



Evolution of Life and Biodiversity

High School Virtual Education Class

Standards Alignment:

HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.

HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.

Overview:

Pre-class activity (10-15 min): take a virtual tour through the St. Louis Aquarium at Union Station! We will send a link to an online video that your students can watch to learn about the Aquarium and prepare them for the virtual class!

Virtual Class (30 min): Join us for a journey through time, natural selection, and evolution! Students will explore how and why evolution occurs, and learn about some key events that have shaped the evolution of the animal kingdom. We will show you some of our animals that display these evolutionary stages, and even give you time to ask questions live on camera.

Follow-Up Activity: Demonstrate understanding of the evolutionary relationships between different groups of life by constructing a phylogenetic tree. A link to this activity will be sent to teachers via web-based Google suite.

Suggested Supplemental Activities:

- Ask students to respond to the prompt: "Can animals adapt to overcome changes in their environment due to pollution, habitat loss, and other human influences?"
- Ask students to create a model that predicts what might happen to specific animal populations if environmental trends (climate change, amount of plastic entering the oceans each year, etc.) stay on the projected path. How might biodiversity be affected? Use data to base your predictions off of current conditions.