



Kentucky Academic Standards Addressed By Zoo Program

SLIDE SHOW PRESENTATION — SAVING SPECIES WITH SCIENCE

Program description:

Learn how scientific technology is being used to conserve endangered plant and animal species. Students will experience real-life examples of how CREW scientists apply scientific technologies to local and worldwide projects to promote the health and conservation of diverse wildlife.

Kentucky *Core Content for Science Assessment* standards addressed by this program:

FOURTH GRADE – HIGH SCHOOL

Subdomain: Biological Science

Organizer: Unity and Diversity

Standards:

Seventh Grade

SC-07-3.4.1

Students will:

- Describe the role of genes/chromosomes in passing of information from one generation to another (heredity);
- Compare inherited and learned traits.

Every organism requires a set of instructions for specifying its traits. This information is contained in genes located in the chromosomes of each cell that can be illustrated through the use of models. Heredity is the passage of these instructions from one generation to another and should be distinguished from learned traits.

Organizer: Biological Change

Standards:

High School

SC-HS-3.5.1

Students will:

- Predict the impact on species of changes to 1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination of genes, (3) a finite supply of the resources required for life, or (4) natural selection;
- Propose solutions to real-world problems of endangered and extinct species.

Species change over time. Biological change over time is the consequence of the interactions of (1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination

of genes, (3) a finite supply of the resources required for life and (4) natural selection. The consequences of change over time provide a scientific explanation for the fossil record of ancient life forms and for the striking molecular similarities observed among the diverse species of living organisms, whereas others can change cells and organisms. Only mutations in germ cells have the potential to create the variation that changes an organism's future offspring.

Subdomain: Unifying Concepts

Organizer: Interdependence

Standards:

High School

SC-HS-4.7.1

Students will:

- Analyze relationships and interactions among organisms in ecosystems;
- Predict the effects on other organisms of changes to one or more components of the ecosystem.

Organisms both cooperate and compete in ecosystems. Often changes in one component of an ecosystem will have effects on the entire system that are difficult to predict. The interrelationships and interdependencies of these organisms may generate ecosystems that are stable for hundreds or thousands of years.

SC-HS-4.7.2

Students will:

- Evaluate proposed solutions from multiple perspectives to environmental problems caused by human interaction;
- Justify positions using evidence/data.

Human beings live within the world's ecosystems. Human activities can deliberately or inadvertently alter the dynamics in ecosystems. These activities can threaten current and future global stability and, if not addressed, ecosystems can be irreversibly affected.