



Video Guide: Exp.342 Newfoundland- Episode 3: Time Machine

Grades 5th-6th grade

Objectives

- Students will be able to identify how the *JOIDES Resolution* helps to study the past.
- Students will be able to list the steps of the coring process.
- Students will be able to identify 3 major scientific properties that are studied from core samples.

Connections to the Next Generation Science Standards

- ESS2.A- Earth's materials and systems
- ESS1.C- The history of planet earth
- ESS3.D- Global climate change

Time

Total Activity Time: 45 minutes

Video Time: 10.5 minutes

Directions

1. Download the Newfoundland Episode 3: Time Machine Video on the *JOIDES Resolution* page below. Scroll down.
<http://joidesresolution.org/node/2492>
2. Hand out a video guide worksheet.
3. Have students view video and listen carefully for the answers to the worksheet questions.
4. After the video, discuss the answers and answer any questions the students may have.

Student Page with Answers:

1. Q: How does the *JOIDES Resolution* help us to study the past?
A: This ship helps us to core pieces of sediment from under the ocean which shows the layers that have fallen there over time.
2. Q: What does a biostratigrapher do on the ship?
A: A biostratigrapher studies the different layers of sediment for clues to the specific time period.
3. Q: Why would scientists want to look back in time?
A: They want to understand how earth takes shape and form. They want to study climate change, extinct life forms, chemicals in the sediment, movement in the sediments, historical events on earth, etc.



4. Q: Why is this important?

A: This is important because it teaches us how we got to where we are today, how things may change in the future, how biology has evolved, how cycles work on earth, etc.

5. Q: What are the 3 major scientific properties that are studied from core samples?

A: The three properties are biological, chemical and physical.

6. Q: Explain or illustrate the steps for coring. Please label any illustrations.

A: 1. It starts on the core receiving platform, where the core is pulled up from the ocean floor after drilling.

2. It is carried from the platform on the rig floor to the catwalk where it is cut into smaller sections. It is cleaned and capped for processing.

3. It is taken to the core entry area to record the core and label each section.

4. It is taken to the core lab for physical studies.

5. It is taken to the core splitting room.

6. The working section is taken to the working lab for sample study and the other half is archived.

7. Q: Write down two facts you already knew, three new facts you learned and one question you still have or your favorite part.

A: Answers will vary