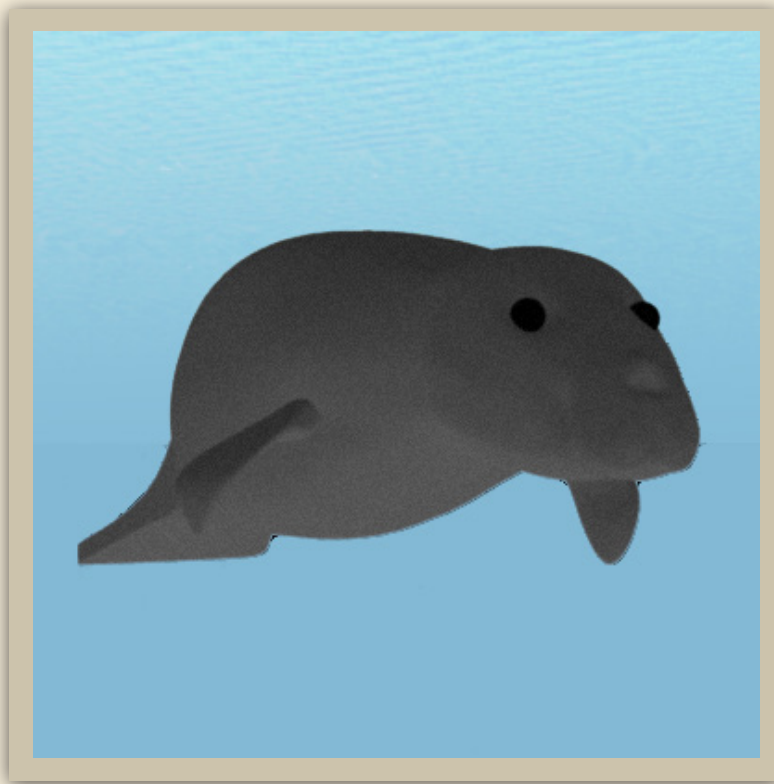


STEM *Sims*™

Manatee Strike Zone

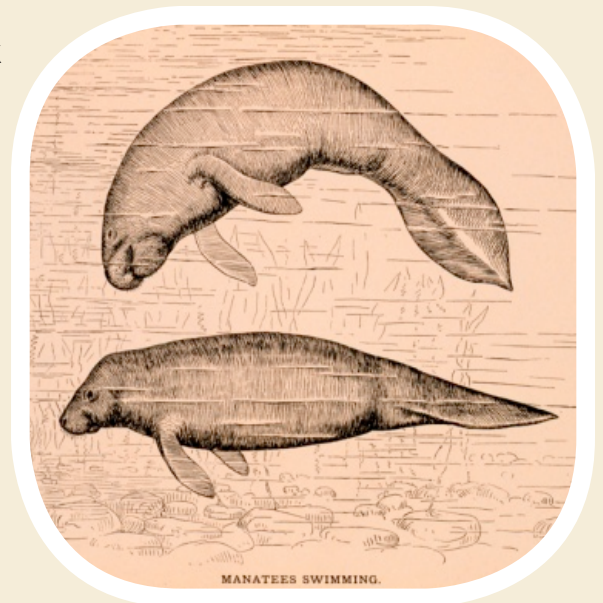


Manatee Strike Zone

**Do you need an idea for a scientific study?
Try out one of our ideas or make one of your own.**

Start learning right now about manatees and what steps you can take to protect them. Take the following brief quiz to see how much you already know about manatees. See the bottom of page 4 to check your answers.

