



Lesson: Tracking Marine Animals—Species Research, Migration Mapping, and Ecosystem Dioramas

Objectives

- ü Describe the habitat and behaviors of a particular marine animal species.
- ü Explain that marine animals live in all of the oceans of the world and migrate in search of food and appropriate breeding grounds throughout the year.
- ü Understand that scientists are interested in tracking the movements of marine animals so that they can study the effects of environmental changes on their behavior.
- ü Plot the locations of animals on a map based on satellite tracking data.



Credit: Mike Danzenbaker



**Credit: Catherine McClellan,
Duke Marine Laboratory**



Credit: USGS



Research Paper

Our group's species is: _____

Use the *Signals of Spring - ACES* website to learn about your animal and collect information for your research paper. Take notes about your animal in your own words.

The checklist below will help you to gather all of the necessary information for your paper.

- Common and scientific name of the species
- Where the animal can be found
- Size and physical description of the animal
- Feeding behaviors and predator/prey relationships (What does the animal eat? What other animals eat your animal?)
- The features of the animal's ecosystem—including living and nonliving things
- When and where does breeding takes place and how young animals survive.
- Human or environmental threats to the species
- Any other interesting or unusual information about your animal
- The migration patterns and routes of your animal if applicable.

Divide the research within your group and prepare a paper that should be no more than four typed pages. Be sure to include a cover page and bibliography.



Tracking Marine Animals on World Map

Go to the *Signals of Spring - ACES* website and view the map of your animal species. To do this, click on “Maps and Data”, “Marine Species”, and then on the animal. Choose one individual animal that you will track.

Update the class map with your animal’s track, including at least two points per month, using push pins and yarn. Also trace your animal’s route on your small world map. Include this map in your research report.

Once you have finished tracking your animal, answer the questions below.



1. How far did the animal travel during the time your group was tracking it?

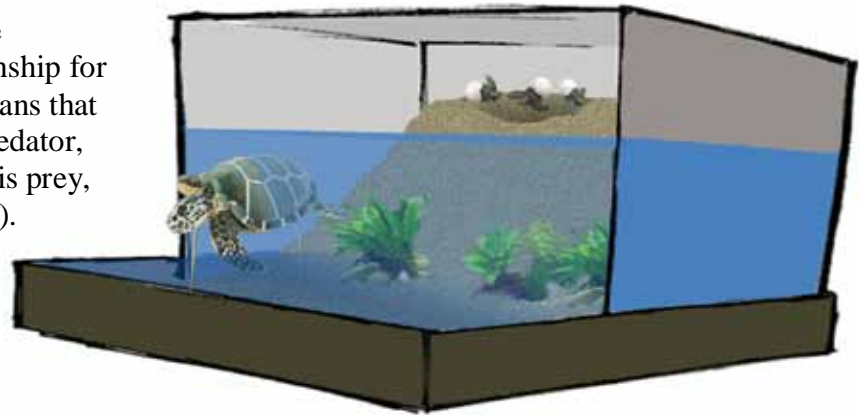
2. Near what political features (countries, states, islands, etc.) did your animal travel?

3. What questions do you have about the animal’s movements?

Marine Species & Ecosystem Diorama

You will create a diorama that shows your animal and its ecosystem and then present your findings to the class. Use the following checklist to make sure you have everything.

- ü Your diorama must include a representation of your marine animal species.
- ü You must include the ecosystem of your animal. Indicate what ocean your ecosystem is in, the area it covers (in square miles), average depth, and deepest depth.
- ü You must accurately represent the given ecosystem of your animal species. *Keep in mind that ecosystems contain various populations of organisms, as well as, essential non-living things. Use various objects and materials to make your diorama creative.*
- ü You must include the predator-prey relationship for that animal. This means that if your animal is a predator, include its food; if it is prey, include its predator(s).



Presentation Information

Each small group must present its findings for the marine animal species, migration patterns, and ecosystem dioramas in any way they choose. Several possible methods are: traditional report, poster board, or PowerPoint. Presentations should be between 5-7 minutes.