

# 4-H Club Meeting 4 Tools for Collecting Insects



## Supplies

- Mesh produce bags or tulle (about 22x32)
- 8-inch plastic embroidery hoops
- Wire hanger
- Scissors
- Two 1/2-inch wooden dowels or broom handles, plunger handles, etc.
- Extra-large spool of soft wire or duct tape
- 1 old pillow case or 20x30-inch pieces of muslin
- Needle and heavy thread
- Drill and various sizes of drill bits
- Extension cord

## PRIOR TO THE MEETING

Review lesson and gather supplies. Youth may be able to provide items they will need for the activities. Call each member/volunteer and inform them of any other information or supplies they need to bring to club meeting 4.

## Activity #1 BUILDING AN AERIAL NET

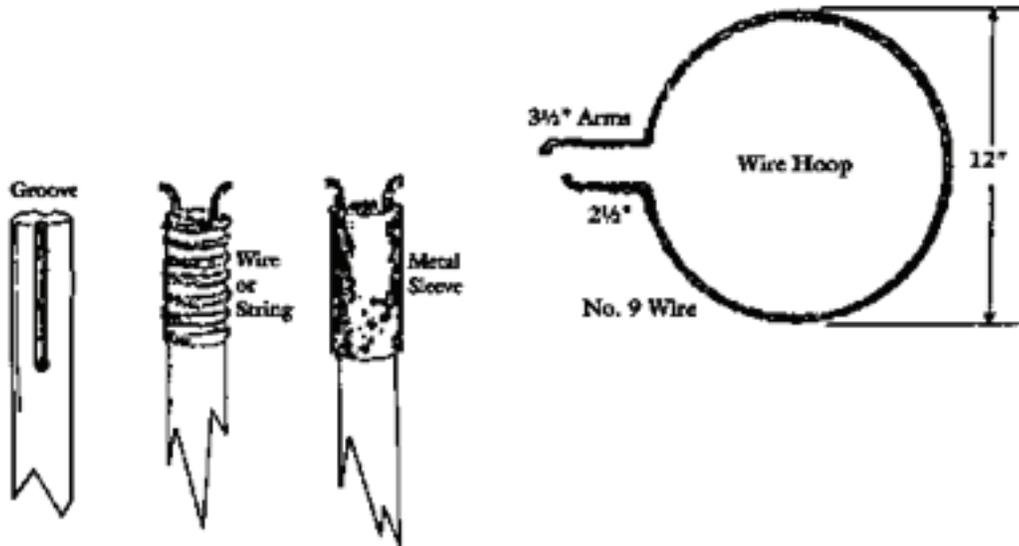
### DESCRIPTION

You can buy insect nets from a biological supply company or from a hobby shop. There are two basic kinds of nets – aerial nets and sweep nets. The lighter bag on an aerial net is designed to capture insects in flight or at rest. The heavier bag on a sweep net is designed to collect insects in tall grass, shrubs, or water by sweeping or beating through plants and water.

1. Loosen the screw on the embroidery hoop, and remove the center ring.
2. Wrap the mesh produce bag around the center ring, then slide it back in the outer ring and re-fasten the screw.
3. Trim away any excess mesh fabric.
4. Wrap colored wire around the end of a wooden dowel, then use the wire to attach the dowel to the embroidery hoop to make a handle.

## DESCRIPTION

1. Bend heavy wire into a circle (about 12 inches) to form a hoop. Bend arms 2 1/2 inches and 3 1/2 inches for fitting in net handle.



2. Bore holes in the net handle for arm hooks. If you want a smooth fit, groove handle as shown.
3. Thread the wire hoop through the hem of the bag, and insert the wire arms into the handle. Slip the metal sleeve over the net handle to hold the wire arms in place. You can also attach the hoop arms to the net handle by wrapping them with soft wire, heavy string, or duct tape.
4. To make the net bag, fold material to 10 x 30 inches. Cut the material from the bottom folded corner diagonally up and across to a point 10 inches below the top unfolded corner. After you have finished cutting, the net bag will be in two roughly triangular pieces.
5. Stitch the two halves of the net together making the seam about 1/2 inch from the cut edge; leave 10 inches free on one side at the top where the net hoop will be inserted. Turn the cut edges inside and stitch the seam down flat (flat-felled seam).
6. To make a loop for the wire hoop, fold the top edge down 5 inches. Then turn the folded edge down 2 1/2 inches and stitch the hem. If you need to reinforce the hem, make only one fold and cover the fold with a strip of muslin 5 x 10 inches. Then fold again and stitch. The muslin will protect the netting around the wire hoop.
7. If you use an old pillow case to make a net bag, you won't be able to "see through" your net; however, it will not snag. The hem of the pillowcase is a ready-made loop for the wire hoop. Just cut a small slit on either side of the pillowcase seam, and then feed the wire through them.



## Reflect

- What is the aerial net used for? What is the sweep net used for?
- What was the most difficult step in building your nets? How did you overcome any building difficulties?

## Apply

- How does the aerial net work to collect insects?
- How does the sweep net work to collect insects?



## 4-H MISSION MANDATES

### Citizenship

Understanding similarities and differences among insects and their habitats increases environmental stewardship.

### Healthy Living

Participation in 4-H clubs is beneficial to the socio-emotional well-being of youth. Life skills gained from participating in the Discover 4-H Entomology club are critical thinking, problem solving, teamwork and cooperation, and conflict resolution, to name a few.

### Science

This club meeting provides youth with activities that surround order/classification of insects and other arthropods, collaboration of groups to achieve goals, opportunities to compare and evaluate as well as building their abilities to analyze and interpret their findings.

## ESSENTIAL ELEMENTS

### Belonging

Being part of the Discover 4-H Entomology Clubs brings youth together who have similar interests in insects.

### Independence

Learning about insects and their uses prepares youth to make informed decisions that affect the environment.

### Generosity

Youth learn by the example of their adult volunteers that volunteering is valuable to our communities.

### Mastery

This introductory club will spark a continued interest in entomology among youth who participate by allowing them to collect, display, and demonstrate the knowledge they have gained in 4-H contests and county fairs.

#### References:

<http://www.extension.umn.edu/youth/mn4-H/projects/environment/entomology/collecting-and-preserving-insects/>

<http://www.sheknows.com/parenting/articles/1003593/bug-hunt-crafts-for-kids-diy-bug-net>

<https://www.uky.edu/Ag/Entomology/ythfacts/4h/unit1/collnet.htm>