

STEM IN ACTION



BIRD BEAKS

Have you ever noticed the types of beaks different birds have? The most important function of a bird bill is feeding, and it is shaped according to what a bird eats. The bill is one of the characteristics used to identify birds. You can learn about bird behavior by looking at the bill and thinking about what it eats. Then you may think about where it lives, and so on.

Idaho National Laboratory conducts environmental monitoring on a variety of things, such as animals. INL conducts midwinter raptor counts, breeding bird surveys, raven nest surveys and bat population surveys.

GRADE LEVELS: 1-6

VOCABULARY

- **NATURAL SELECTION-** a natural process where organisms that are best adapted to their environment survive and can reproduce.
- **ADAPTION-** a change in an organism, over time, that helps it survive and reproduce.
- **ORGANISM-** any living thing.

MATERIALS

- Plates
- Small bowls or dishes
- Variety of seeds and things to pick up, such as: sunflower seeds, popcorn, dried beans, uncooked rice, garden or grass seeds, small leaves, flowers and buds
- Variety of tool types: paper clip, clothes pin, binder clip, spoon tweezers

PROCEDURE

1. Pick a tool for the beak- ask the child(ren) to explain why they think their bird beak will be the best at gathering seeds.
2. Place a variety of seeds on a plate- use a small dish or bowl to collect the seeds.
3. Practice picking up seeds and moving them to the bowl or dish with their beak.
4. Next see who can collect the most seeds in twenty seconds.

QUESTIONS

- *What is the relationship between beaks and seed-gathering?*
- *Which beak(s) are the favored type(s)?*
- *How does natural selection contribute to adaptation(s)?*
- *Are the beaks at the end of the simulation the best-adapted ones?*



EXTENSIONS

*Research different types of bird beaks here-
http://www.fernbank.edu/Birding/bird_beaks.htm*

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