

## Earth Day Science Symposium: Sea Turtles

### RESEARCH QUESTIONS FOR DATA SETS

#### What To Do

Copy the questions, cut them out, and distribute them to groups or individuals. Use for extra credit assignments for students who wish to do more—or as a time-filler for those who finish their prep for presentations early.

#### *Data Set 1: Nesting Leatherbacks at Playa Grande*

Playa Grande is located on the Pacific coast of Costa Rica. How many leatherback beaches are there on the Pacific coasts of countries in the Western Hemisphere? Where in the world are other leatherback beaches located?

#### *Data Set 2: Leatherback Nests in Terengganu, Malaysia*

Why are leatherback and other sea turtle eggs considered a valuable food? How are scientists and conservationists working to prevent removal of eggs from sea turtle nests on beaches in Terengganu and around the world?

#### *Data Set 3: Loggerhead Nesting Attempts at Melbourne Beach*

How is light pollution controlled on Florida beaches?

#### *Data Set 4: Loggerhead Emergence Events at Melbourne Beach*

What special adaptation do sea turtle hatchlings use to break open their egg shells?

#### *Data Set 5: Estimated Loggerhead and Leatherback Longline Bycatch*

Besides sea turtles, what other kinds of marine wildlife are caught and killed by longline fishing gear?

#### *Data Set 6: Ghost Nets Recovered in the Northwestern Hawaiian Islands*

Where else in the world are ghost nets accumulating? Are there other programs to recover ghost nets?

#### *Data Set 7: Sea Turtle Nests and Tourists at Sabah Turtle Islands*

Sabah Turtle Islands are part of the Bi-national Turtle Island Heritage Protected Area. Four other islands are also part of this area. To what country do these islands belong? How does this country protect nesting turtles and turtle eggs?

#### *Data Set 8: Leatherback Nests Counted on Florida Beaches*

Where do leatherbacks in the western Atlantic migrate after their nesting seasons? How are scientists tracking them?

*Data Set 9: Sea Turtle Anatomy*

How is the shell of the leatherback sea turtle different from the shells of all other turtles?

*Data Set 10: Sea Turtle Egg*

What are some of the animals that eat sea turtle eggs? What steps are taken to protect turtle eggs from predators?

*Data Set 11: The Great Turtle Race: Speed and Size*

Scientists have estimated the short-distance swimming speeds of some of the largest and fastest leatherbacks. How fast are they? How deep can leatherbacks dive? How do these numbers compare with swimming speeds and diving depths of some of the other sea turtle species?

*Data Set 12: Reports of Hatchling Disorientation on Florida Beaches*

Once they are in the ocean, hatchlings swim directly away from the beach into deep water. How do they stay on course in the water?

*Data Set 13: Percent of Loggerhead Females Varies with Nest Temperature*

What are pivotal temperatures for some other sea turtle species? Do all of a species' nesting populations share the same pivotal temperature?

*Data Set 14: Sea Turtles Use Magnetic Maps to Navigate*

Scientists are now learning a lot about loggerhead sea turtle migration. Where do loggerhead hatchlings and juveniles migrate, and how do they find their way?

*Data Set 15: Stranded Loggerheads Larger than Minimum TED Openings*

In the past, shrimpers complained that TEDs would have negative impacts on their businesses. Have there been negative impacts?

*Data Set 16: Sea Turtle Nests at Watamu Beach, Kenya*

What are some other African countries where sea turtles nest? What are some of the threats to African sea turtles?