Unit 12: Introduction to Animal and Evolution and Diversity

Content Area: **Template**
Course(s):
Time Period:
Length:
Status: **Published**

State Mandated Topics Addressed in this Unit

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N/A	N/A

Unit 12: Introduction to Animal and Evolution and Diversity

Learning Objectives

- How have animals descended from earlier forms through the process of evolution?
- What characteristics and traits define animals?

Essential Skills

- Characteristics of animals
- Differences between invertebrates, chordates and vertebrate chordates
- Identify adaptations that allow hominine species to walk upright
- Interpret and understand a cladogram of animals
- Trends in animal evolution
- Understand what fossil evidence can tell us about the evolution of the first animals

Standards

9-12.HS-LS1-2	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
9-12.HS-LS1-3	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
9-12.HS-LS2-3	Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.
9-12.HS-LS4-3	Apply concepts of statistics and probability to support explanations that organisms with an

	advantageous heritable trait tend to increase in proportion to organisms lacking this trait.
9-12.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.
9-12.HS-LS2-4	Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.
9-12.HS-LS2-5	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.
9-12.HS-LS4-4	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

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.
- Chapter Test
- 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.
- Review game
- Vocabulary Quizzes

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
- Chromebook
- Cladogram worksheet: students use animal and characteristic information provided and arrange on cladogram then explain how evolution occurred.
- Copy/Paste Content Specific Link Here
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- Foldables – organization of material (invertebrate characteristics, chordate characteristics)
- Gimkit
- GoGuardian
- Google Classroom
- Google Docs
- Google Forms
- Google Slides
- Group discussion
- Kahoot
- MagicSchool AI
- Other- Specified in Lesson
- PowerPoint presentation of material
- Quiziz
- Screencastify
- Think, pair, share (read assigned section of text individually, discuss with a partner, present material in pairs to class – use PowerPoint as a reference)

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

N/A

Resources

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