

Marine Mystery Organisms

ANSWER KEY

NAME:

In this lesson we have learned many terms that we can use to describe organisms that live in the ocean. While it is important to know the definitions of these terms, it is even more important to be able to apply them. Read the following descriptions of “Marine Mystery Organisms” and decide which terms apply, based on the information given. Circle the appropriate terms.

SEE ALSO SUPPLEMENTAL POWERPOINT EXERCISE
THAT INCLUDES ANSWER SLIDES AND VIDEO “REVEALS.”
Available online at <https://doi.org/10.5670/oceanog.2021.304>



Marine Mystery Organism #1

This organism is 4 or 5 meters in length and swims around the Arctic Ocean. One of its teeth is elongated into an odd tusk that makes it look like a swimming unicorn. It does not use its tusk in eating, however, as it preys on fish by getting close to them then vigorously sucking them into its mouth.

prokaryote	autotroph
eukaryote	heterotroph
plankton	photoautotroph
nekton	chemoautotroph
benthos	phytoplankton
pelagic	zooplankton
benthic	bacterioplankton



Marine Mystery Organism #2

These organism have five arms that they use to crawl on the seafloor. They can be as big as 60 cm across. Most of them live in very deep water. They also use their arms to prey on small crustaceans and worms that they sweep towards their centrally located mouths. They may also feed on dead organic matter that is lying on the seafloor.

prokaryote	autotroph
eukaryote	heterotroph
plankton	photoautotroph
nekton	chemoautotroph
benthos	phytoplankton
pelagic	zooplankton
benthic	bacterioplankton



Marine Mystery Organism #3

This single-celled organism does not have a nucleus and is only about 1/2 a micrometer in diameter (1 mm = 1,000 micrometers). It lives in the upper levels of the ocean water where it utilizes sunlight, water, and CO₂ to generate sugar molecules.

prokaryote	autotroph
eukaryote	heterotroph
plankton	photoautotroph
nekton	chemoautotroph
benthos	phytoplankton
pelagic	zooplankton
benthic	bacterioplankton



Marine Mystery Organism #4

This extremely tiny single cell is very simple and does not have a nucleus. It lives inside the gut of a tube worm near the mid-ocean ridge. The tube worm has “roots” that extract H₂S from the seafloor sediment to which it is attached. The organism is then able to use the H₂S to create sugar molecules that it then metabolizes. Waste products generated provide energy for the tube worm.

prokaryote	autotroph
eukaryote	heterotroph
plankton	photoautotroph
nekton	chemoautotroph
benthos	phytoplankton
pelagic	zooplankton
benthic	bacterioplankton



Marine Mystery Organism #5

These tiny crustaceans look like a miniature shrimp, about 1–2 cm long. Although they have legs, they use the legs for feeding rather than swimming. They live in the upper parts of the water column where they filter phytoplankton out of seawater to eat. They themselves are food for larger animals, including whales.

prokaryote	autotroph
eukaryote	heterotroph
plankton	photoautotroph
nekton	chemoautotroph
benthos	phytoplankton
pelagic	zooplankton
benthic	bacterioplankton



Marine Mystery Organism #6

This animal slowly swims through the ocean, sucking in plankton using its tubular snout. The male carries fertilized eggs around in a pouch for about a month before the babies hatch and are released. These animals mostly swim about in the seaweed and seagrass meadows, and do not like to swim into the open ocean.

prokaryote	autotroph
eukaryote	heterotroph
plankton	photoautotroph
nekton	chemoautotroph
benthos	phytoplankton
pelagic	zooplankton
benthic	bacterioplankton