Data Nuggets developed by Michigan State University fellows in the NSF BEACON and GK-12 programs
crickets remain unnoticed by the parasitoid flies. To test this idea, Robin dissected the males to look for fly larvae. She compared infection levels for 67 normal males—collected before the flatwing mutation appeared in the population—to 122 flatwing males that she collected after the flatwing mutation appeared. She expected fewer males to be infected by the parasitoid fly after the appearance of the flatwing mutation in the cricket population.

**Scientific Questions:** Why do most male crickets on Kauai have flat wings? Could parasitoid flies have contributed to the loss of song for male crickets?

*What is the hypothesis?* Find the hypothesis in the text and underline it. A hypothesis is a proposed explanation for an observation, which can then be tested with experimentation or other types of studies.

**Scientific Data:**

*Use the data below to answer the scientific questions:*

<table>
<thead>
<tr>
<th></th>
<th>Number of males</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before Flatwing</td>
<td>After Flatwing</td>
</tr>
<tr>
<td>Mutation</td>
<td>Mutation</td>
<td></td>
</tr>
<tr>
<td>Parasitized</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>Not Parasitized</td>
<td>42</td>
<td>121</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parasitized</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What data will you graph to answer the scientific questions?

Independent variable: _________________________________

Dependent variable: _________________________________

---

Figure 2: A parasitoid fly, *Ormia ochracea*, sitting on top of its cricket host, *Teleogryllus oceanicus*. 

_Data Nuggets developed by Michigan State University fellows in the NSF BEACON and GK-12 programs_
Below is a graph of the data: Identify any changes, trends, or differences you see in your graph. Draw arrows pointing out what you see, and write one sentence describing what you see next to each arrow.

Interpret the data:

Make a claim that answers each of the scientific questions.

What evidence was used to write your claim? Reference specific parts of the table or graph.
Explain your reasoning and why the evidence supports your claim. Connect the data back to what you learned about the flatwing mutation and the parasitoid flies

Did the data support Robin’s hypothesis? Use evidence to explain why or why not. If you feel the data were inconclusive, explain why.

*Your next steps as a scientist:* Science is an ongoing process. What new question(s) should be investigated to build on Robin’s research? What future data should be collected to answer your question(s)?