

Wisconsin NatureMapping Asian Beetle Study

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Middle School

Activity 2: Asian Lady Beetle Trap

Lesson: Students will design a trap to catch Asian Lady Beetles.

Objectives: Students will review the scientific method, investigate how to collect data scientifically, and use experimental design to create a trap.

1. Review the scientific method with students. Emphasize the importance of having a “controlled” experiment and only having one variable.
2. As a class make a class list of what students know about Asian Lady Beetles. On a second chart make a list of what students would like to know or learn by conducting a field study on Asian Lady Beetles. (These charts will also be used in activity 3)
3. Give students the “Asian Lady Beetle Trap Challenge” handout. Students may work alone or with a partner. Have students follow the directions to create a trap. Remind students they should consider the unique characteristics of the Asian lady beetle when designing their trap. (Students who finish their trap before other students could research to find as many answers to the questions they created on the second chart from step 2.)
4. Have the class place their traps during one class period and mark the area a “scientific research area” to deter other students from disturbing the traps. The next day, collect the traps during the class period and complete the “Trap Analysis” handout.
5. Conclude the activity by discussing the effectiveness of the traps and determine which one worked best.
6. Based on their observations, have the class develop one research question they would like to investigate. Use the second chart the class created in step 2 to help them develop their question. (This research question will be used in Activity 3)

Name _____
Hour _____

Asian Lady Beetle Trap Challenge

Problem: Several people have been calling the Wisconsin Department of Natural Resources complaining about large amounts of “lady bugs” getting into their homes. The DNR has determined these are not “lady bugs” but Asian lady beetles – an invasive species of Wisconsin. You have been hired by the DNR to determine if the Asian lady beetle population is out of control. Your job is to create an effective trap so the Asian lady beetles can be counted.

***Note – you may not purchase materials to build your trap. You will need to be creative and recycle materials you already have at home.

Procedure:

1. Research – before you design a trap you need to collect as much information as you can about the Asian lady beetle so your trap will reflect the unique characteristics of the Asian lady beetle. During your research you should consider: lady beetle habitat, food, winter behavior, body characteristics, your previous observations, and any other information you think will help you build an effective trap. Consider where the best place to place your trap will be.
2. Organize Your Research – Make a chart, table or graphic organizer to summarize your research information.
3. Brainstorm ideas for your trap. Consider what the trap will be made of, what will attract the Asian lady beetles, and what will keep them from escaping.
4. Build your trap.
5. If you have time test your trap at home by placing your trap outside for 24 hours.
6. Trap your beetles! Your teacher will help you place your traps outside.
7. 24 hours later, collect your trap and complete the “Trap Analysis” handout.





Name _____
Hour _____

Trap Analysis

1. Describe how you designed your trap to catch the Asian lady beetles. Make sure you describe the unique features that would make your trap efficient. You may use diagrams to help your description.
2. How many beetles are present in your trap?
3. How many beetles are dead? Alive?
4. Beetle observations – use your senses to write down as many things as you can about the beetles you captured.
5. Describe the location of your trap.
6. Describe the weather during the trapping period.
7. Describe the surrounding vegetation. What kind of vegetation was right next to your trap? Was there different vegetation near by?
8. Did you use any bait in your trap? Explain.

9. Did you use any scent in your trap? Explain.

10. How well did your trap work? Give examples of what worked well and what did not work well.

11. List at least 5 things that would have made your trap work better.

12. What factors were you not able to control during your trapping?