

Name _____ Period _____ Date _____



Manatee Strike Zone

STEM Sims

Lesson 1: How Does the Number of Manatees Affect the Number of Strikes?

Manatees are social creatures and tend to congregate in areas together. However, does this behavior increase the likelihood that a boat will strike a manatee?

Doing the Science

1. Start the Manatee Strike Zone Simulation by clicking on the “Sim” tab.
2. Click the mouse in a location in Zone 1 and drag the mouse to Zone 2 before it’s released. Note a red path and boat appears.
3. Click the mouse in a location in Zone 2 and drag the mouse to Zone 3 before it’s released. Note another red path and boat appears.
4. Note and record in Table 1 the number of manatees on the screen (it should be 5).
5. Click the “Run” button. Let the time run for 1:00 minute.
6. At the 1:00 minute mark, click the “Pause” button.
7. Note and record in Table 1 the number of manatee strikes shown in the display in the upper right-hand corner of the screen.
8. Click and drag the “Number of Manatees” slider to about the halfway position.
9. Count and record in Table 1 the total number of manatees now on the screen.
10. Click the “Run” button. Let the time run for 1:00 minute until it hits the 2:00 minute mark.
11. At the 2:00 minute mark, click the “Pause” button.
12. Note the number of manatee strikes shown in the display in the upper right-hand corner of the screen. Subtract the number of strikes at the end of 1:00 minute from this number. Record this new number of strikes (between 1:00 and 2:00 minutes) in Table 1.
13. Click and drag the “Number of Manatees” slider to the far right position.
14. Repeat steps 9 through 12 for this new number of manatees (all times are now between 2:00 and 3:00 minutes).

Table 1.

Trial	Number of Manatees	Number of Strikes (in one minute)
1		
2		
3		

Do You Understand?

1. How did the number of manatees in the area affect the likelihood that a manatee strike would occur?
2. In today’s world of motor boats, how does the herding nature of manatees impact the survival of the species?