

Evolution

Teacher:

Credits: (½ credit)

Course Description:

In this course, we will explore the fascinating world of evolution, examining how life as we know it has developed and the processes that continue to shape it. Through an in-depth study of environmental patterns and changes, we will understand how mutations drive survival and the emergence of new species. The course will challenge students to apply their knowledge to imagine and predict what life forms may evolve in the future after humans cease to exist. Additionally, we'll explore how our understanding of evolutionary processes can be used to influence the adaptation of species in the present.

Prerequisites:

- Completion of Biology or AP Biology.
- Basic understanding of statistical analysis and its application to identifying patterns in biological data.
- Curiosity and creativity, with an eagerness to ask questions and engage in discussions to deepen your understanding of evolutionary concepts.

Standards Assessed:

Students should be able to do the following

- Ask scientific questions.
- Develop, use, and evaluate models based on evidence.
- Plan, equip, and carry out investigations.
- Analyze data.
- Use mathematics to quantify scientific research.
- Construct and refine explanations for phenomena based on evidence.
- Effectively communicate their knowledge and findings.
- Critically read and understand scientific literature adapted for the classroom.

Content areas assessed Topic Outline

- **A Brief History of Evolution:**
Understanding the key milestones in our knowledge of evolution.
- **Identifying Patterns in Evolution:**
Analyzing how evolution occurs and how we can spot recurring trends.
- **Speculating on Future Evolution:**
Using current trends to predict the evolution of life after human existence.
- **Influencing Evolution:**
Exploring how we might impact and direct the evolution of species in our world.