What Can You Learn From A Mealworm?

Objective:

To practice collecting metric data using mealworms.

Materials needed:

A Balance, 5x7 index card, mealworms, 2 rulers and graph paper.

Strategy:

Begin the lesson by discussing the metric system. It is a decimal system scaled on the powers of 10. Pick up a metric ruler and look carefully at the scale. You will see many little lines and every so often a much longer line marked with a number. The longer lines are centimetre (cm) marks and the shorter lines are one tenth of a centimetre (0.1) or millimetre marks.

Answer the following questions:
1. Using your metric ruler, draw a line that is 8 centimetres long. Put a small mark on the line for each centimetre length.
2. Draw a line that is 8 millimetres long.
3. What do you notice about the relationship between the lengths of these lines?
4. Measure the length of the following line: _____.
   length = _____mm and length = _____cm.

After the students understand how to determine metric units, have them measure the length of the mealworm (anterior to posterior) in cm. Using a balance, weigh the worm. Record the data in table form on the blackboard.

Example: Name Length Weight Race I Race II Race III Avg.

Set up a racing card in the following manner:
A. Construct a track 1 cm. wide and 10 cm. long in the centre of the 5x7 card.
B. Place two rulers on either side of the track to restrict movement of the mealworm.
C. Record the time it takes the worm to reach the finish line at the end of the track. Race the worms three times and then determine the average time. RECORD THE TIME IN SECONDS!
D. Record your results on the blackboard.
E. Using the data collected, graph the weight of the mealworms and the timings of the mealworms.

Questions:

A. What are mealworms? Where are they found?

B. Which worm was the fastest? Slowest?
C. Was there a relationship between weight or length and speed?
D. What is the difference between a spider and an insect?