Getting the biggest energy bang for your buck?

Adapted from SYEFEST Activity "Ant cafeteria"

By Emily Adams

Purpose: Which type of food do ants prefer – carbohydrates, lipids, or proteins?

Materials:

- 1 cafeteria tray
- Access to a variety of foods
- Timer
- Ant colony

Hypothesis:

Procedure: Design a procedure to test your hypothesis. Write the steps below. Be sure to control all other variables.

Prediction:

Data: Design and complete a data table for your results.
Analysis and conclusion:

1. What does your data show? Did the ants have a preference?

2. Why do you believe the ants chose the food that they did?

3. Identify any sources of error in your experiment.

4. Go to the two websites listed below. Interpret your results in light of that information and what you’ve learned about cellular respiration.

http://www.greensmiths.com/ants.htm

Resources:

Ant food preferences

http://www.greensmiths.com/ants.htm - general description

http://scholar.lib.vt.edu/theses/available/etd-06282003-114935/unrestricted/Laura_Barbani.pdf - thesis testing one type of ant’s preferences in the lab and in the field

Lipid metabolism

http://www.elmhurst.edu/~chm/vchembook/622overview.html


Note: I tried to do this lab at the end of our cellular respiration and photosynthesis unit. It was too cold and muddy to find any ant colonies. Would probably be better at the beginning of the unit or to wait until spring when we do ecology.