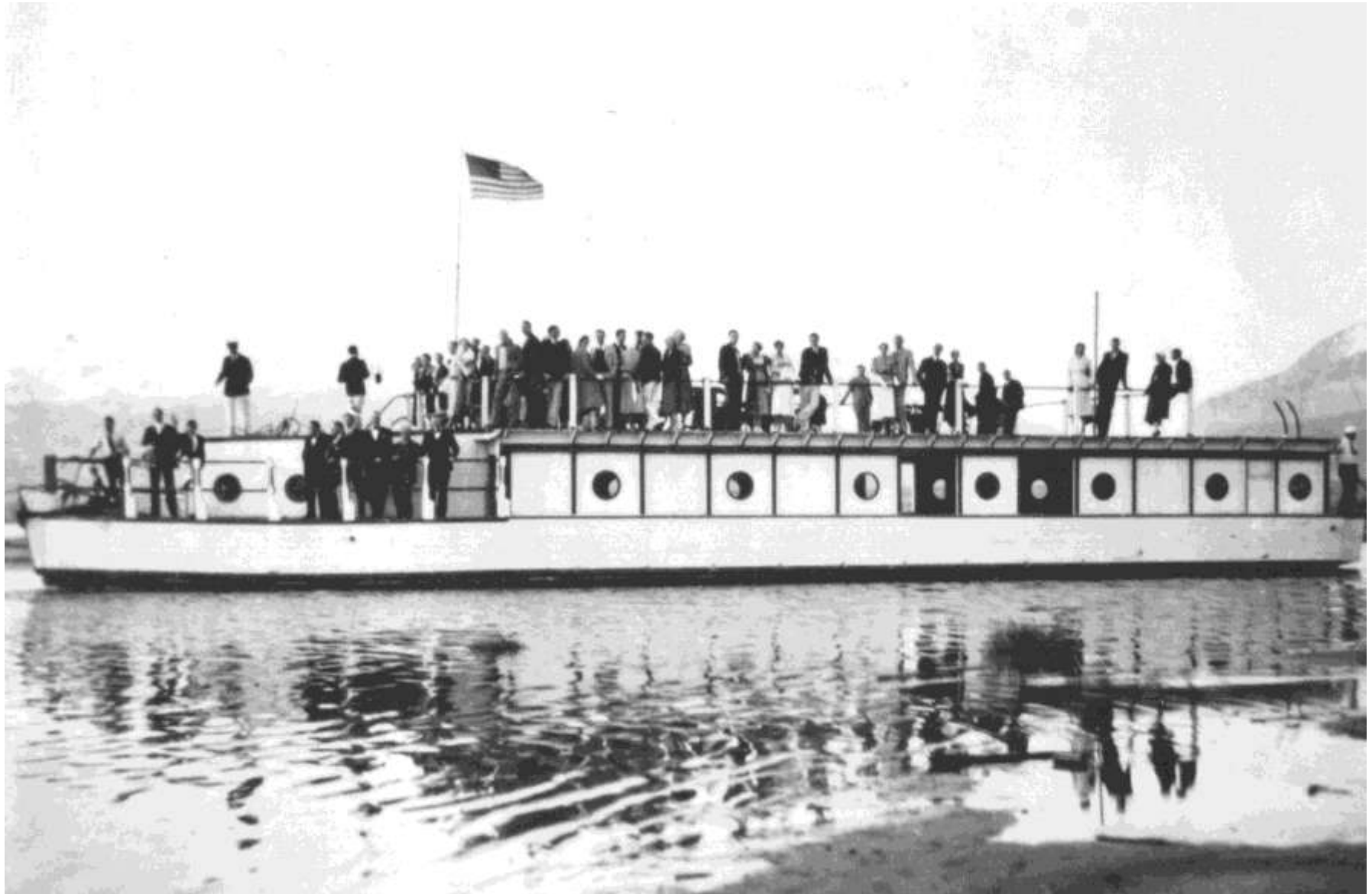
BIRD ISLAND – MID TO LATE 1900S



BIRD ISLAND – JULY 2010



SS SHO-BOAT, 1932



What Bird Am I?

- The male has a green head and white neck with a chestnut chest. It has a yellow bill and orange legs and feet.
- The female is all brown and an orange and black bill.
- The baby looks like the female, but it has a yellow bill.
- It eats seeds, plants, and aquatic insects.
- It makes a quacking sound.

What Bird Am I?

Mallard

What Bird Am I?

