INSECT COLLECTION

How many insects? 20

How many insect orders represented? 10

Each student must have at least 10 insect orders represented. Two of the orders may have 3 insects within them, while the rest may only have a maximum of 2 insects per order.

What information is needed for each insect?

Each insect will have a small label (typed or printed) with the following information:

1. **Order**: Diptera
2. **Scientific name**: ex. *Musca domestica* or Musca domestica
3. **Common name**: ex. Housefly
4. **Date collected**
5. **Location collected**: ex. Muncie, IN

How much is the insect collection worth?

It is worth **10% of the first nine weeks grade** in Biology.

When is the insect collection due?

It is due in mid October.

How should the insect collection be displayed?

The actual display is left up to the student. However, neatness and appearance are important factors in the grade. The body of each insect should be completely visible.

How will the grade be calculated?

Number of insects	20 points
Number of orders	20 points
Number of correct scientific names	20 points
Condition of the insects	20 points
Display	20 points
Total	100 points

Miscellaneous

You must collect and identify your own insects. You can not use insects from an older brother or sister's insect collection.

Use a good identification book. The public library has identification books.

Do not keep insects in the freezer. The liquid inside them will expand and when the insects thaw, the appendages will fall off.

In grading, each insect will be looked up to see if it is identified correctly.

Bonus points can be earned if turned in early. Also, bonus points can be earned for extra orders of insects represented. These must be designated as such.

Insect Orders

Anoplura	Lice
Blattodea	Cockroaches
Coleoptera	Beetles, ladybugs
Collembola	Springtails
Dermaptera	Earwigs
Diptera	Flies
Ephemeroptera	Mayflies
Hemiptera	True bugs (plant, seed, lace, stink, water)
Homoptera	Aphids, leafoppers, scale insects
Hymenoptera	Ants, bees, wasps
Isoptera	Termites
Lepidoptera	Butterflies, moths
Mantodea	Mantids
Mecoptera	Scorpionflies
Megaloptera	Dobsonflies, fishflies, alderflies
Neuroptera	Lacewings
Odonata	Damselflies, dragonflies
Orthoptera	Grasshoppers, crickets, katydids
Phasmatodea	Walkingsticks
Plecoptera	Stoneflies
Siphonaptera	Fleas
Thysanura	Bristletails, silverfish
Trichoptera	Caddisflies

Ideas for Catching Insects

1. Look under stones or boards.
2. Collect mushrooms and put them in a closed jar. As the mushrooms dry, insects that were inside will come out.
3. Dig up and turn over a shovelful of earth. Watch it closely and capture the insects that scurry away.
4. Check around an outdoor light.
5. At night, put a light over a tub of water with a spoonful of kerosene in it. In the morning gather the insects from the tub.
6. Collect caterpillars and grubs. When they become adults, kill, and identify them.
7. Leave an open sandwich outside for an hour or two. Insects will be attracted to the food.

8. Attach an insect net to an automobile and drive along at dusk about 25 to 30 mph. The net will trap many flying insects. This method works very well along country roads.

9. Use an insect net to capture flying insects. Disturbing bushes and tall grass will often arouse many flying insects.

How to Make a Killing—Jar

Use a large—mouth jar' with a screw lid or a coffee can with a plastic lid. Make several jars of various sizes if you plan to catch several insects at one time.

Place a half-inch layer of cotton in the bottom of the jar or can. (you can use sponge instead of cotton if you prefer)

Pour a garden grade insecticide on the cotton or sponge. (Rubbing alcohol also works, but it doesn't work as well.) Keep the killing jar tightly closed as much of the time as possible. The more you keep the jar covered, the fewer times you will have to add insecticide to the cotton. If the cotton or sponge becomes too dry, simply add more insecticide.

Cover the cotton or sponge with cardboard that has holes punched in it and that has been cut to fit the bottom of the container.

Shred newspaper. Put a layer (3 to 4 inches thick) of the newspaper over the cardboard to prevent insects from damaging their body parts as they try to escape.

Note: Insecticides are poisonous. You must use care when handling them. Be sure to read the instructions carefully. Keep killing jars away from small children and pets.

Hints for Killing Insects

1. Make a killing jar following the directions above. You can kill many insects by placing them in your killing jar as soon as you catch them. Leave them in the jar until they are completely dead.

2. You can kill beetles easily by dropping them into a small jar of alcohol. Beetles often resist insecticides for a long period of time.

3. Do not place butterflies or moths into your killing jar. They may ruin their wings by flapping around inside the jar. Kill a butterfly or moth by squeezing hard on its thorax.

Hints for Mounting Insects

1. You can mount most insects by sticking pins through the thorax and into a piece of cardboard, Make sure that the insects are suspended in the air on the pins and are not tacked against the cardboard. Be sure the insect is dead before you mount it.

2. To mount beetles, place the pin through the right wing, not through the thorax.

3. Mount tiny insects (such as mosquitoes, gnats, and fruit flies) onto small triangular piece of paper. Touch the triangle to a small drop of glue; then touch the glue on the paper to the insect. Pin the paper triangle to the cardboard.

4. Always mount the insects immediately after killing them. Do not wait as they often become brittle and fall apart while you pin then to the cardboard.