

Environmental Geology Pre Trip Activity Answer Sheet

General Vocabulary

1. Watershed
2. Energy
3. Hypothesis
4. Ecosystem
5. Variable
6. Pollutant

Geologic History and Plate Tectonics

1. Convergent Boundaries
2. Divergent boundary
3. Transform Fault
4. Faults
5. Plate Tectonics
6. Uplift
7. Weathering

River Systems

1. Channelization
2. Discharge
3. Stream
4. Erosion, Deposition

Waves and Longshore Transport

1. Sand
2. Longshore Transport
3. Longshore Current
4. Sand Starvation
5. Jetties, Groins
6. Harbors, Sea Walls, Breakwaters

Sea Floor Sediment

1. Benthic
2. Decomposers
3. Detritus
4. Biological Indicators
5. Biotic, Abiotic

Plankton Productivity

1. Phytoplankton
2. Chlorophyll
3. Algal Bloom
4. Food Web

Marine Nitrogen Cycle

1. Nutrients
2. Nitrogen, Nitrogen Cycle
3. Nitrites
4. Nitrogen
5. Ammonia, Nitrates

Sea Floor Sediment Page

Which living organisms and non-living things can be found in our local marine environment. List their names below. Circle the ones you think live in the benthic habitat.

Living: **Brittle Stars**, Dolphins, Phytoplankton, Zooplankton, Seaweed, **Crabs**, **Shrimp**, **Lobsters**, Mackerel, **Sharks**, **Worms**, **Bacteria**, **Fish**, **Clams**, **Mussels**

Non-Living: Water, Sand, Mud, Rocks

Plankton Productivity Page

Draw lines to match the words below with the correct definition.

- | | | | |
|--------------------|---|--------------------------|--|
| Tertiary Consumer | → | <input type="checkbox"/> | A diverse group of organisms that use the process of photosynthesis to produce their own food. |
| Primary Consumer | → | <input type="checkbox"/> | Herbivores, that feed on green plants and decomposers, that feed on decaying matter. |
| Producer | → | <input type="checkbox"/> | Carnivores that feed on herbivores and decomposers. |
| Scavenger | → | <input type="checkbox"/> | Carnivores that eat other carnivores |
| Decomposer | → | <input type="checkbox"/> | Carnivores that feed on dead organisms, rather than hunting them. |
| Secondary Consumer | → | <input type="checkbox"/> | An organism that feeds on and breaks down dead plant and animal matter. |

Marine Food Web Activity Sheet

The image below shows several local marine organisms. These organisms represent all places in a typical marine food web. Complete the food web by writing the name of the organism next to its appropriate place in the food web. Then draw lines that will connect the organisms by what they eat and what might eat them!

Places within the Marine Food Web

Producers: **Phytoplankton**

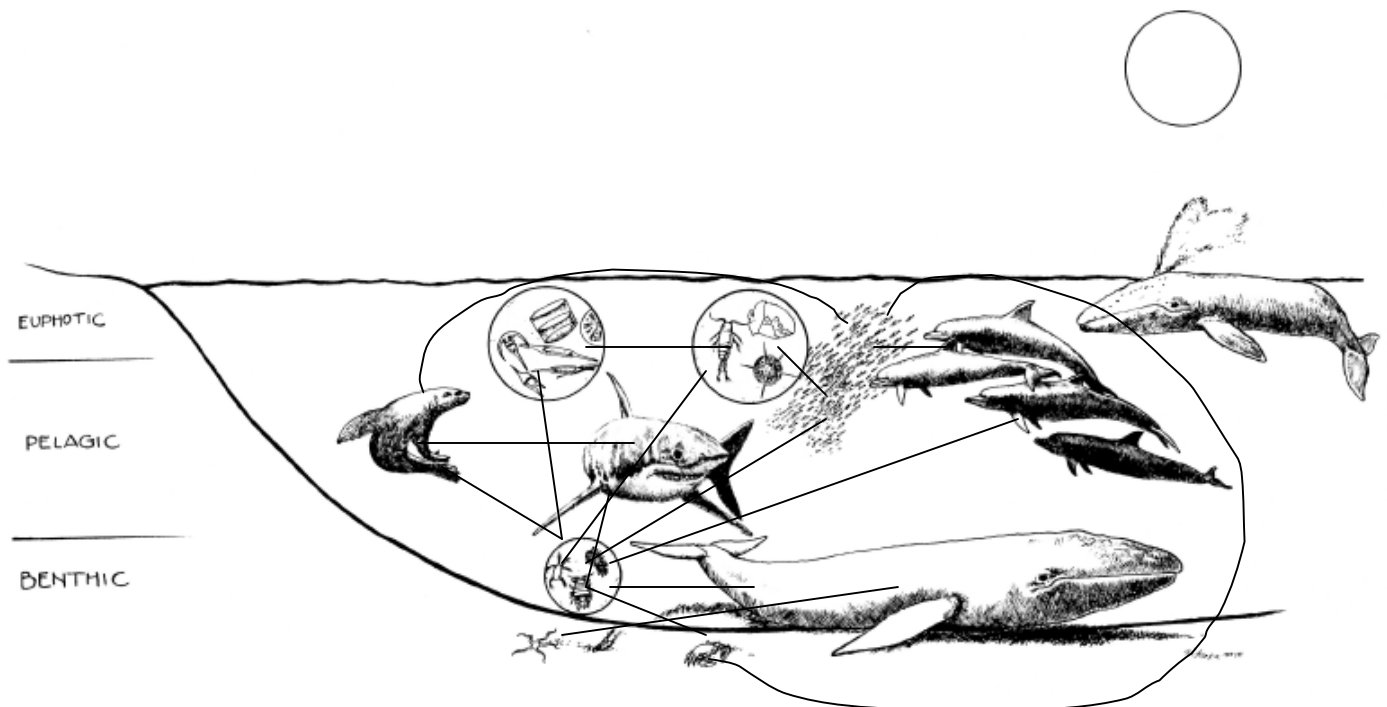
Primary (1st) Consumers: **Zooplankton**