- It is a large all black water bird with a long snake like neck.
- The female and male look alike.
- It eats small fish and aquatic insects.
- It catches fish by swimming with wings out at its side.
- It is often seen flying in a large "V" formation.

What Bird Am I?

Double Crested Cormorant

What Bird Am I?

- It is tall and gray. It has black eyebrows that extend into several long plumes off the back of head.
- It eats small fish, frogs, insects, and snakes.
- It flies holding its neck in an "S" shape, with its long legs trailing straight out behind.
- It nests in treetops near or over open water.
- They often bark like a dog when startled.

What Bird Am I?

Great Blue Heron

What Bird Am I?

- The male has a golden brown body with a long tail. It has a white ring around his neck with a purple, green, blue, and red head.
- The female is all brown with a long tail.
- This bird does not migrate.
- It eats insects, seeds, fruit, and visits ground feeders.
- The male makes a cackling call to attract females.

What Bird Am I?

Ring-Necked Pheasant

What Bird Am I?

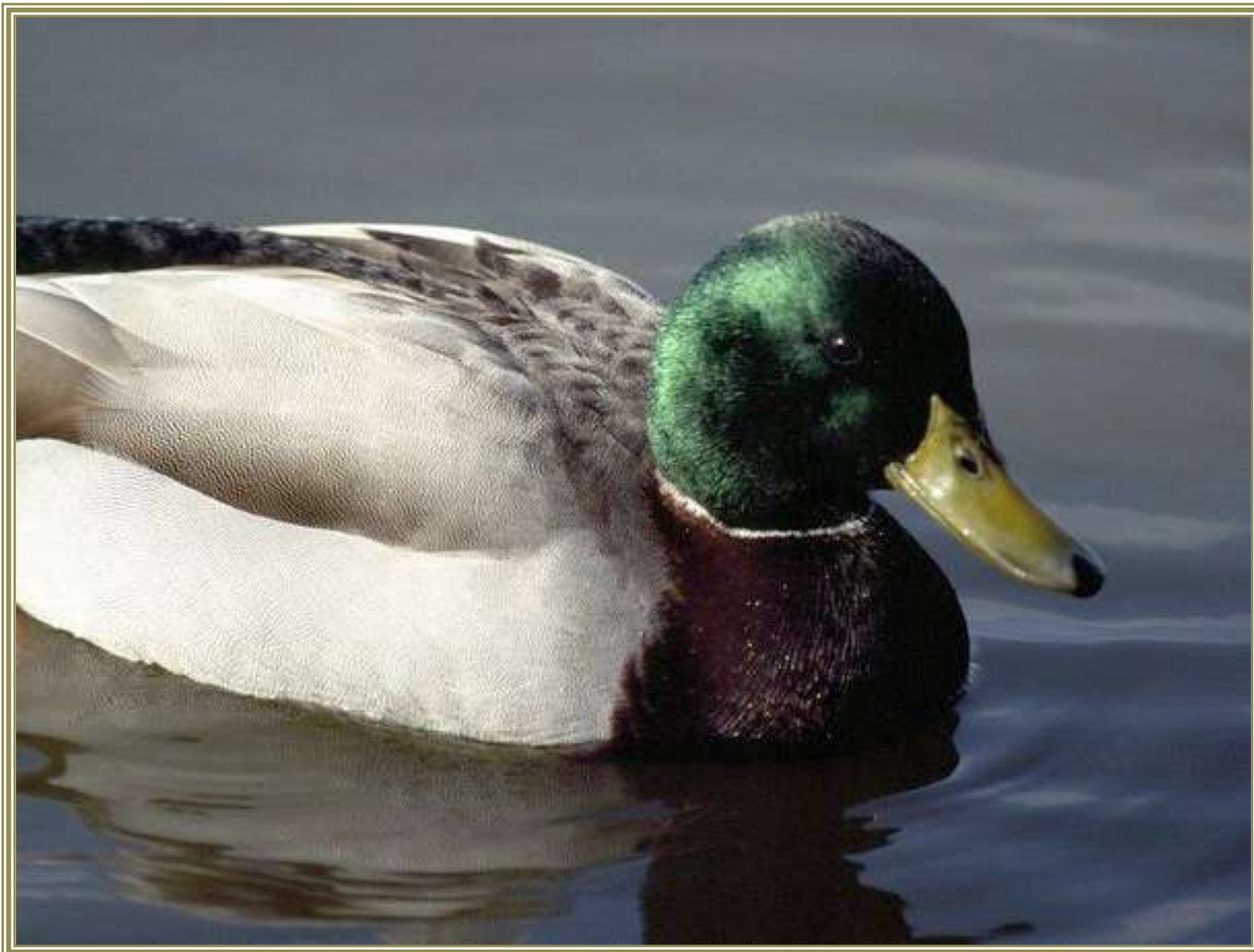
- This is a white bird with gray wings and black wing tips. It has a red and black mark on the tip of its yellow bill. It has a red ring around its dark eyes.
- The young are all brown for the first two years of their lives.
- It eats insects, seeds, and mammals.
- They are the famed bird that saved the crops from an overpopulation of grasshoppers during 1848.
- It is the state bird of Utah.

