Lab: Fruit Fly Speciation

This experiment was an important piece of research that demonstrated the ability of *isolation* and *differences in selective pressures* to create different species. It provided laboratory based evidence that something similar could happen in the natural world.

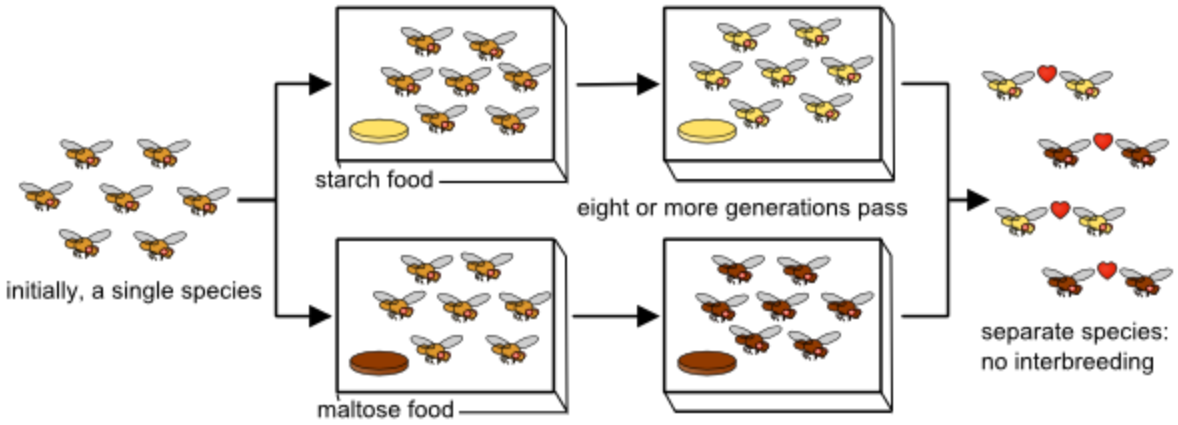

Diagram of Fruit Fly Breeding Experiment demonstrating speciation
http://commons.wikimedia.org/wiki/File:Speciation_experiment.png#file

An experiment demonstrating speciation in the fruit fly (Drosophila pseudoobscura) was conducted by Diane Dodd. A single group of flies was divided into two, with one of the group fed with starch-based food and the other with maltose-based food. After the two groups had reproduced over many generations, it was observed that flies had changed. The groups were again mixed; it was observed that the flies now preferred mating with only those from their group. *Source:*http://commons.wikimedia.org/wiki/File:Drosophila_speciation_experiment.svg

Observe the diagram above and answer the following questions:

Identify these statement as True or False and defend your answer.

1) The initial group of fruit flies is a population. True or False
   Defense: _____
   _____

2) In the second stage of the experiment the fruit flies are still one population. True or False
   Defense: _____
   _____

3) The fruit flies are isolated in the final stage of the experiment. True or False
   Defense: _____
   _____

What is the selective pressure difference that investigation places on the Fruit Flies?