

Lesson Plan for: Ocean Acidification

Subject	Earth Science
Unit	Ocean Acidification
Key Concepts	<ul style="list-style-type: none"> • Ocean acidification definition • Human Causes of ocean acidification • Effects of ocean acidification on ocean life, especially coral reef populations
Standards	<p>HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.</p> <p>[Clarification Statement: Examples of key natural resources include access to fresh water (such as rivers, lakes, and groundwater), regions of fertile soils such as river deltas, and high concentrations of minerals and fossil fuels. Examples of natural hazards can be from interior processes (such as volcanic eruptions and earthquakes), surface processes (such as tsunamis, mass wasting and soil erosion), and severe weather (such as hurricanes, floods, and droughts). Examples of the results of changes in climate that can affect populations or drive mass migrations include changes to sea level, regional patterns of temperature and precipitation, and the types of crops and livestock that can be raised.]</p>
Materials	Internet access
Duration	50 minutes
Teaching	<p>Have students watch these videos and not the ramifications of ocean acidification.</p> <p>Show this video on Ocean Acidification: http://www.youtube.com/watch?v=5cqCvcX7buo 21 minutes</p>
Guided Practice	<ul style="list-style-type: none"> • Discussion points: • What is meant by nutrient pollution? (Nitrogen runoff from farming.) • How does the increasing CO₂ in the atmosphere affect the oceans? • If we have the ability to generate alternative energy, why aren't we doing more? Does the big business of oil, coal and natural gas have anything to do with it? <p>Investigate one of the Alternative Energies: wind, sun, tides, and geothermal. Choose one and write a one page paper on that energy. Intro should discuss history of the energy. Topics</p>

	are how viable the energy is, what “costs” might be involved, both economic and environmental, and political.
Closure	Ask students to go home and talk about this with their families. They can report back their experiences with their families.

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