What Bird Am I?

California Gull

WHAT BIRD AM I?

MALLARD



DOUBLE-CRESTED CORMORANT



GREAT BLUE HERON



RING-NECKED PHEASANT - Male



RING-NECKED PHEASANT - Female



CALIFORNIA GULL



BIRD REPORT RESEARCH FORM

Name _____

- I. Write a paragraph introducing your bird. What does your bird look like? Briefly introduce what environment your bird lives in, how it gets its food, and an interesting fact about your bird.
- II. Write a paragraph about the environment your bird lives in.
- III. Write a paragraph about your bird's adaptations. Explain how your bird gets its food.
- IV. Write a paragraph about an interesting fact about your bird.
- V. Write a conclusion paragraph.

Things to consider adding to your paper:

Illustrations

Quotes

Definitions

Examples

My Beak Holds More Than Yours Does

Background Information:

Birds differ from one another in many ways. One difference is found in the shape and size of the birds' beaks. Students will be given a tool to collect different kinds of food. After playing the game, each student will fill out the bird beak matching activity sheet. The students will discover that their bill type will determine the success of this activity.

Materials:

- A cup for each student (the cups represent the stomachs of the birds. The cups are only holders for the food and cannot be used to scoop up the food).
- Tools (Beak Types) (You will need one tool for each student)
 - popsicle sticks or tongue depressors
 - clothespins
 - chopsticks
 - tongs
 - tweezers
 - strong plastic spoons
 - scissors
 - eyedropper

- Food items

<u>Item</u>	<u>Represents</u>
○ pipe cleaners	worms
○ rice	small bugs
○ buttons	beetles
○ marbles	nuts
○ toothpicks (round)	caterpillars
○ pompoms	berries
○ sunflower seeds	seeds
○ pony beads	fruit
○ gold fish crackers	fish

My Beak Holds More Than Yours Does

Activity Instructions:

1. Take the students outside on the grass. The students will become birds. Give each student a tool, which will represent his or her beak type.
2. Take the food items and throw them out on the grass. (Make sure you have a large area to avoid bumping and crowding of the birds.)
3. The birds must pick up one item at a time and place it in their cups. (Reminder there is no scooping or throwing of food into the cup.)
4. When the food has been distributed, the teacher (the predator) will give the signal to begin. Tell the birds that you will also give the signal to stop and they must stand up immediately when the stop signal is given.
5. Make sure you stop the game before the food runs too low or you may stop the game if the birds are being too rough.
6. When the game is over, have the birds count the number of items that are found in their cups. Discuss which type of food item was easier for this bird's beak type.
7. If desired, you may play the game with only half of the class the first time; then play the game a second time for the other half of the class. (Crowd issues may be easier.)
8. Pass out the Bird Beak Activity Sheet. Let the students decide which birds would eat the types of foods according to their beaks.

Name _____

BIRD BEAK MATCHING

seed
crusher



plant
eater



wood
chisel



nut/seed
cracker



meat
tearer



fish
grabber



nectar
sucker



Write the name of each bird bill with the type of food and food-getting behavior for which you think it is useful.

Tearing the flesh of
dead animals

Pelican



Pounding holes to obtains
Insects within trees

Parakeet



Cracking seeds

Duck/Goose



Catching fish

Hawk



Reaching into flowers
to extract nectar

Chickadee



Seed crusher

Woodpecker



Bottom plant feeder

Hummingbird



Give some examples of how a bird's beak helps it adapt to its environment.

A Bird's Paradise

You can find more than 226 species of birds using Utah Lake's wetlands throughout the year. Birds use wetlands as a "nursery" because wetlands provide easy access to food, cover and protection.

Some birds commonly seen at Utah Lake have flown hundreds of miles to get here. The 21,750 acres of the Utah Lake Wetland Preserve are a vast habitat for birds.



Great Blue Heron



Bald Eagle & California Gulls



American White Pelicans



Quail Eggs



American Avocet



Snowy Egret