**Available Offspring Data Sheet**

**Directions:** In the time allotted collect as many food items as possible using the beak your group created.

**Round #1...EAT!**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Food Source** | **Collection Time** | **Number of Collected Food Necessary to Produce 1 Offspring (Round down)** | **Number of Food Items** | **How Many Offspring Can You Produce?** | **1 Offspring = Time in Minutes** | **Total Time (# of offspring X 2min)** | **Total Redesign Time** |
| Type 1 (Think ants) | 15 seconds | 40 |  |  | 2 minutes |  |  |
| Type 2 (Think worms) | 15 seconds | 15 |  |  | 2 minutes |  |
| Type 3 (Think grubs) | 15 seconds | 15 |  |  | 2 minutes |  |
| Type 4 (Think seeds) | 15 seconds | 20 |  |  | 2 minutes |  |
| Type 5 (Think fruit) | 15 seconds | 7 |  |  | 2 minutes |  |

 **Reflection Question:**

|  |  |
| --- | --- |
| **How many offspring did you produce?**  |  |
| **Did your beak perform better or worse than you thought it would? Why or why not?**  |  |



**Round #1...Reflect**

|  |  |
| --- | --- |
| **Can you redesign your beak to produce more offspring?** |  |
| **If so, what changes did you make?**  |  |
| **What are your predictions for the second round of testing?** |  |

**Round #2...EAT!**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Food Source** | **Collection Time** | **Number of Collected Food Necessary to Produce 1 Offspring (Round down)** | **Number of Food Items** | **How Many Offspring Can You Produce?** | **1 Offspring = Time in Minutes** | **Total Time (# of offspring X 2min)** | **Total Redesign Time** |
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| Type 2 (Think worms) | 15 seconds | 15 |  |  | 2 minutes |  |
| Type 3 (Think grubs) | 15 seconds | 15 |  |  | 2 minutes |  |
| Type 4 (Think seeds) | 15 seconds | 20 |  |  | 2 minutes |  |
| Type 5 (Think fruit) | 15 seconds | 7 |  |  | 2 minutes |  |

 **Reflection Question:**

|  |  |
| --- | --- |
| **How many offspring did you produce? Were your predictions accurate? Include how much higher or lower you were than you predicted.** |  |
| **What happened during your test? Was Be sure to provide specific details.**  |  |

**Round #2...Reflect**

|  |  |
| --- | --- |
| **Could you redesign your beak to produce more offspring?**  |  |
| **What features are changing and why?**  |  |
| **What are your predictions for the third round of testing?** |  |

**Round #3...EAT!**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Food Source** | **Collection Time** | **Number of Collected Food Necessary to Produce 1 Offspring (Round down)** | **Number of Food Items** | **How Many Offspring Can You Produce?** | **1 Offspring = Time in Minutes** | **Total Time (# of offspring X 2min)** | **Total Redesign Time** |
| Type 1 (Think ants) | 15 seconds | 40 |  |  | 2 minutes |  |  |
| Type 2 (Think worms) | 15 seconds | 15 |  |  | 2 minutes |  |
| Type 3 (Think grubs) | 15 seconds | 15 |  |  | 2 minutes |  |
| Type 4 (Think seeds) | 15 seconds | 20 |  |  | 2 minutes |  |
| Type 5 (Think fruit) | 15 seconds | 7 |  |  | 2 minutes |  |

 **Reflection Question:**

|  |  |
| --- | --- |
| **How many offspring did you produce? Were your predictions accurate? Include how much higher or lower you were than you predicted.** |  |
| **What happened during your test? Be sure to provide specific details.** |  |

**Round #3...Reflect**

|  |  |
| --- | --- |
| **How could a change in environment affect the success of your beak?**  |  |
| **What would happen if we moved this experiment outside onto the grass?**  |  |
| **What would happen if we increased the competition?**  |  |
| **Imagine the entire class having access to a food source. Would your beak be more or less successful?**  |  |

|  |  |
| --- | --- |
| **Which beak was best adapted to each type of food? Why?** |  |
| **Did editing time impact food collection? How?** |  |
| **Which beak was least adapted to each type of food? Why?** |  |
| **What do you think would happen if the only available food source was bananas? How would your beak fare? What about your classmates’?** |  |