

EvoTutor Instructions

1. Open Internet Explorer (preferred) or Netscape Navigator.
2. Go to URL <http://ucsu.colorado.edu/~lemmon/EvoTutor/Tutor.html>.
3. Choose No.
4. See if you already have the Applet Viewer on your computer. If you aren't sure, click on the download button for your computer and follow the instructions. Mac users: you want the Apple Applet Viewer. To simplify your life, find the Apple Applet Runner in the Apple Applet Viewer folder; put an alias for the Runner on your desktop and double-click the program to open it.
5. Go to the URL <http://ucsu.colorado.edu/~lemmon/EvoTutor/TutorB.html> (you may already be there after downloading the viewer). Read the instructions.
6. Return to <http://ucsu.colorado.edu/~lemmon/EvoTutor/TutorB.html>. Select Genetic Drift.
7. In the Genetic Drift window, select Allele Frequency. Click on the Background, Simulation, and Parameters windows and read them.
8. Copy the URL for the window (<http://ucsu.colorado.edu/~lemmon/EvoTutor/GenDrift/GD2B.html>). Open Applet Runner. In the File menu, choose Open Location. Paste the URL in the window, then change the B before html to A, resulting in <http://ucsu.colorado.edu/~lemmon/EvoTutor/GenDrift/GD2A.html>. Then click Open; this will open a simulation window.
9. Run simulations. Each time, the program will plot the frequencies of five neutral alleles changing over time due to random drift. You might start with the parameters recommended at the site; but I recommend you start with allele frequencies $f(a) = 0.5$, then try higher and lower frequencies.
10. Now return to the Genetic Drift window and choose Population Size. Read the Background, Simulation, and Parameters. Run simulations. NOTE: this simulation starts with a genetically homogenous population, i.e. monomorphic, only one allele. Consequently nothing happens unless there is mutation. This is actually a simulation of drift plus mutation. Periodically a mutation occurs and the simulation plots the frequency of the new mutant allele (or alleles if a second mutation occurs before the first is fixed or lost).
11. In the next window, open Population Size. Click on all three windows and read them.
12. Return to the EvoTutor page and choose Selection. In the Selection window, choose Modes of Selection. In that window, choose Directional Selection.