

Third Grade Manatee Curriculum—Introduction¹

Ruth Francis-Floyd and Maia McGuire²

This curriculum provides a series of individual lessons covering manatee biology and ecology, as well as highlighting some of the ways that humans impact and can protect manatees. The curriculum has been written at a third grade level but can be adapted for older or younger students. Lessons were pilot-tested by the authors and/or by Flagler County teachers. The lessons are designed to take approximately one class period each (45–60 minutes; exceptions are noted in the lesson descriptions). Lessons are listed in the suggested order; however, each one is a stand-alone lesson that could be taught independently of the others. It is suggested that teachers integrate these lessons into their regular curriculum, mostly in the fall semester, culminating with a field experience in the winter (December–February), if feasible, and a school manatee-science night in the spring.

Some lessons include PowerPoint presentations, which can be downloaded or viewed at http://edis.ifas.ufl.edu/topic_series_third_grade_manatee_workbook. Teacher scripts for all presentations are provided in the lessons, as are answer keys for student worksheets. If desired, the quiz in Lesson 14 can be used as a pre-test before starting the other lessons in the curriculum and/or as a final assessment (post-test).

Lessons incorporate science, mathematics, language arts, and social studies (geography). Sunshine State Standards and Common Core correlations are provided for each of the lessons.

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What Teachers Are Saying about the Curriculum

- *This manatee program has been the most inclusive, hands-on educational program that has been offered at our school. The activities and lessons are standard-based and geared to our specific grade level. The children love every lesson and long to see the manatees on our live field trip to Blue Spring. Many of our children have never been to a spring or even seen a manatee up close.*
- *Everything is ready to use—no preparation required. It is also clearly aligned to the standards within life science for third grade.*
- *I absolutely think these lessons had an impact on my students' knowledge and feelings about manatees. Many of my students had little understanding about what a manatee was prior to the lessons. We have done Powerpoints and iMovies about the manatees.*

1. This document is VM203, one of a series of the Veterinary Medicine—Large Animal Clinical Sciences Department, UF/IFAS Extension. Original publication date July 2015. For more lessons in the *Third Grade Manatee Curriculum* series, go to http://edis.ifas.ufl.edu/topic_series_third_grade_manatee_workbook. Visit the EDIS website at <http://edis.ifas.ufl.edu>.

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The authors thank the Florida Fish and Wildlife Conservation Commission for their financial support of this project, and Nina Youngman and Kristi Booth for pilot-testing several of the lessons.

Curriculum Outline

Lesson 1: Starting to Learn about Manatees

Students will create a KWL chart and learn about manatee biology by reading the book *Sam the Sea Cow*.

Lesson 2: Reading Rainbow—“*Sam the Sea Cow*”

Students will watch the *Reading Rainbow* episode based on *Sam the Sea Cow* and will then complete a worksheet.

Lesson 3: Manatee Adaptations

Students will learn about what an adaptation means and how manatees are adapted to their aquatic environment.

Lesson 4: Manatees Are Mammals; They Are Closely Related to Elephants

Students will learn characteristics of mammals and will use observation skills to list similarities and differences between manatees and their close relative, elephants.

Lesson 5: Manatees and Their Cousins

Students will learn about different species of Sirenians, and will use maps to locate where each species lives.

Lesson 6: What Do Animals Need to Survive?

Students will attempt to hatch brine shrimp in water of different salinities to learn how changes in the environment affect survival of animals.

Lesson 7: What Do Manatees Need to Survive?

Students will learn about plant biology, herbivory, and what manatees eat. Students will realize that all plants are not the same and that the manatee has some plants it prefers.

Lesson 8: How Much Do Manatees Need to Eat?

Students will use math skills to calculate feeding needs.

Lesson 9: Manatees Need Warm Water to Survive

Students will understand thermal refuges and manatee winter migrations.

Lesson 10: Students Will Learn How They Impact Their Environment

Students will learn that different activities create different amounts of pollution.

Lesson 11: Biodegradable or Not?

Students will learn what types of items are biodegradable and what types are not.

Lesson 12: Pollution and Other Threats to Manatees

Students will learn about threats to manatee survival.

Lesson 13: Manatee Migration

Students will learn about factors that can affect manatees during their migration to find warm water in the fall and winter months. Students will work together to complete a successful manatee migration

Lesson 14: Reviewing What We Know about Manatees

Students will take quizzes to test their manatee knowledge.

Lesson 15: Collecting Data about Manatees

Students will learn how scientists identify and track individual manatees.

Lesson 16: Sharing What We Know about Manatees

Students will create podcasts/PSAs/posters to teach others about the ways to protect manatees.

Lesson 17: Exploring the Manatees’ Habitat

Students will complete a field study activity (e.g., at Blue Spring State Park).

Lesson 18: Let’s Have a Manatee Science Night!

Students and teachers will prepare for Manatee Night.

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