

Mathematical Biology — Evolutionary Genetics

Introduction to Biological Evolution

Homework Set 1

1. Give definitions of each of the following. You should be able to find all of the terms in a freshman-level biology text.

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| 1. evolution | 5. stabilizing selection | 9. adaptation |
| 2. natural selection | 6. diversifying selection | 10. differential reproduction |
| 3. artificial selection | 7. catastrophism | 11. speciation |
| 4. directional selection | 8. uniformitarianism | 12. convergent evolution |

2. You are a *Homo sapiens* (that is, you are of the genus *Homo* and the species *Homo sapiens*). What are your kingdom, phylum, subphylum, class, order, and family?
3. Darwin's theory of evolution is sometimes popularly called "survival of the fittest." Is this a reasonable characterization?