



## DIVE DEEPER: Great Ocean Conveyor Teacher Lesson Plan (Part 2)

### SYNOPSIS

How are ocean currents affected by climate change, and what are the climatic and ecological consequences? This course provides understanding of ocean circulation relative to the carbon cycle, focusing on the impacts to two major currents: the Atlantic Meridional Overturning Circulation (AMOC) and the Gulf Stream. The course teaches the main concepts in the second half of the *Just Have a Think* Video #48: Arctic Disintegration.

### TOTAL TIME

One 45-50 min (one class period).

### ACTIVITY

Watch the relevant video as a class (10-15 minutes); then have the students work either in small groups or individually online through active student responding (answering questions, receiving hints and feedback for each question). The students should use the hints if they don't know the answer. Optional discussion on connections: Is there a weather event that they've experienced that was influenced by the ocean? Why and how do fishermen rely on understanding ocean currents? The video is embedded in the online course, and also available on YouTube at: <https://youtu.be/kpvUivhCw2Y>

### LEARNING OUTCOMES

*Modified Bloom's Taxonomy: Definition/Conceptual; Explain/Identify; Apply; Critique/Analyze*

- Students will understand **key terms** underlying thermohaline circulation, currents, the Atlantic Meridional Overturning Circulation (AMOC), Gulf Stream, and self-regulation.
- Students will **explain/identify** the climatic and ecological benefits of AMOC and the Gulf Stream; how scientists collect oceanographic and climate data; and how they determined that the AMOC was weakening over time.
- Students will **apply their knowledge** to predict climatic impacts to various currents.

### PLANNING

Register your class by emailing: [support@behaviordevelopmentsolutions.com](mailto:support@behaviordevelopmentsolutions.com)

### SCIENCE STANDARDS

● NGSS

● Common Core

