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|  | Materials/Procedure  Before the actual experiment can begin, it is necessary that you acquire all of the materials needed to complete the experiment.  Materials Needed  1. One Drosophila Kit- (includes a mold inhibitor, caps, plugs, vials, medium, culture jars, netting, instructions, two free Drosophila Melanogaster cultures)  -See bibliography section for a link to the ordering site.  Cost: $30.00 plus shipping  2. One 16 oz. Container of Ortho 'Volck Oil Spray'- (kills scale insects, flies, meal bugs, and spider mites)  -Can be purchased at a local hardware store.  Cost: $8.99  3. One microscope- (for identifying the sex of the flies)  -I would not recommend purchasing a microscope. Instead, borrow a school microscope, or in my case, a neighbor's.  Cost: Too much, don't buy one just for this experiment.  4. One eyedropper- (for applying the pesticide to the vials)  -Can be purchased at a local pharmacy.  Cost: $0.80  \*After you receive your flies, but before you begin your experiment, it is important that you determine the concentration of water to poison that will be used. To avoid any possible math errors by producing a smaller batch of poison, I mixed a gallon of water with 4 1/2 tablespoons of poison as stated in the directions. The directions asked for five tablespoons of water, but I lowered the concentration to make sure I don�t kill all of the flies. I mixed the poison in our sprayer and sprayed the excess poison on our lawn and flower garden. After the poison is mixed, take four vials and with the eyedropper, put two drops in one vial, three in another and so on until there is five drops in the final vial. Place several flies in each vial, seal and turn containers over. Wait 2-3 minutes and place each jar of flies in a separate container and wait two to three days. All the flies in the jar that had 5 drops of poison should be dead, two of the three flies in the jar with four drops were dead and I decided that was the perfect dosage. Properly dispose of the exposed flies as they would distort the results. Now that you know that four drops are the amount of poison to be administered, you are ready to begin.  Procedure:  1. After thoroughly cleaning and rinsing the four vials, set one vial aside, this will be used to hold the control flies. The other three vials will be administering the pesticide to the lucky flies.  2. Taking great care, place ten flies in the control jar and seal it. I learned very quickly that flies are fragile. Make sure that there are five males and five females in the control jar. I studied the dead flies from the pre-test under the microscope to understand what a male and female fly looks like. Use the chart below to determine if a fly is male or female.  Male Female  -Dark abdomen -Light abdomen  -Smaller in size -Larger in size  -Rounded abdomen -Pointed abdomen  -Bristles near abdomen -No bristles  3. Take whatever precautions necessary before handling the poison and put four drops of poison in each container, excluding the control vial.  4. Place ten flies in each jar containing the poison and once again, take great care when doing this. Seal each jar and gently shake to distribute the poison.  5. Wait several minutes and place the flies back into their original containers. Be sure to thoroughly clean the jars that contained poison in them.  6. Come back the next day and remove and record the dead flies. Be sure to dispose of the flies in a garbage can. Wait two weeks to allow the flies to produce a second generation.  7. Repeat steps 1-6 until you have the desired amount of generations bred and killed. |

*This Web Site is Best viewed with 256 or more colors.*

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