Process skills course goals, Evolution, U. of Colorado at Boulder, Andrew Martin, EBIO 3080

Engage in observation-discovery and hypothesis-driven studies of biology

Correctly interpret graphical, tabular, and text-based description of data

Distinguish between claims based on scientific evidence and other types of claims

Judge and critique the reliability, sufficiency, and/or authenticity of information

Evaluate acceptance of evolution

Identify social influences on scientific pursuits or acceptance of science

Confidently use R (or another computational environment) to manipulate, visualize and analyze data

Construct logical-deductive arguments based on evidence

Effectively argue the relevance of biology to diverse audiences

Demonstrate awareness of the ways context, audience, and purpose drive content, presentation, and stylistic choices

Communicate the applications of biology for social, ethical and environmental issues

Effectively communicate scientific content, methods and thinking

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Decipher, assess the validity, and gauge the uncertainty of scientific claims

Use a database or spreadsheets to organize data and share data

Use and interpret models, data or simulations to make predictions

Design an experiment to test a specific hypothesis

Make inferences from phylogenies

Confidently collect and manipulate data

Develop computer, lab, and/or field skills

Map data for visualizing spatial patterns or solving problems

Develop different problem-solving strategies

Construct and evaluate models

Propose an informed hypothesis to explain observations

Use the comparative method

Make and solidify interpersonal connections that stem from preparedness and participation in the sociology of science

Interact with peers and share information and skills

Seek out the assistance of expert individuals

Collaborate with people of varying knowledge and points of view towards common goals

Map data for visualizing spatial patterns or solving problems

Use statistics appropriately

Identify social influences on scientific pursuits or acceptance of science

Use a database or spreadsheets to organize data and share data

Develop computer, lab, and/or field skills

Effectively communicate scientific content, methods and thinking

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Improve your ability to work productively and cooperatively with others towards a common goal

Become a self-actualized learner (learn how to learn)

Accurately evaluate your understanding of content and the process of science

Develop confidence in your knowledge and abilities