



THE FANTASTIC FILTER

Objective

The student will be able to use addition, multiplication, and division to interpret marine data.

Vocabulary

cilia
plankton

Background

Oysters feed on planktonic plants and animals. Currents are created by gill cilia. Water is brought

into the shell and into contact with the oyster's gills where food particles are trapped by mucous and slime. The food is then transferred to the mouth.

Oysters feed at any time of the day or night and may filter as much as 30 quarts of water through their shells in a single hour. For this reason, oysters are often used as sentinel organisms for the bodies of water in which they live. Because they filter such tremendous volumes of water, toxins become concentrated in their tissues. By monitoring a bay's oyster population, scientists can detect toxins in the water.

Exercises

Complete the following.

- How much water would a single oyster filter in a day?
- How much water would six oysters filter in a day?
- How much water would a single oyster filter in a week?
- How much water would ten oysters filter in a day?
- How much water would a single oyster filter in the month of June?
- How much water would seven oysters filter in the month of May?
- How much water would three oysters filter in the month of March?
- How much water would a single oyster filter in a year?
- How long would it take an oyster to filter 28,800 quarts of water?
- How long would it take two oysters to filter 14,400 quarts of water?
- How many weeks would it take five oysters to filter 50,400 quarts of water?
- How many weeks would it take for three oysters to filter 12,960 quarts of water?
- How many quarts of water would a single oyster filter during the summer (June - August)?
- How many quarts of water would a single oyster filter during the spring (March - May)?
- How many quarts of water would a single oyster filter during the winter (December - February)?
- How many quarts of water would a single oyster filter during the fall (September - November)?

