



Build Your Own Insect Trap

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Description

This lesson can be used as an introduction to insects or as an assessment about insects at the end of the unit. Students will design their own insect traps to collect a new unknown insect, in the same way that entomologists collect the insects they research.



Student Outcomes/Objectives

- Students will be able to ask a testable question
- Students will be able to explain the relationship between insect behavior and insect trapping techniques



Standards

Benchmark 2:

- *Explain the relationship between animal behavior and species survival*
- *Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat*



Time Estimate

One 50-minute class period



Material (for 30 students)

White paper	40 sheets
Colored paper (red/yellow)	2 reams (1 of each color)
Construction paper	1 packs
Clear plastic cups	15
Colored cups (yellow/red)	15(one type of cup big, one type small if possible)
String	1balls
Small plates (yellow/red/white)	15
Large plates (yellow/red/white)	15
Popsicle sticks	1 large box
Masking tape	2 rolls
Straws	75 straws
Scissors	8 pair, sharp but cheap

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This material is based upon work supported by the National Science Foundation under Grant No. 0139372

Q tips	1 box
Cotton balls	1 bag
Pepsi/soda	1 small bottle
Beans/lentils	1 bag of each (You only need a few ounces of each, if you are buying bulk)
Markers	4 packs



Worksheets

N/A



Vocabulary

Entomologist - a scientist who studies insects

Insect Trap - an object used to catch insects

Visual cues that attract insects - colors or shapes of objects that attract insects

Odor cues that attract insects - smells or scents that attract insects



Background Information

Students should have an understanding of insects if the lesson is being used as an assessment. If the lesson is used as an introduction, little background knowledge about insects is necessary.



Lesson Plan *

Attached - 'Building the Trap' (50-min period)



Extensions/Resources

N/A



Teacher Keys

N/A

*Italicized words in lesson plan are potential script for teacher

Teacher Worksheet



Building the Trap

Preparation

Divide the materials so that there is roughly the same amount for each class in which the activity is to be implemented. Place supplies on a table at the front or rear end of the classroom.

I. Introduction (2 minutes)

- *A new insect has been sighted in the Willamette Valley*
- *Farmers are concerned that it might be damaging their crops*
- *Very little is known about the biology of this insect, and entomologists would like to catch as many as possible so that they can study them*
- *They prefer to have the insect captured alive*
- *They need your help in catching as many insects as possible*
- *You will be designing and building a trap to catch this insect alive*

II. Questions for brainstorming about insects (3 minutes)

- *What would you like to know about the insect before you design your trap?*
- Answer student questions with known information that is listed below. If the student asks a question for which the information is not provided, let him/her know that it is unknown, and that this would be a good research question.

Questions likely to be asked by students followed by answers that should be written on the board.

Does the insect walk or fly?

- *It flies*

Does the insect fly during the day or night?

- *It flies during the day*

Is it attracted to any color?

- *It is attracted to yellow*

Is it attracted to any scent?

- *It is attracted to the scent (odor) of beans (protein) and soda*

How big is the insect?

- *It is similar in size to a yellow jacket*

III. Go over procedures (3 minutes)

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Supplies available to you for building the trap (hold them up as go over these items):

- *plastic cups (colored, clear)*
- *paper (colored, white, yellow, construction)*
- *tape*
- *string*
- *plastic plates (yellow, red, white)*
- *beans (protein)*
- *soda*
- *markers, scissors*
- *cotton balls, Q-tips*
- *popsicle sticks*
- *straws*

Steps: (Write on board)

1. Plan / Design your trap
2. Gather supplies
3. Build the trap
4. Present the trap to the class explaining features that will help trap the insects

IV. Divide the class into groups of 2-3 students (2 minutes)

V. Plan / Design your trap (5 minutes)

VI. Gather supplies and build the trap (20 minutes)

- get only supplies you need
- one person in the group collects supplies for team

VII. Present the Trap (10 minutes)

- ask for volunteers - as many as time permits

VIII. Clean-up (5 minutes)

IX. Follow-up lesson

If students are interested, the traps can be placed outdoors to see what insects are trapped.