

OCEANS ALL OVER

KAY ANDERSON

Grade: 4-5

Time: 1-2 days

Overview

This lesson is designed to acquaint students with the oceans of the world and look at the distribution of the sea turtle population in those oceans.

Background Information

Sea turtles inhabit all but the coldest of the oceans of the world. They are found in both open ocean and coastal waters. There are seven species of sea turtles. Six of those turtles are found in U.S. waters. Of those six, five are found nesting or feeding in the waters surrounding Florida.

Materials

- large, round piece of fruit such as honeydew melon, grapefruit, etc. (one per student)
- globe
- world maps
- nontoxic pens
- paper
- eating utensils
- Transparency of sea turtle fact sheet

Objectives

- Students will use maps and atlases to locate the oceans of the world.
- Students will identify sea turtles and the oceans they live in.

Procedures

1. Ask students to bring a large, round piece of fruit such as a honeydew melon, grapefruit, orange or apple from home.
2. Give students access to globes and/or world maps.

3. Students draw and label the world's oceans on their piece of fruit. If there is room, students label seas, major straits, and bays.
4. Have students pair up to answer the questions listed below. Have each pair work together to write down the travel directions. Remind them to use directional terms like "travel south," "turn left," etc.
5. When everyone is finished, invite students to eat their fruit globes.

Questions

1. How do you get from the Arctic Ocean to the Indian Ocean?
2. What is the best way to get to the Mediterranean Sea from the North Pacific?
3. Describe the route from the Sea of Japan to the Arabian Sea.
4. You live in the Indian Ocean, and your friend lives in Baffin Bay. Where could you meet that would be a halfway point?
5. You live in the cold Greenland Sea, and have decided to visit the warm waters of the Coral Sea. Describe the route you'll take.
6. Using the fact sheet and the world map, the students create a legend and map the distribution of sea turtles around the world.

Evaluation

Evaluation will be based on the student's participation and completion of the mapping exercise.

National Geography Standards

#1, #8

Parts of lesson adapted from Sea World/Busch Gardens activity entitled *Ocean All Over*.

Sea Turtle Fact Sheet

Leatherback Turtle

- Largest and deepest diving of the sea turtles
- Named for smooth, rubbery shell
- Feeds on jellyfish
- About 50 nests a year reported in Florida
- A huge turtle; adults weigh 700 to 2,000 pounds and measure 4 to 8 feet in length
- Hatchlings: 2 ½ inches long
- Nest in Florida from April through July
- Many leatherback turtles die from ingesting plastic debris mistaken for jellyfish

Green Turtle

- Only adult sea turtle with diet of seagrass and seaweed
- Named for greenish color of body fat
- 60 to 800 nests reported each year in Florida
- Medium to large sea turtle; nesting females average 3.3 feet in length and 300 pounds in weight
- Hatchlings: 2 inches long
- Nest in Florida from June through late September
- Survival in Florida threatened by beach lighting, habitat alterations and drowning in fishing gear

Hawksbill Turtle

- Least amount known about this turtle
- Lives in tropical waters, observed off the Atlantic coast of Florida and in the Florida Keys
- Feeds on a wide variety of invertebrates and sponges
- Agile small to medium size turtle
- Species threatened by value of its shell for jewelry and ornaments

Kemp's Ridley Turtle

- Rarest and most endangered of the sea turtles
- Nesting restricted to a 20-mile stretch of beach in western Gulf of Mexico

- Only 300 to 350 females nest each year
- Females synchronize egg laying in mass nestings
- Nesting occurs during daylight
- Feeds on blue crabs, clams, mussels, fish and jellyfish
- A small sea turtle; adults weight 85 to 100 pounds and measure 24 to 30 inches in length
- Hatchlings: 1 ½ inches long
- Species threatened by drowning in shrimp trawls, habitat alterations and pollution

Loggerhead Turtle

- Most common sea turtle in Florida
- Named for its large head
- Powerful jaws crush mollusks, crabs and encrusting animals attached to reefs and rocks
- An estimated 14,000 females nest in southeastern U.S. each year
- Adults weigh 200 to 350 pounds and measure about 3 feet in length
- Hatchlings: 2 inches long
- Nest in Florida from late April to September
- Survival in Florida threatened by drowning in shrimp trawls and habitat loss

Sea Turtle Distribution Fact Sheet

Green Sea Turtle (*Chelonia mydas*)

Distribution: Atlantic Ocean, Gulf of Mexico, along Argentine coast, in the Mediterranean Sea, and Indo-Pacific

Habitat: tropical and subtropical areas near continental coasts and around islands

Black Sea Turtle (*Chelonia agassizii*)

Distribution: West coasts of North and South America, from central Baja California to Peru

Habitat: bays and protected shores; not commonly observed in the open ocean

Loggerhead Sea Turtle (*Caretta caretta*)

Distribution: Worldwide

Habitat: coastal tropical and subtropical waters; will venture into temperate waters, to boundaries of warm currents; prefer coastal bays, but have been found in streams, creeks, and in the open ocean

Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)

Distribution: Adults usually occur only in the Gulf of Mexico; one of two sea turtle species with a restricted distribution (the other is the flatback). Juveniles and immatures range between tropical and temperate coastal areas of the northwestern Atlantic Ocean. Occasionally, young turtles reach northern European waters and as far south as the Moroccan coast.

Habitat: shallow areas with sandy and muddy bottoms – areas rich in crustaceans

Olive Ridley Sea Turtle (*Lepidochelys olivacea*)

Distribution: Tropical regions of Pacific, Indian, and Atlantic Oceans; in spite of their wide range, nearly unknown around oceanic islands

Habitat: mostly coastal, traveling or resting in surface waters

Hawksbill Sea Turtle (*Eretmochelys imbricata*)

Distribution: Throughout central Atlantic and Indo-Pacific regions; most tropical of all sea turtles

Habitat: near coral reefs and rocky outcroppings in shallow coastal areas

Flatback Sea Turtle (*Natator depressus*)

Distribution: indigenous to northwestern, northern, and northeastern regions of Australia; the most restricted range of all sea turtle species

Habitat: completely coastal; does not go beyond the continental shelf

Leatherback Sea Turtle (*Dermochelys coriacea*)

Distribution: Most widely distributed of all sea turtles; found in the Gulf of Alaska and south of the Bering Sea in the northern Pacific; to Chile in the southeastern Pacific; in the Barents Sea, Newfoundland and Labrador in the North Atlantic; throughout the Indian Ocean; and to Tasmania and New Zealand in the southwestern Pacific. This species is found farther north than any other reptile, marine or terrestrial.

Habitat: highly oceanic, approach coastal waters only during breeding season

Distribution information obtained from Sea World.