INTERDISCIPLINARY ACTIVITIES

MATH:

There are a number of math activities that you can do with this unit, either as part of the lessons or in conjunction with Discovery Files.

A few quick examples of how you can incorporate math:

1. Operation Vector Find
   - Have students calculate the area of the plot.
   - Have students do conversions from meters to feet.
2. Skeeter Farm
   - Have students graph the temperature changes.
   - Have students calculate the percentage of larval mosquitoes that become adults.
3. Discovery File: West Nile Virus
   - Have students graph the information in the data table.
   - Have students graph West Nile Virus case data they find on the CDC website.
4. Discovery File: Bacteria Fight Back
   - Have students calculate the number of bacteria after 24, 36, or 48 hours.
   - Have students calculate the number of bacteria remaining if antibiotics given at 24, 36, or 48 hours kill half the population at the time of dosages.

WRITING

Students are asked to write reports for the Task, but - if they don’t already do so in your science class - they may also be asked to create science journals. You may ask them to write about what they have discovered in their research.

A few additional quick examples of how you can incorporate writing:

1. Have students take the role of a science reporter covering their local community.
2. Have students write letters to the editor as concerned citizens regarding local mosquito spraying.
3. Have students write a diary entry of a young mosquito who takes her first bite.
4. Have students write a pro or con position paper about allowing a deer hunt to control Lyme disease.
5. Have students write an informed consent for a trial of a vaccine for West Nile virus or Lyme disease. You might obtain a sample from a local hospital or by going to <humansubjects.energy.gov/doe-resources/files/generic-sample-informed-consent-form.doc>.

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HIDE A PENNY MAPPING ACTIVITY

This one-period classroom activity will develop a beginning understanding of map features, map orientation and location vocabulary.

Objective: To give students first-hand experience drawing a map of the classroom or another limited area, and through this activity gaining an understanding of the importance of map features.

Materials: an 8 ½ x 11-inch piece of paper, one penny per student, each with a different date.

Procedure:
1. Choose a limited area in the classroom or part of the hallway and specify the boundaries for the students. Everyone gets a penny to hide.

2. Every student gets about 2 minutes to hide the penny and then about ten minutes to draw a map to show the hiding place of that penny. The map can include any kind of information—pictures, words, arrows, number of steps that the student wants to include.

3. The students should draw a circle with the date of the penny at the hiding spot on the map. The date will let the finders know whether they have found the right penny or not.

4. When all the maps are completed, collect them and pass them out randomly to the students. Ask them to make sure they don’t have their own map and then follow the map and search for the penny. If the students are lost, have the mapmaker lead the student to the hiding place.

5. Once all the pennies are found, bring the class back together and ask them to talk about what helped them find the penny.

6. After this conversation, ask the class to help create guidelines for how to draw accurate maps. Post these guidelines in the classroom. After you've developed your guidelines for maps, you can try this activity again and see what map elements the students now add to improve the map accuracy.

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