

Introduction to Genetics – Drosophila Activity Biology

Genetics is the study of how genes and reproduction contribute to **heredity** – the inheritance of traits (characteristics) by offspring from their parents.

Many scientists study genetics by using fruit flies (*Drosophila*) as they are easy to breed, have a relatively simple genetic profile, and show clear traits that can be observed.

The following website has an on-line fruit fly lab that you can use to explore the ways scientists can observe and quantify genetic data. Your goals for today are:

1. Perform at least three crosses of fruit flies
2. For each cross, hypothesize how the trait is inherited
3. Test your hypothesis by doing a second crossing of the fruit fly offspring

The website is located at <http://www.sciencecourseware.org/vcise/drosophila/>. You will need to register as a New User – click on the “Create New Account” button. Use the following “Class Code”: 2398344. You can choose any user name and password you’d like.

Once you’ve registered, log in and follow the instructions on the screen. It takes a little getting used to – be patient. You might want to work with a partner in order to more easily determine the process you should follow.

While completing the activity, make sure that you save your work from time to time by clicking on the “Notebook” tab and clicking “Save”. This way, you can access it later on (and I can check your work on-line).