

## TOPIC 9.7

# Ocean Acidification

**SUGGESTED SKILL**
 *Concept Explanation*
**1.C**

Explain environmental concepts, processes, or models in applied contexts.



### Required Course Content

#### ENDURING UNDERSTANDING

**STB-4**

Local and regional human activities can have impacts at the global level.

#### LEARNING OBJECTIVE

**STB-4.H**

Explain the causes and effects of ocean acidification.

#### ESSENTIAL KNOWLEDGE

**STB-4.H.1**

Ocean acidification is the decrease in pH of the oceans, primarily due to increased CO<sub>2</sub> concentrations in the atmosphere, and can be expressed as chemical equations.

**STB-4.H.2**

As more CO<sub>2</sub> is released into the atmosphere, the oceans, which absorb a large part of that CO<sub>2</sub>, become more acidic.

**STB-4.H.3**

Anthropogenic activities that contribute to ocean acidification are those that lead to increased CO<sub>2</sub> concentrations in the atmosphere: burning of fossil fuels, vehicle emissions, and deforestation.

**STB-4.H.4**

Ocean acidification damages coral because acidification makes it difficult for them to form shells, due to the loss of calcium carbonate.

**AVAILABLE RESOURCES**

- Classroom Resource > [AP Environmental Science Teacher's Guide](#)
- External Resource > [Environmental Literacy Council's AP Environmental Science Course Material](#)