1. Manatees are often referred to as “sea horses.”
 - a. true
 - b. false
2. Manatees are capable of communicating with each other. Their communication form is most similar to the sounds used by which other organism?
 - a. fur seal
 - b. mouse
 - c. cat
 - d. cow
3. What is the gestation period for a typical manatee?
 - a. 6 months
 - b. 9 months
 - c. 12 months
 - d. 18 months
4. The major reason why manatees are often struck by boats is because manatees have very poor hearing.
 - a. true
 - b. false
5. Which is the closest relative to the manatee?
 - a. dolphin
 - b. shark
 - c. walrus
 - d. elephant



The Manatee

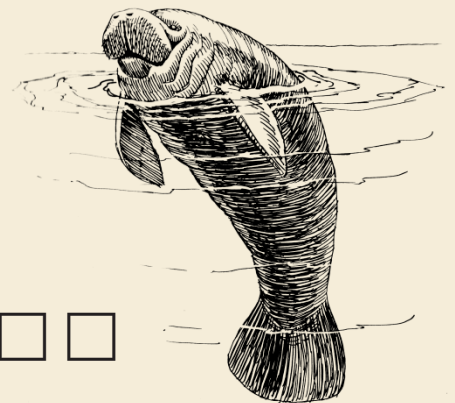
Adult manatees are large creatures with a length of almost 10 feet (3 meters), and they can weigh up to 1,200 pounds (550 kilograms). Manatees can live in a variety of water types, from salt water, to brackish, to fresh water. Manatees are herbivores, which means they eat plants. They eat about 10 to 15% of their body weight in food each day. That's about 150 pounds of vegetation eaten every day by one manatee! Unlike humans, manatees' teeth are continuously being replaced their entire lives. As old teeth wear down and fall out, they are replaced by new teeth.

Manatees have large ear bones, which indicates a good sense of hearing. They have a wide range of hearing, and they can hear best in a higher frequency range than humans. Manatees use a variety of vocalizations to show many emotions. These sounds include squeaks, whistles, and chirps. Although they can communicate, manatees tend to be solitary animals that congregate primarily for common environmental needs. Manatees reproduce very slowly. The gestation period for a typical manatee is about one year. Most female manatees only produce one calf every two to five years. Manatees are an endangered species that must be viewed from afar, so as not to disturb them in their natural surroundings.

Read the paragraphs above to figure out each word below. Each of the terms is used in the paragraphs, and the hints on the left should help you find the section that has the term. Once you complete the seven terms, the circled letter in each term should be combined to form a word that describes something that is very important to protect regarding manatees.

Hint

1. food ○ □ □ □ □ □ □ □ □
2. protection □ □ □ ○ □ □ □ □ □ □
3. water ○ □ □ □ □ □ □
4. size □ ○ □ □ □ □ □ □ □
5. herd □ □ □ □ ○ □ □ □
6. sound □ □ □ □ □ □ □ ○ □ □ □ □ □
7. reproduction □ □ □ □ □ ○ □ □ □



Write the letters from the circles above in their exact order to solve the word puzzle.

Manatee Strike Zone

Should there be a law?

Since propellers cause so many injuries to manatees, why not require all boats to use propeller guards to protect manatees from injuries? Some boaters do have their boats equipped with propeller guards, which keep manatees from being injured when struck by a turning propeller. However, the state of Florida does not require guards on all boats. The reason? Manatees can still be severely and fatally injured due to collisions with fast-moving boats. Although the guards will prevent manatees from being cut by a propeller, the boat hitting the manatee provides a large enough blunt force trauma to kill the manatee. More than 50% of all watercraft-related manatee deaths were the result of collisions and were not due to propellers cutting the manatees. In fact, some researchers believe that the use of some types of propeller guards by boaters could actually cause an increase in manatee deaths. This is because of the larger surface area the guard occupies in the water as compared to a regular propeller.



Left: Large Propeller

Below: Propeller with guard



Please visit our site for more helpful information:
STEMsims.com

For more information on how you can help protect manatees check out the Fish and Wildlife Research Institute of the Florida Fish and Wildlife Conservation Commission at <http://myfwc.com/research/>.

Answers: 1) b. They are called "sea cows." 2) b. 3) c. 4) b. They have excellent hearing, they are struck by boats because they must surface to breathe and they are very slow moving creatures. 5) d. The Manatee Answers: 1) herbivores. 2) endangered. 3) brackish. 4) kilograms. 5) solitary. 6) vocalizations. 7) gestation. Word Puzzle = habitat.

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