Unit #10 Introduction to Animals Evolution and Diversity

Content Area: **Science**
Course(s):
Time Period:
Length: **7 days**
Status: **Published**

State Mandated Topics Addressed in this Unit

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N/A	N/A

Introduction to Animals Evolution and Diversity

Learning Objectives

- Objective 1 - Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
- Objective 2 - Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.
- Objective 3 - Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.
- Objective 4 - 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.

Essential Skills

- Essential Skill 1 - Identify characteristics of animals
- Essential Skill 10 - Describe 4 examples of cloning plants
- Essential Skill 11 - Describe plant adaptations that permit very long lives
- Essential Skill 2 - Differences between invertebrates, chordates and vertebrate chordates
- Essential Skill 3 - Trends in animal evolution
- Essential Skill 4 - Understand what fossil evidence can tell us about the evolution of the first animals
- Essential Skill 5 - Interpret and understand a cladogram of animals
- Essential Skill 6 - Identify adaptations that allow hominine species to walk upright
- Essential Skill 7 - Explain how a seed forms.
- Essential Skill 8 - Describe the structure and function of fruit

- Essential Skill 9 - Describe and compare germination in bean and corn plants

Standards

SCI.HS-LS1-2	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
SCI.HS-LS4-1	Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.
SCI.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.
SCI.HS-LS2-8	Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

Instructional Tasks/Activities

- Animal Conservation Research project: Students choose vertebrate/arthropod animal in decline, describe reasons for decline, role of animal in environment, and offer at least one course of action to assist the animals' return to a healthy state.
- Cladogram worksheet: students use animal and characteristic information provided and arrange on cladogram then explain how evolution occurred.
- Dichotomous Key: Students create a dichotomous key that will allow the user differentiate between different types of animals according to the characteristics discussed.
- Dissection (if materials can be provided) or Virtual Dissections: Students identify similarities and differences in structures of various types of invertebrates and vertebrates. Explain differences in terms of evolutionary change. Create a cladogram that demonstrates these observations.
- Foldables – organization of material
- Group discussion
- Identify the type of animal lab – based on known physical features
- Inquiry lab activity- Classify the animal lab – labeling as vertebrate and invertebrate and also identifying the specific type of vertebrate or invertebrate
- PowerPoint presentation of material
- Research Animal traits and its classification
- Review game
- Think, pair, share (read assigned section of text individually, discuss with a partner, present material in pairs to class – use PowerPoint as a reference)
- Traits similar among all animals and the specific classifications of invertebrates and vertebrates

Assessment Procedure

- Classroom Total Participation Technique
- Classwork
- DBQ

- Essay
- Exit Ticket/Entrance Ticket/Do Now
- Journal / Student Reflection
- Kahoot
- Other named in lesson
- Peer Review
- Performance
- Problem Correction
- Project
- Quiz
- Rubric
- Teacher Collected Data
- Test
- Worksheet

Recommended Technology Activities

- Appropriate Content Specific Online Resource
- Appropriate Content Specific Online Resource
- Copy/Paste Content Specific Link Here
- Copy/Paste Content Specific Link Here
- Copy/Paste Content Specific Link Here
- Gimkit
- GoGuardian
- Google Classroom
- Google Docs
- Google Slides
- Google Slides
- Kahoot
- MagicSchool AI
- Other- Specified in Lesson
- Quiziz
- Screencastify

Accommodations & Modifications & Differentiation

Accommodations and Modifications should be used to meet individual needs. Their IEP and 504 plans should be used in addition to the following suggestions.

Gifted and Talented

- Compare & Contrast
- Conferencing
- Debates
- Jigsaw
- Peer Partner Learning
- Problem Solving
- Structured Controversy
- Think, Pair, Share
- Tutorial Groups

Instruction/Materials

- alter format of materials (type/highlight, etc.)
- color code materials
- eliminate answers
- extended time
- extended time
- large print
- modified quiz
- modified test
- Modify Assignments as Needed
- Modify/Repeat/Model directions
- necessary assignments only
- Other (specify in plans)
- other- named in lesson
- provide assistance and cues for transitions
- provide daily assignment list
- read class materials orally
- reduce work load
- shorten assignments
- study guide/outline
- utilize multi-sensory modes to reinforce instruction

Environment

- alter physical room environment

- assign peer tutors/work buddies/note takers
- assign preferential seating
- individualized instruction/small group
- modify student schedule (Describe)
- other- please specify in plans
- provide desktop list/formula

Honors Modifications

Resources

- Resource 1
- Resource 2
- Resource 3
- Resource 4
- Resource 5