Observing Ant Behavior on Flat Island/Popoia

Directions:

1. Have students work in groups of three. Have each group of students take two index cards and put their names, classroom, and card # on the card.
2. Before placing the cards out, have the students put about a dime-sized amount of spam, peanut butter, and honey in the labeled spaces on the card. The cards should look like this:

<table>
<thead>
<tr>
<th>Ms. Kim and Ms. Nori</th>
<th>Card #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>C8</td>
<td></td>
</tr>
</tbody>
</table>

- Spam
- Honey
- Peanut Butter

3. Have the students place the cards carefully into separate Zip-loc© bags.
4. Next, leaving the Zip-loc© bags open, have students place the bait cards about 10 feet apart from each other in a shady area.
5. Leave the Zip-loc© bags out for about 45 minutes.
6. During the 45 minutes, the students should pick a bait card to observe and answer the questions on the datasheet.
7. At the end of the 45 minutes, have students seal their Zip-loc© bags securely with the ants inside.
8. The ants should be brought back to the classroom and placed in the freezer until they are examined during the next class period.
1. Which food (spam, honey or peanut butter) do you hypothesize will attract the most ants? Why?

2. Describe in detail where you placed your ant bait cards. For example, “Ant bait card #1 was put in the shade, under a bush near Building C with a lot of leaves on it.”
   
   Ant bait card #1:

   Ant bait card #2:

3. Pick one of your bait cards to observe and record detailed observations about the ants that come to the card on the lines below. Include information such as how long it took ants to find the bait card, the number of different kinds of ants you see, how the ants are behaving, and the bait type each kind of ant is eating.

   __________________________________________________________
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Next page ➔
Answer the following questions:

4. How many different types of ants did you see on your card?

5. Which type of ant was most common?

6. What baits did the ants eat?

7. What kinds of ants liked the spam? Honey? Peanut butter?

8. Compare the types of ants from Flat Island with that of Kanewai Field. Are they the same? If not, how are they different? Do they like to eat the same types of things? Remember to provide a lot of details in your answers!
Post-field trip Group work → classroom

1) Separate the students into 4 groups

   a. One group is in charge of summarizing the experiment
   b. One group calculates the average number of ants and types of ants per bait card. They will also graph the total number of ants per bait card and number of species per bait card
   c. One group will draw and describe the different types of ants observed in all the bait cards collected

2) Have them organize the different sections on a poster board

3) Display next to the Kanewai Field poster

4) Compare the data on the two posters and write out their conclusions.
Summary Group

Include in your summary:

1) General description on where the bait cards were placed on Flat Island
2) Average number of ants found on the bait cards
3) Average number of type of ants on the bait cards
4) Which baits did each type of ant like best?

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SUMMARY

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Observing Ant Behavior

Name__________________________
Classroom_________

<table>
<thead>
<tr>
<th>Bait card #</th>
<th>How many ants total?</th>
<th>How many different types of ants?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<td>10</td>
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<td>Total</td>
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</tr>
<tr>
<td>Average</td>
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</tbody>
</table>

What do the different ants look like? What bait did they like the best?

Ant #1 _________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Ant #2 _________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Ant #3 _________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Ant #4 _________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Ant #5 _________________________________________________________________
________________________________________________________________________

Prepared by the Ecology, Evolution and Conservation Biology GK-12 program at the University of Hawaii at Manoa  http://www.hawaii.edu/gk-12/evolution