

Gallery Walk An Introductory Activity

Students rotate through different stations to make observations and generate questions about the objects presented. The objects selected are those that provide clues about the scientific ocean drilling program and its relevance to understanding Earth's history and/or the deep biosphere. The goal of the activity is to spark students' interest by providing an introductory exposure to cores, microfossils, and the *JOIDES Resolution*.

Grades Can be modified for any grade

Objectives

- Give students an opportunity to make observations and differentiate observations from inferences.
- Challenge students to generate scientific and non-scientific questions about objects with which they may be unfamiliar.
- Expose students to cores, the *JOIDES Resolution*, and microfossils in a simple and hands-on manner to spark interest in follow-up activities.

Connections to the Next Generation Science Standards

Disciplinary Core Ideas

- ESS1.C Earth's history
- ESS2.A Earth materials and systems

Science & Engineering Practices

- Asking questions and defining problems

Time 30 minutes to 1 hour

Materials Needed

- Objects such as core models and/or photos, pictures of the *JOIDES Resolution*, real microfossils or pictures of microfossils, pictures of people in labs, or other items that align with particular activities planned for students to complete.
- Large blank paper for writing questions and making observations (2 sheets per station)
- Markers (1 per group)

Advanced Preparation

- Set up stations so that students can rotate to different items in small groups
- Put out two large pieces of paper at each station; one for recording observations and one for recording questions
- Review information at <http://www.joidesresolution.org>





Directions

1. Explain to students that they will be rotating through different stations in groups of 2-4 to become familiar with items that are essential for understanding Earth's history and/or the deep biosphere. At the same time, they will be recording observations of each object and listing questions that come to mind as they observe. Encourage students to think about who, what, when, where, why, and how questions as well as any other questions they may have about the object or activity.
2. Pass out a marker to each group. It can be useful to let each group have a different color that they take with them to each station.
3. Student groups spend 5-10 minutes at their first station recording their observations and questions. When time is up, they rotate to the next station.
4. Each new group to a station should review the previous groups' observations and questions, then add to the lists. Encourage students to provide additional details to other groups' work. Continue rotations until students have visited the stations you want. NOTE: For large classes, you can set up 2 rounds of identical stations to limit the number of rotations and different types of objects needed.
5. Engage the class in one or more of the following discussions using the information listed at the stations:

Observations vs Inferences

- Have students identify where they recorded inferences instead of observations. Discuss the role of each in science.
- Discuss the different senses that can be used for making observations and the role different tools play in enhancing our ability to make observations.
- Have students generate a list of tools that would be useful for making more detailed observations of their objects.
- **Scientific vs Non-scientific questions**
 - Discuss the difference between scientific and non-scientific questions and the role that each plays. Have students identify the two kinds of questions on their papers.
 - Challenge students to generate additional scientific questions and discuss how they would investigate their questions.
- **Introduction to upcoming activities and content**
 - Review the variety of questions that students generated. Have students ponder specific questions and guide them to understand what each object is and its relevance to what they will be learning.
 - Have each individual student or small group use resources such as www.joidesresolution.org to investigate a different question and share their research with the class.