Lesson Plan

Teacher:	Wardensky	Grade Level and Subject:	Science	Time Frame:	45 minutes

SOL Objectives

Science 5.6 The student will investigate and understand characteristics of the ocean environment. Key concepts include

a) geological characteristics;

b) physical characteristics; and

c) ecological characteristics.

Essential Questions	Learning Objectives	Assessments
- Oceans cover about 70 percent of the surface of Earth. - Important features of the ocean floor near the continents are the continental shelf, the continental slope, and the continental rise. These areas are covered with thick layers of sediments (sand, mud, rocks). - The depth of the ocean varies. Ocean trenches are very deep, and the continental shelf is relatively shallow. - As the depth of ocean water increases, the temperature decreases, the pressure increases, and the amount of light decreases. These factors influence the type of life forms that are present at a given depth. - Plankton are tiny free-floating organisms that live in water. Plankton may be animal-like or plant-like. Animal-like plankton are called zooplankton. Plant-like plankton (phytoplankton) carry out most of the photosynthesis on Earth. Therefore, they provide much of Earth's oxygen. Phytoplankton form the base of the ocean food web. Plankton flourish in areas where nutrient-rich water upwells from the deep.	The students will work in collaborative groups to "Breakout" by finding and working to unlock the 4 locks to breakout with at least 50% success.	Teacher observation: - Working in Collaborative group - Use of hint cards (What kind of questions are they asking?) - Breakout

Lesson Plan

Instructional Procedures	Differentiated Activities and Strategies
The teacher will: ● Explain the rules of a digital breakout to students and teacher. Making sure to explain that anything can be a hint. (Read, Read, Read!) See attached sheet for how to implement a digital breakout. ● Divide students into cooperative groups of 2 or 3 ● Pass out hint cards and explain how to use them. (2 or 3 per group) ● Use iStation to show QR code then timer for the breakout ● Start the digital breakout ● Walk around and give hints if students have hint cards, otherwise offer no help. ● Debrief after the digital breakout is over. The students will: ● Scan the QR code with iPads and select "go online" ● Students work in a collaborative group to solve the 4 different locks to "Breakout" ● Celebrate your successes and failures.	● Students will work at their own pace to complete the digital breakout with their group. ● If a student can't work with a group he can work alone. .
	Teacher Checklist
	☒ Critical thinking / Problem-solving ☒ Communication / Collaboration ☐ Transformative Connection ☐ Project Based Learning ☒ Higher Order Thinking Questions (Analytical, Synthesis, Interpretive, Evaluative) Notes:

Resources and Technology Connections

Digital Breakout website: Oceans - https://sites.google.com/view/oceans5/home
iPads – 2 or 3 students per iPad
QR Code Reader App
Desktops – if needed
iStation
PPT of QR Codes
Digital Breakout Vault: https://sites.google.com/view/digitalbreakoutvault/home
Hint Cards
Paper & Pencils or Dry Erase boards and marker
Online timer: https://www.online-stopwatch.com/