Secondary (2nd) Consumers: **Mackerel, Gray Whale**

Tertiary (3rd) Consumers: **California Sea Lion, White Shark, Bottlenose Dolphin**

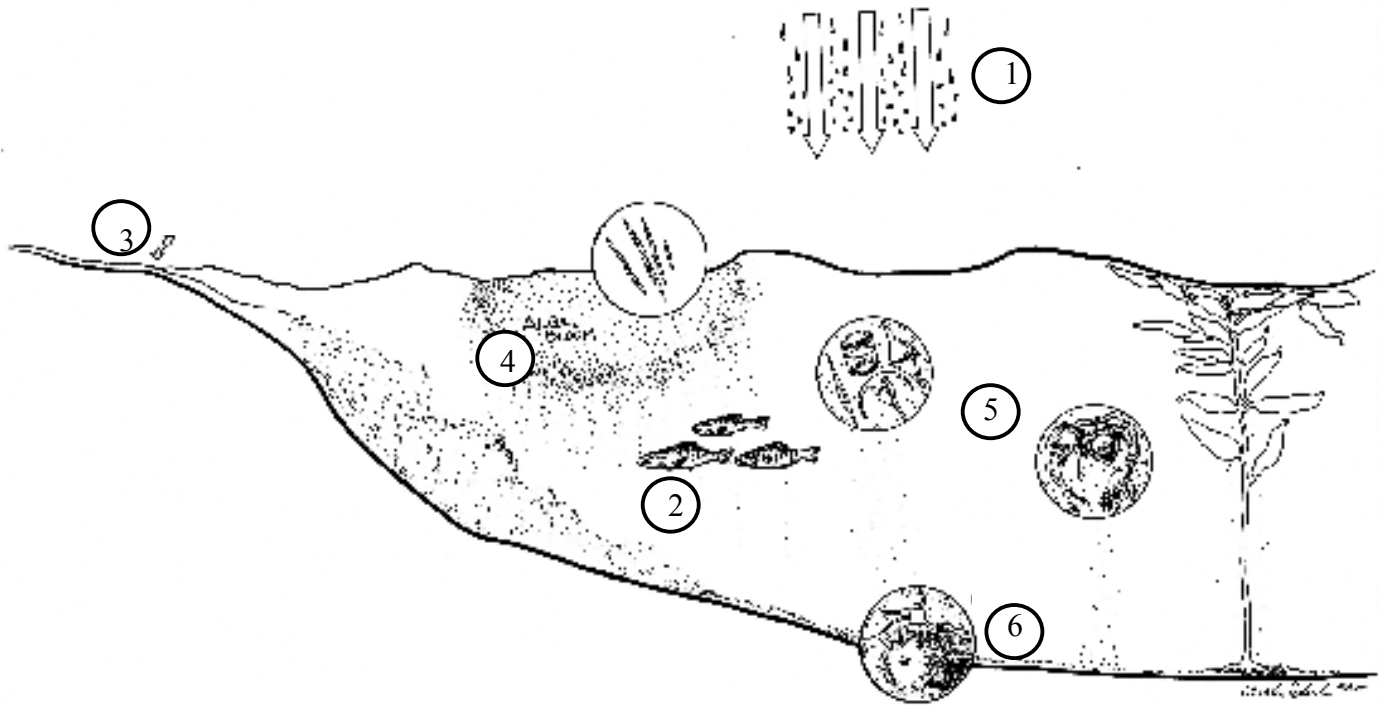
Scavengers: **Crab**

Decomposers: **Mud Worm, Brittle Star**



Marine Nitrogen Cycle Activity Sheet

This is an image of a marine nitrogen cycle. Read each sentence below to determine where it belongs on the diagram, then write the sentence number in the appropriate circle on the drawing.



1. Rain, dust, and airborne pollutants can add nitrogen to the ocean.
2. All living organisms produce waste, which can turn into nitrates.
3. Rivers and storm drains can bring excess nutrients, including nitrates, directly from the land to the ocean.
4. Excess nutrients can lead to an increase in plant growth and an imbalance in the local ecosystem.
5. As living organisms die, they descend toward the bottom of the ocean where scavengers and decomposers contribute to their breakdown into reusable nutrients.
6. Bacteria work to convert waste into reusable nitrates in the water for plants.