

RQ: Experimental Design

A kid is irritated at all the mosquitoes around his house, and wants to find some non-chemical way of repelling them from the doors to his house. He remembers his grandma's house also has lots of mosquitoes near her fruit trees, but not too many around her house where there are a lot of citronella and marigold plants. He decides to see if these plants have mosquito repelling properties. He takes the leaves from the citronella plant, grinds them up with water, and filters the solids out. He soaks a paper towel with the citronella extract, and places it in a corner of an enclosed tank with mosquitoes in it. He monitors how many mosquitoes are near the corner of the tank with the extract every 15 minutes for one hour. He does the exact same thing in a second tank using marigold extract, and in a third tank he places a paper towel soaked in water.

1. List some possible inferences that lead to this experiment?
2. What is a possible hypothesis for the kids experiment?
3. What is the independent variable?
4. What is the dependent variable?
5. What are the constant variables?
6. What are some potential difficulties in the experiment?

RQ: Experimental Design

A kid is irritated at all the mosquitoes around his house, and wants to find some non-chemical way of repelling them from the doors to his house. He remembers his grandma's house also has lots of mosquitoes near her fruit trees, but not too many around her house where there are a lot of citronella and marigold plants. He decides to see if these plants have mosquito repelling properties. He takes the leaves from the citronella plant, grinds them up with water, and filters the solids out. He soaks a paper towel with the citronella extract, and places it in a corner of an enclosed tank with mosquitoes in it. He monitors how many mosquitoes are near the corner of the tank with the extract every 15 minutes for one hour. He does the exact same thing in a second tank using marigold extract, and in a third tank he places a paper towel soaked in water.

1. List some possible inferences that lead to this experiment?
2. What is a possible hypothesis for the kids experiment?
3. What is the independent variable?
4. What is the dependent variable?
5. What are the constant variables?

6. What are some potential difficulties in the experiment?