



In The News

Current Events in Earth & Space Science

Summaries for the Classroom

De-extinction

De-extinction is a new and controversial topic that involves resurrecting extinct species from the past. Some of these species' extinctions were a direct result of human over-hunting, while others were more 'natural'. Using biotechnological processes, scientists have discovered methods that can make this seemingly science-fiction experiment a reality.

Articles to Share with Students

Science Daily – Scientists Produce Cloned Embryos of Extinct Frog

<http://www.sciencedaily.com/releases/2013/03/130315151044.htm>

New York Times (video interview) – Bringing Back the Dead

<http://www.nytimes.com/video/2013/03/19/science/100000002125789/bringing-back-the-dead.html>

Discovery News – Will De-Extinction Become Reality?

<http://news.discovery.com/animals/reviving-extinct-animals-mammoths-130317.htm>

TEDxDeExtinction – videos from event on March 15, 2013

<http://tedxdeextinction.org/>

General Information

The Encyclopedia of Earth

Extinction -

http://www.eoearth.org/article/Extinction_and_population_viability_analysis?topic=58074

Causes of Extinction -

http://www.eoearth.org/article/Causes_of_extinction?topic=58074

National Geographic Video – Should We Bring Extinct Species Back to Life?

http://youtu.be/a_hgCM8XZkk

The Long Now Foundation – Revive and Restore: De-extinction
<http://longnow.org/revive/>

National Geographic (pictures): Extinct Species That Could Be Brought Back
<http://on.natgeo.com/Xoxyb8>

Questions for Classroom Discussion

- Define de-extinction. Name a Hollywood movie that has showcased the idea of de-extinction.
- List some species that are in contention for being revived from extinction. For the species you list, find the year or estimated time period that species originally went extinct, and what the possible cause(s) of extinction might be.
- Why are dinosaurs not eligible for de-extinction?
- What are the techniques that can be used for de-extinction? Explain the processes needed to bring species “back from the dead.”
- Do you think that it is a good use of time and money to de-extinct these species, or should the resources be spent on species that are currently endangered? Explain.
- Are there some species that you think deserve to be brought back and others that do not? Why or why not?
- If de-extinction is successful, should species be reintroduced to natural habitats? What are some of the complications of this approach?
- In your opinion, is de-extinction messing with natural selection, and if so, how could this impact current species?

Tags

biodiversity, extinction, natural selection, dinosaurs

Big Ideas

From the Earth Science Literacy Principles

- Big Idea 1. Earth scientists use repeatable observations and testable ideas to understand and explain our planet. (1.7)
- Big Idea 3. Earth is a complex system of interacting rock, water, air, and life. (3.6, 3.7)
- Big Idea 6. Life evolves on a dynamic Earth and continuously modifies Earth (6.2, 6.3, 6.7)
- Big Idea 9. Humans significantly alter the Earth. (9.7)

From The Big Ideas in Earth and Space Science (ESBD)

- The Biosphere (16, 17)
- The Nature of Science (24, 25)

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