

OCEAN IN A BOX

Create an Ocean Diorama



Curriculum topics

- Biodiversity
- Earth Systems
- Human Impacts
- Landscapes
- Model Building
- Structure & Function

Subjects

- Earth & Space Science
- Life Science

Grade range: K – 8

Who we are: Resource Area for Teaching (RAFT) helps transform the learning experience by inspiring joy through hands-on learning.

One of the ways that people share their ideas with others is by creating models.

Models are representations of a concept or idea. Models can be flat, 2D representations like drawings, flow charts, or other diagrams, or they can be 3D objects (e.g. scale models of cars or airplanes). **Dioramas** are a type of model that depicts a scene to convey a much larger idea. They usually contain several miniature models of different objects, landscapes, living things, or phenomena (see example below). Dioramas can be made of various materials and are usually portable, with some exceptions.

Our oceans have an entire world of aquatic life and provide a home to thousands of species. Life on Earth depends on healthy oceans and learning about the variety of animals and plants that coexist in oceans can help students appreciate this vast resource on our planet. In this activity, students use a variety of materials to create a box-like diorama of an underwater ocean scene. They can decide which plants and/or animals, underwater landscapes, and other features to model. It's creative, fun, and is useful for teaching about different aspects of the Earth's oceans!



A diorama of a neighborhood, complete with buildings, homes, roads, and vegetation.

Share Your feedback!

<http://bit.ly/RAFTkitsurvey>

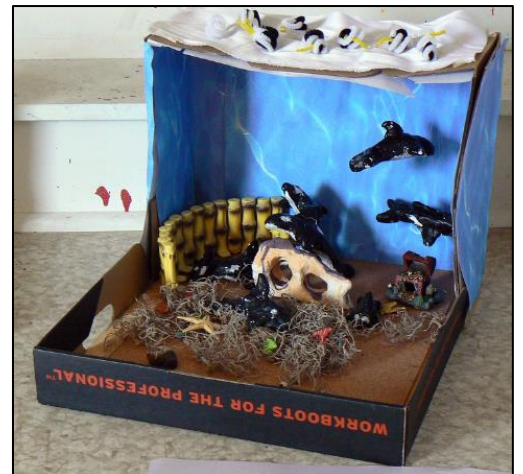
Materials

Materials in the kit may vary but generally, this kit contains the following:

- Cardboard box or loose pieces
- Acrylic paints, various colors
- Paint brushes
- Construction paper
- Pipe cleaners
- Yarn, various colors
- Tissue paper for crafting
- Adhesive labels
- Modeling clay
- Rubber bands (3)
- **Not included:** Scissors, glue, markers

To Do and Notice

1. Review and visit the resources linked on page 3 to learn some facts about ocean habitats and the plants and animals that live in them. Go online to find and examine images/video of underwater landforms.
2. **Making the Diorama:** If no cardboard box is available, join some loose cardboard pieces together with glue and/or tape to make an open front box.
3. Decorate the inside of box to get the underwater look of your ocean habitat of choice. Use blue acrylic paint for the top and sides or line it with blue construction paper. Use another colored paper for the bottom (ocean floor).
4. Make animals, plants, and other ocean habitat features using the available materials. For example, fish, turtles, and other organisms can be drawn, cut out, and taped/glue in place. Modeling clay can be used for various elements as well.
5. For seaweed and other underwater plant life, green construction paper or pipe cleaners may be ideal. Tissue paper is easy to fold, cut, and shape into different model features and can be colored with markers and/or paint.
6. For an enhanced 3D effect, decorate the diorama using thread and glue or tape to dangle the fish and mammals from the top of the box. This gives the appearance of swimming or floating in the “water” (see example at right for ideas).
7. Examine your diorama and make sure that any life that dwells on the ocean floor is at the bottom of the box. Anything swimming or floating should appear to be elevated above the ocean floor. Make any adjustments needed to give viewers a sense of being in the ocean scene!
8. **Discussion:** Which ocean habitat does the diorama depict? What type(s) of plants, animals or other features did you model? Why should people consider your diorama important? Describe any challenges you faced while making the diorama and how you overcame them.
9. **Share** your learning with RAFT! Submit photos/video via email at education@raft.net or on social media ([Facebook](#), [Twitter](#), [Instagram](#)).



Core Content Skills:

Science & Engineering (NGSS)

Developing and Using Models, Engaging in Argument from Evidence, Systems and System Models, Biogeology, Natural Resources, Earth Materials & Systems, Human Impacts on Environment, Biodiversity and Humans, Structure and Function, Growth and Development of Organisms, Adaptation, Properties of Materials, Cause and Effect

Social Emotional Learning

- Self-awareness
- Self-management
- Responsible decision-making

The Science Behind the Activity

Planet Earth is known as “the blue planet” because it is 71% covered with water, most of which is in its 5 oceans: the Pacific, Atlantic, Indian, Arctic, and Southern Ocean (Antarctic). Ocean ecosystems are home to the smallest plankton and the largest creature on earth, the blue whale. Types of aquatic life forms vary with the ocean depth due to variance in light availability, water temperature, and pressure. There are different habitats in the world’s oceans. A **habitat** is the natural home or environment of an animal, plant, or other organism. Some habitats in the oceans include coastal, open ocean, pelagic, and demersal, to name a few. Visit the resources listed below to learn more about specific ocean habitats! While it is okay for us to enjoy the ocean, we must remember that humans have a responsibility to take care of it. In the picture below (left), a diver is carefully studying part of a delicate coral reef to preserve it. By studying and making dioramas of ocean habitats (see below, right), students learn to appreciate the ocean and learn modeling skills that are ideal for communicating complex ideas while being creative.



Reuse

This kit uses 100% reusable materials designed for other uses. To continue making a positive impact in reducing waste, reuse these materials in other projects. Additionally, any unused materials can be collected and delivered back to RAFT.

Feedback

Please comment on this kit by taking this short survey: <http://bit.ly/RAFTkitsurvey>. Let us know of any material concerns (missing, broken, or poorly fitting parts) as well as any suggestions for improvement.

Visit <https://raft.net> to view related activities!

- Baby, It’s Cold Outside
- Plumbing the Depths
- Sticky Situation

Resources

- Ocean Animals - <https://www.youtube.com/watch?v=8adtdg0N2-g>
- National Park Service (ocean habitats) - <https://www.nps.gov/subjects/oceans/ocean-habitats.htm>
- Ocean habitats & ecosystems - <https://www.youtube.com/watch?v=JDcGwskWFtA>