Unit #7 Oceanography

Content Area: **Science**
Course(s):
Time Period:
Length: **15 days**
Status: **Published**

State Mandated Topics Addressed in this Unit

State Mandated Topics Addressed in this Unit	
N/A	N/A

Oceanography

Learning Objectives

- Objective 1 - Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.
- Objective 2 - Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.
- Objective 3 - Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- Objective 4 - Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
- Objective 5 - Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

Essential Skills

- Essential Skill 1 - Describe what would raise and what would lower the salinity of the ocean
- Essential Skill 2 - Determine which is denser warm or cold water
- Essential Skill 3 - Determine how the ocean affects climate
- Essential Skill 4 - What causes a wave to break? Describe the process
- Essential Skill 5 - Draw a diagram of a wave :label crest, trough, wavelength and wave height
- Essential Skill 6 - Name the size of each ocean and how deep each ocean is
- Essential Skill 7 - Name at least 5 facts about a specific marine animal and be able to list where marine organisms live
- Essential Skill 8 - Draw a diagram of the sea floor and be able to label each part of the sea floor.

Standards

SCI.HS-ESS2-1	Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.
SCI.HS-ESS3-6	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
SCI.HS-ESS2-4	Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
SCI.HS-ESS2-5	Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
SCI.HS-ESS2-2	Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.

Instructional Tasks/Activities

- Build a marine animal
- Build a model of the ocean floor
- Complete a lab on identifying marine specimens
- Complete a lab on identifying shells of marine organisms
- Design a poem and a stamp for a marine organism
- Group discussion
- Inquiry based lab activity- Design and build a boat that will float in both salt and fresh water
- PowerPoint presentation of material
- 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)

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