**Bird Beak Experiment**

\*\*This lesson was adapted from a lesson we bought from TPT on Plant and Animal Adaptations

**NGSS:** 3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]

**Objective:** Students will use different bird “beaks” to gather as much food in 30 second intervals as possible.

**Materials:**

* tools for bird beaks (tongs, tweezers, slotted spoons, staple removers, eye droppers, etc).
* a variety of bird foods:
  + snails- macaroni
  + grubs- m&ms
  + nectar- red water
  + worms- gummy worms
  + seeds
  + flesh- stapes in cardboard
  + fish- paper clips
  + beetles- raisins in soil
* pans to put food in
* oatmeal to mix food with (or potting soil)
* [bird beak lab sheet](https://docs.google.com/document/d/1tVmRrySXhyAirH9jQuICfpnhOk0Q-5ISoNFPdvai0tk/edit)
* timer

**Procedure:**

1. Mix food in with the oatmeal. Each food had its own pan. We used tin pans from the Dollar Store. We also used small containers for students to put the collected food in.
2. Each food had 2 tools for students to try and collect their food from (first attempt and second attempt).
3. Students had 30 seconds with each tool to try to collect as much food as possible.
4. We did this as small groups; students also worked on animal adaptation posters and watched videos from [Project Beak](http://projectbeak.org/adaptations/beaks.htm) on different bird beaks

**Evidence of Learning**

Each group compiles data to graph and share

What inferences can you make about bird beaks and diet

**Conclusion:**

* Which type of beak is best suited for capturing worms?
* Which type of beak is best suited for capturing snails?
* Which type of beak is best suited for capturing bugs?
* Which type of beak is best suited for capturing seeds?
* Which type of beak was best at capturing the most different kinds of prey?
* Which type of beak caught the least amount of prey?
* Why do birds have different types of beaks?
* What would happen if all birds did have the same beak type?
* From the types of beaks used in this lab, draw a mutated beak that would not allow a bird to capture enough food.
* From the types of beaks used in this lab, draw a mutated beak that would allow a bird to capture more food.
* If you were a bird, would you want a beak that could only eat one type of food or a beak that could eat many different types of food? Explain your answer.