Unit 10: Classification

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 10: Classification

Learning Objectives

- How are DNA sequences used in classification?
- What are the goals of binomial nomenclature and systematics?
- What are the six kingdoms of life as they are now identified?
- What is a cladogram?
- What is the goal of evolutionary classification?

Essential Skills

- Understand and describe the major groups in the modern classification system.
- Understand how evolutionary relationships affect the way scientists classify organisms
- Understand why scientists classify organisms

Standards

9-12.HS-LS2-6	Evaluate claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.
9-12.HS-LS4-4	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.
9-12.HS-LS2-8	Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce.

Instructional Tasks/Activities

- Chapter tests
- Classification of Animals Lab: Students observe traits of various animals, look for similarities and differences, then use a dichotomous key to determine the species.
- Create a Dichotomous Key: Students choose a group of “subjects” that are related. They list characteristics of each. Using the similarities and differences between each, the students create a dichotomous key. Upon completion, other students use dichotomous keys in an attempt to identify the “subjects”
- Dichotomous Key Lab (sharks) (donuts) (protist drawings): students use dichotomous key provided to identify various species of an animal
- Project Assessment (in class): Students are given a scenario in which only specific species have survived a natural disaster. Their objective is to use the traits of each organism to create a taxonomic scheme, names for each organism, illustration of each organism, dichotomous key to identify each, and a cladogram to show evolutionary path of development.
- Review game
- Vocabulary Quizzes

Assessment Procedure

- Cladogram Handout: Students identify evolutionary differences on a cladogram, then create their own cladogram using information they gather
- Classroom Total Participation Technique
- Classwork
- DBQ
- Essay
- Exit Ticket/Entrance Ticket/Do Now
- Finding Order in Diversity Web Search: Students use internet and textbook/notes to answer questions about classification systems. They also classify 2 animals and compare and contrast their taxonomy. Then infer characteristics they may share and definitely do not share and relate to taxonomic scheme of the 2 animals.
- Group discussion
- Journal / Student Reflection
- Kahoot
- Kingdom Objects: Students are given an envelope with random items inside. They are to work together to categorize these items into phyla and classes according to common characteristics, then describe their classification system to the class, and discuss differences in each group’s system.
- Other named in lesson
- Peer Review
- Performance
- PowerPoint presentation of material
- Problem Correction
- Project
- Quiz

- Rubric
- Teacher Collected Data
- Test
- Think, pair, share (read assigned section of text individually, discuss with a partner, present material in pairs to class – use PowerPoint as a reference)
- Worksheet

Recommended Technology Activities

- Appropriate Content Specific Online Resource
- Chromebook
- 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 Forms
- 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

N/A

Resources

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