

PLANKTON

NAME _____ TA/DATE _____

Goals of Lab:

- To observe the diversity in the plankton of Monterey Bay, to identify and draw some common phytoplankton and zooplankton using microscopes.
 - To explore the role of phytoplankton and zooplankton in the marine food web.
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Phytoplankton

1. What are phytoplankton?

2. How do phytoplankton gain energy? What is their characteristic green color?

3. Describe the role of phytoplankton in the marine food web.

4. Find and draw two different diatoms.

Diatom drawings:

4. What are some of your diatoms' distinguishing features? (Is it a **centric** or **pennate**? Does it live individually or in chains? What is its shell made of?)

5. Find a dinoflagellate and describe its structure (spines, girdle, and two flagella). A labeled drawing is worth 1000 words...

6. Many phytoplankton have adaptations to keep from sinking. Describe any adaptations you've observed on the phytoplankton you studied. Also, why is it important for phytoplankton to keep from sinking?

Zooplankton

1. Define "zooplankton".

2. What two major roles do they play in marine food webs?

3. Copepods are the most abundant type of zooplankton. They are rice-grain sized zooplankton that are white or transparent and have long antennae. How are zooplankton different from phytoplankton?

Spend a few minutes and watch the movement of a living copepod.

4. Describe the movements of the Copepod you observed. Do they move continuously or in spurts? Why?

5. Why are most zooplankton transparent?

There are many different groups of animals in the Zooplankton. Common ones include:

annelid larva	cnidarians	ctenophores
mollusca larva	arthropods	radiolarians
chaetognaths	echinoderm larva	rotifers
ciliates	foraminiferans	tintinnids

6. Find two of these organisms (or any other zooplankton that is NOT a copepod—ask your TA or look at the field guides to help you identify non-copepods) and draw them below. Label them with a group name from above (doesn't have to be a scientific name).
