Take a moment to imagine the incredible variety of birds in the world, even just those birds in your backyard or local park. Ever wonder why seemingly similar birds have such different beaks? Observing bird beaks can give us clues to how a bird survives and thrives in its habitat. In this game, you will explore bird beak adaptations and gain a whole new appreciation for finding food without fingers!

MATERIALS
- A variety of tools to represent "beaks": tweezers, spoons, clothespins, or chopsticks
- Cups (1 per person) to represent your bird’s stomach
- 4–5 different types of bird “food”: marbles, rubber bands, dried beans or pasta, small rocks, bits of string (a generous amount of each)
- A feeding zone boundary marker, such as a circle of string, a jump rope or masking tape on the rug
- Smart phone or speaker, CD player or other music making device (you could sing a song!)
- Optional: Pencil and paper or a science notebook for recording your data

PROCEDURE
In this activity, players will try to gather “food” by using a tool to represent a bird’s beak. This game can be played with several players, each using a different tool “beak,” or by one person over several rounds using a different tool each round.

Overview:
- Each player will be a bird using a different tool as a beak. A cup will be their “stomach.”
- Explain the guidelines (chart to the right).
- When the music starts, players will use their beak tool to pick up food and put it in their stomach cup.
- When the music ends, everyone drops their beaks and moves out of the feeding zone.
- Players will then share what they “ate” and discuss what was easy and what was hard to “eat” with their “beak.”

Guidelines
- Stay outside of feeding zone until the music starts.
- Only “beaks” can pick up food, no using hands or cup to scoop.
- A player’s “stomach” cup must be held straight up in one hand.
- Don’t steal another “bird’s” food
- When music ends, leave feeding zone

Experiment continued on next page...

Show us how you’re being curious! Share your results with us.
Time to eat:
- Hand out beak tools and stomach cups.
- Only use one type of food per round for the first rounds.
- Sprinkle the food all over the playing area. What type of food might your items represent? (Beans could be seeds or insects, pieces of string could be worms, etc.)
- Make a hypothesis: Which type of beak do you think will be most successful for this type of food and why?
- Start the music. Let the players feed until most of the food is gone or 90 seconds, whichever comes first.
- Stop the music.
- Record data: Have players count how many pieces of food they collected. Younger children can count total number of items eaten, while older children can record data by beak type.
- Repeat, each time with a different type of food.
- For a final round, use all the foods together! Make predictions first about what beaks will be most successful given your previous experiments.
- At the conclusion, ask the players:
  - Which beak worked best for which type of food.
  - What kind of beak might each tool you used, represent in a real bird?
  - Why do you think birds have such different beaks from one another?
  - What would make playing this game easier or harder?
  - What things might a bird experience that makes finding and collecting food easier or more challenging?

DID YOU KNOW
Adaptations are physical traits or behaviors that a living thing uses to survive in its particular environment. An animal’s adaptations can give us clues about how and where it lives and what it eats, and can also be used to identify different species. What would happen if all birds nested in the same places and ate the same foods? There would be a lot of competition for food and shelter, and some birds wouldn’t survive! Instead, birds fill different niches (a special place a species has in its community which includes how it lives and what it eats). By eating different foods, birds can live in the same area without over-competition for food and other resources. A bird’s beak is an important adaptation that is used for obtaining food. Because birds eat an incredible variety of foods—from insects to seeds to nectar and more—bird beaks are highly varied.

Finches in the Galapagos Islands are famous for their beaks! Scientists Rosemary and Peter Grant have spent many, many years doing research in the Galapagos and have demonstrated that changes in the size and shape of finches’ beaks correspond to the kinds of seeds available to the birds over time, thus demonstrating the theory of evolution at work!
K–2 GRADE EXPLORATION

- Make a bird beak matching game! Glue or tape pictures of birds from old magazines or discarded books and paste them onto blank note cards or recycled slips of paper—one bird per slip. You can also draw pictures of birds if you don’t have magazines around (just a picture of the head is ok, and don’t worry about your drawing skills). On a separate set of pieces of paper, draw the type of food each bird eats, one per slip. Mix them up and match each bird beak to the food it eats.

- Go on a bird beak hunt as you walk around your neighborhood. Draw and/or describe the kinds of beaks you see on the birds you observe. Use rich, descriptive details—what size is the beak? Is it thick or thin? What color? What makes the beak different from other birds you’ve seen? Is the bird using its beak? If so, what do you observe it doing? What type of food do you think the beak would be good for eating? How might you find out?