Lesson 15: Collecting Data about Manatees

Objectives: Students will learn how scientists identify and track individual manatees.

Vocabulary: endangered, extinct, population, migration, scar patterns

You will need:
1. Rulers (optional)
2. Print outs or pictures of manatees for each group of students (pages 15-6 through 15-11)
3. Copies of manatee scar sheet and key to manatee ID sheet for each group of students (page 15-3 and 15-5)
4. Copies of manatee sketch sheet for each student (page 15-4). Each student will need at least one copy of the sketch sheet, and possibly more.

Strategy:
1. Explain to students that they will learn how scientists identify individual manatees. Ask if anyone can think of some way that people can tell one manatee from another. Ideas might include color (but manatees are all pretty similar in color), size (but manatees can grow). The answer you are looking for is “by using scars.”

2. Ask students where they think each of the scars on the manatees come from. Explain to students that manatees are very slow moving animals and cannot get out of the way of boats.

3. Divide students into groups of 2-4; give each group copies of photos of different individual Florida manatees (included with this lesson). Explain that they will use the scar patterns on the manatees to identify them. These are all manatees that are commonly seen at Blue Spring State Park.

4. Give each group a copy of the “Key to Manatee Identification Drawings” and copies of the sketch worksheet. Explain that students will try to identify the manatees in their photographs by sketching what they see. Show the class a copy of Ranger Wayne’s Scar Chart (perhaps project it so all can see) and briefly show how scars and damaged flippers are shown on the chart. Explain that students will create their own sketches from the photographs, and then will identify the manatees by comparing both the sketches and the photos to Scar Charts. This is similar to the method that scientists use to visually identify manatees.

5. The Manatee photographs are labeled A-F. Tell students to select one photograph and study it carefully. They should look for distinguishing scars or other features that make this manatee unique. Questions that they should consider:
   - Which side of the Manatee is the scar on?
   - What is the shape of the scar?
   - What color is the scar?
   - Are there other distinctive markings on the skin?

This activity is available online at http://stjohns.ifas.ufl.edu/sea/manatees.html
Do you see anything missing from the Manatee?

6. Working in their groups, have students label each of their sketch worksheets with the same letter as the photograph they are about to sketch (A, B, C, D, E, and/or F).

7. Tell students that they can now begin their sketches. They should draw the unique scars and features that they see in the photographs. Remind them that they are drawing the manatee’s back (dorsal view) so they need to think about which side of the manatee is the left and right side (they need to pay attention to the direction the manatee is facing in the photograph).

8. Ideally, each student in the group should complete one sketch. Have the students in the group review each other’s sketches and make sure that they match the photographs. Once the group has completed their sketches, distribute copies of Ranger Wayne’s Scar Sheet to the group. Have the students use the Scar Sheet to find Manatees with the same scars or other features that are shown (or missing) in the photos and sketches? Ask the students if they can make a positive ID. Suggest that they might want to turn the Scar Sheet or sketches sideways or upside down to correspond to the layout of the photograph.

9. Point out to students that the sketches on the scar sheet and the photographs may have been made at different times, so one may have more markings that the other. Tell the students that even if they do not have an exact match, if there are some of the same markings in the same positions on their sketch and the scar sheet they may have a match!

**Standards:** SC.3.N.1.1, SC.3.N.1.3; SC.3.N.1.6

**References:**
Adapted from “You make the call (roll call that is)”
http://www.learner.org/jnorth/tm/manatee/RollCall.html

This activity is available online at http://stjohns.ifas.ufl.edu/sea/manatees.html
Lesson 15: How to Identify Manatees

KEY TO MANATEE IDENTIFICATION DRAWINGS

Flipper drawn to show damage or to show relation of a scar to the flipper

SCARS

White

Visible but healed grey (sometimes deep)

Cut

Section missing from tail

Name

PHOEBE
Lesson 15: Sketch worksheet

Name: ________________________________  Manatee photo letter: ________

Consider these questions, then draw the appropriate scars/marks on the manatee outline:

- Which side of the Manatee is the scar on?
- What is the shape?
- What color is the scar?
- Are there other distinctive markings on the skin?
- Do you see anything missing from the Manatee?

This activity is available online at http://stjohns.ifas.ufl.edu/sea/manatees.html
Lesson 15: Manatee Identification
Ranger Wayne’s Scar Sheet from Blue Springs State Park

SCAR SHEET

AFRICA  CALISTA  DONNA  FLASH  FLOYD

GEORGIA  JIM  LILLITH  LOLA  PHYLLIS

This activity is available online at
http://stjohns.ifas.ufl.edu/sea/manatees.html
Lesson 15: Manatee Photo Identification

Manatee A

This activity is available online at http://stjohns.ifas.ufl.edu/sea/manatees.html
Manatee B

This activity is available online at http://stjohns.ifas.ufl.edu/sea/manatees.html
Manatee C

This activity is available online at http://stjohns.ifas.ufl.edu/sea/manatees.html
Manatee D

This activity is available online at http://stjohns.ifas.ufl.edu/sea/manatees.html
Manatee E
Manatee F