

## Line Up for Recycling

### OBJECTIVES

The students will be able to describe the sources of discarded monofilament fishing line and its hazard to wildlife. Students will plan a clean-up campaign in their area. As an option, students can carry out the campaign. During the campaign, students will document the procedure, record the amount of line collected and write a "planning book" to become a resource for others to use.

**National Geography Standards:** 14, 16

### MATERIALS

- ❑ Internet access. Visit "How to start a monofilament recycling program" at <http://www.fishinglinerecycling.org/implementing.htm>
- ❑ Reel of fishing line and 10 to 12 lengths of line cut to 30.5 cm (12 in.) each

### BACKGROUND

Monofilament Recovery and Recycling Program (MRRP) is an innovative recycling project dedicated to reducing the environmental damage caused by discarded monofilament fishing line. Monofilament line is another name for single-strand, high-density, nylon fishing line that is used on fishing reels and in the manufacturing of fishing nets. Wildlife is adversely affected by monofilament line in two ways: Entanglement and ingestion. Humans are also affected by monofilament line, which can wrap around boat propellers and SCUBA divers. Monofilament fishing line can last up to 600 years in the environment. Some facts about monofilament fishing line:

- From 1980 to 1999, one in every five manatee rescues in the U.S. was a result of entanglement in fishing line (monofilament).
- From 1996 to 2000, the Florida Marine Research Institute documented 163 turtles that were entangled in fishing line.
- From 1995 to 2000, approximately 35 dolphins in the Southeast U.S. died as a result of monofilament-related injuries.
- Researchers have documented more than 60 fish species that have swallowed or become entangled in marine debris.
- From 1999 to 2000, more than 265 seabirds of various species were rescued due to hook and line entanglements. Of those 265 seabirds, 92 died.

### ACTION

1. Ask students to raise their hands if they have ever been fishing. Show students the fishing line reel and distribute the cut pieces for students to touch. Ask students to try to break the line or pull it apart. Explain that this single-strand, high-density, nylon fishing line is used around the country (and the world) by commercial and recreational fishermen. Ask students if they think this small, lightweight line could pose problems to ocean animals. Use the background information to illustrate specific instances.
2. Ask students if they have seen discarded fishing line around their neighborhood, town or favorite fishing area(s). Introduce the Web pages from the Monofilament Recovery and Recycling Program (either on overhead transparencies or by making handouts). Explain that this is a successful ongoing recycling program.
3. Have the class break into groups to investigate the many aspects and steps involved in organizing and running their own monofilament line recycling program. Issues to think about include advertising, organizing a clean-up, and coordinating volunteer help. Students can find information, downloads, and support materials at <http://fishinglinerecycling.org/startup.htm>
4. After students have finished their research, the class should discuss and analyze the pros and cons of starting their own program. Is a program needed in

their area? How much might it cost? If students would like to continue, ask them to create an action plan with a timeline and a list of tasks to perform. If a monofilament line recycling program exists in the area, students can volunteer to work with that program for extra credit or to fulfill a community service requirement.

5. During the campaign, ask students to document their actions, record the amount of line collected and create a "planning book" as a resource for others to use.
6. Research methods of recycling the line after it has been collected. What products can be produced from recycled line?

### Online Sources

**U.S. Environmental Protection Agency: Educational Resources**

[www.epa.gov/highschool/](http://www.epa.gov/highschool/)

**U.S. Environmental Protection Agency: Municipal Solid Waste: Reduce, Reuse, Recycle**

[www.epa.gov/epaoswer/non-hw/muncpl/reduce.htm](http://www.epa.gov/epaoswer/non-hw/muncpl/reduce.htm)

**Monofilament Recovery and Recycling, Brevard County Florida**

[www.brevardcounty.us/mrrp/](http://www.brevardcounty.us/mrrp/)

**Monofilament Recovery and Recycling (Texas)**

<http://mrrp.tamu.edu/index.htm>



A green sea turtle (*Chelonia mydas*) swallowed a hook and fishing line. Without medical assistance this endangered animal could perish.

SeaWorld's veterinarian staff operates on the troubled turtle.

After a brief recovery period, this turtle was released.