

# Bird Beak Design Challenge


## Defining the Problem

What is the design problem?

What are the constraints?

## Plan Solution

Diagram a model of your bird beak below: (make sure to indicate the type and amount of supplies that you will be using)



## Test the Model

You will have three 15 second trials to collect food with your beak. At the end of each trial you will calculate the grams of food that you have collected and record your data and the data of your group members in table 1.

Beaks	Grams of Food Obtained			
	Trial 1	Trial 2	Trial 3	Average

## Reflect

Talk with your team, then answer the following questions

1. Analyze the data from the three trials, what beak was most successful?

2. What attributes did the “winning” beak have that made it successful?
  
3. Which beak(s) were not successful for your food source?
  
4. Is there a type of food that the unsuccessful beaks would be useful on? If so what?

**Redesign**

As a group, redesign ONE beak to be more efficient on your island.

Diagram your group’s redesigned beak below:

**Testing Stage**

	Grams of Food Obtained			
	Trial 1	Trial 2	Trial 3	Average
Redesigned beak				

**Reflect**

Talk with your team, then answer the following questions

1. Based on the data you collected, why do birds eat different foods?
  
2. In nature, can birds change the shape of their beak to collect different food types?