

# Plankton Module

# Lake Ecology Education Program

**Friends of the Eau Claire Lakes Area**

Barnes, WI

## **CLASSROOM WET LAB**

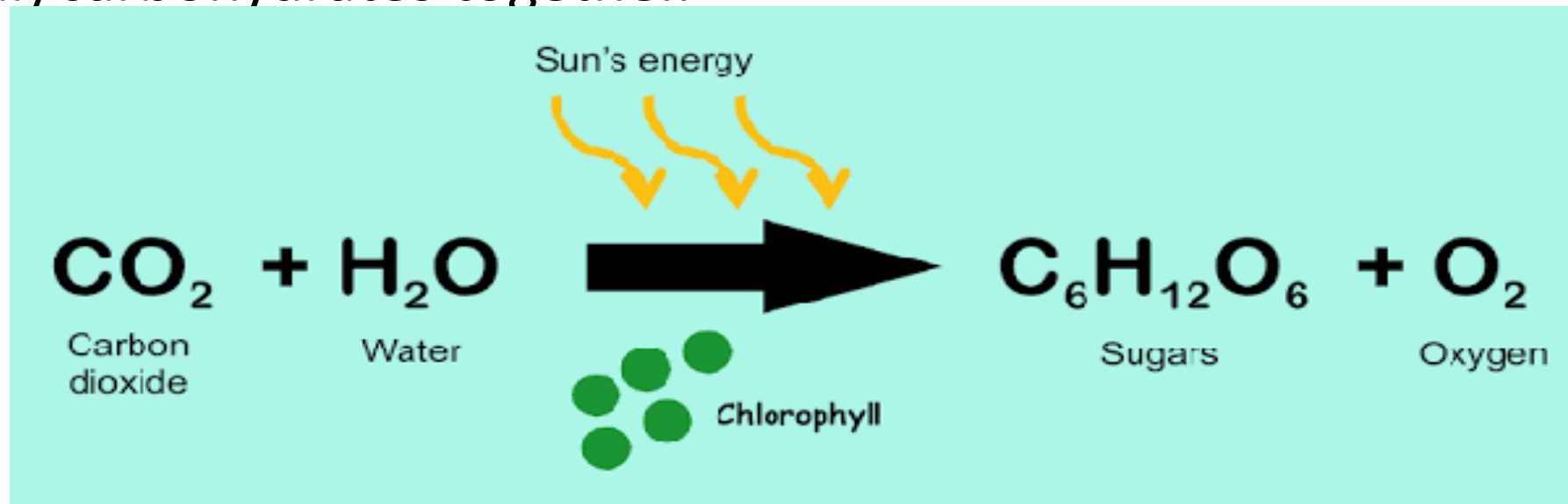
*This presentation was developed by Ted Eastlund, a supporter of the LEEP program since its inception and a regular classroom visitor to share his knowledge of Wisconsin lake ecology. Ted developed this presentation to help students visualize the diversity of plankton that can be difficult to see otherwise.*

# OBJECTIVES

- Understand photosynthesis
- Collection of plankton in a water sample from a lake
- Use of microscope, slides and a pipette for examining a water sample to observe plankton
- Identification of phytoplankton (algae & diatoms) and Zooplankton (copepods & Daphnia)
- Understand the Aquatic Food Web and where plankton fits in

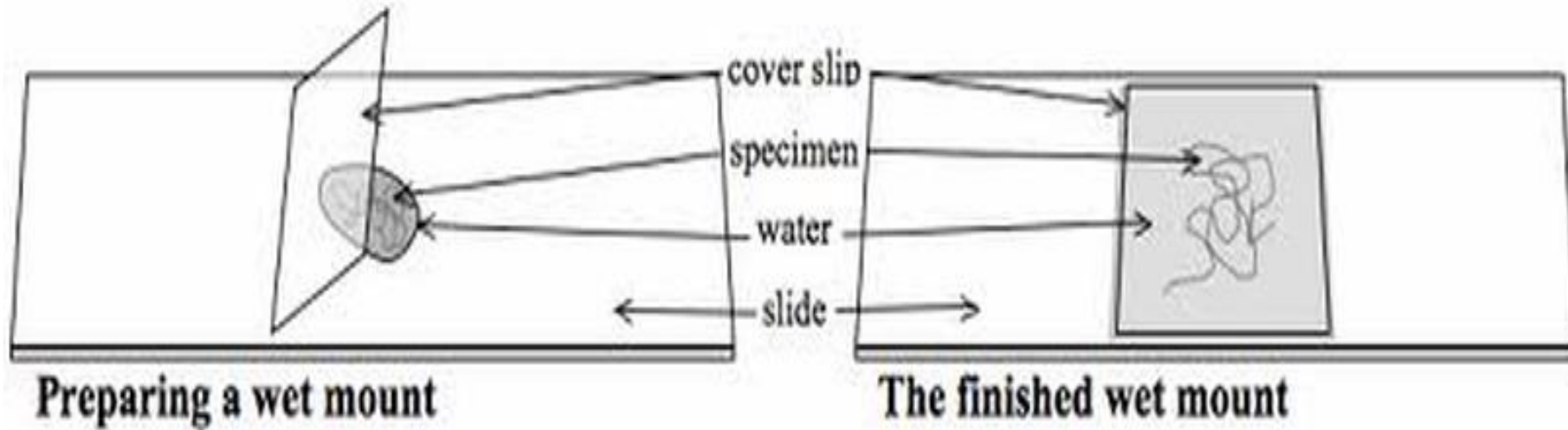
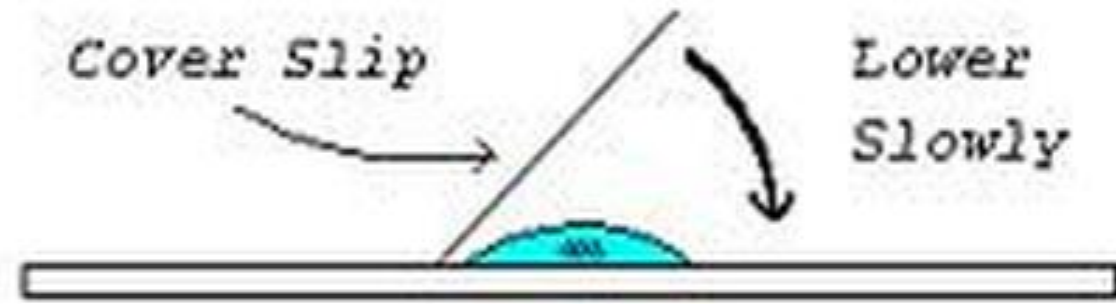
# Green plants, algae & photosynthesis

- By the process of photosynthesis green plants produce carbohydrates (sugars) and oxygen
- **Sun, the source of energy animals need for life**
- **Chlorophyll**, carries sun's photons of light or radiant energy down an electron transport chain so the energy can be used to put sugar/carbohydrates together.





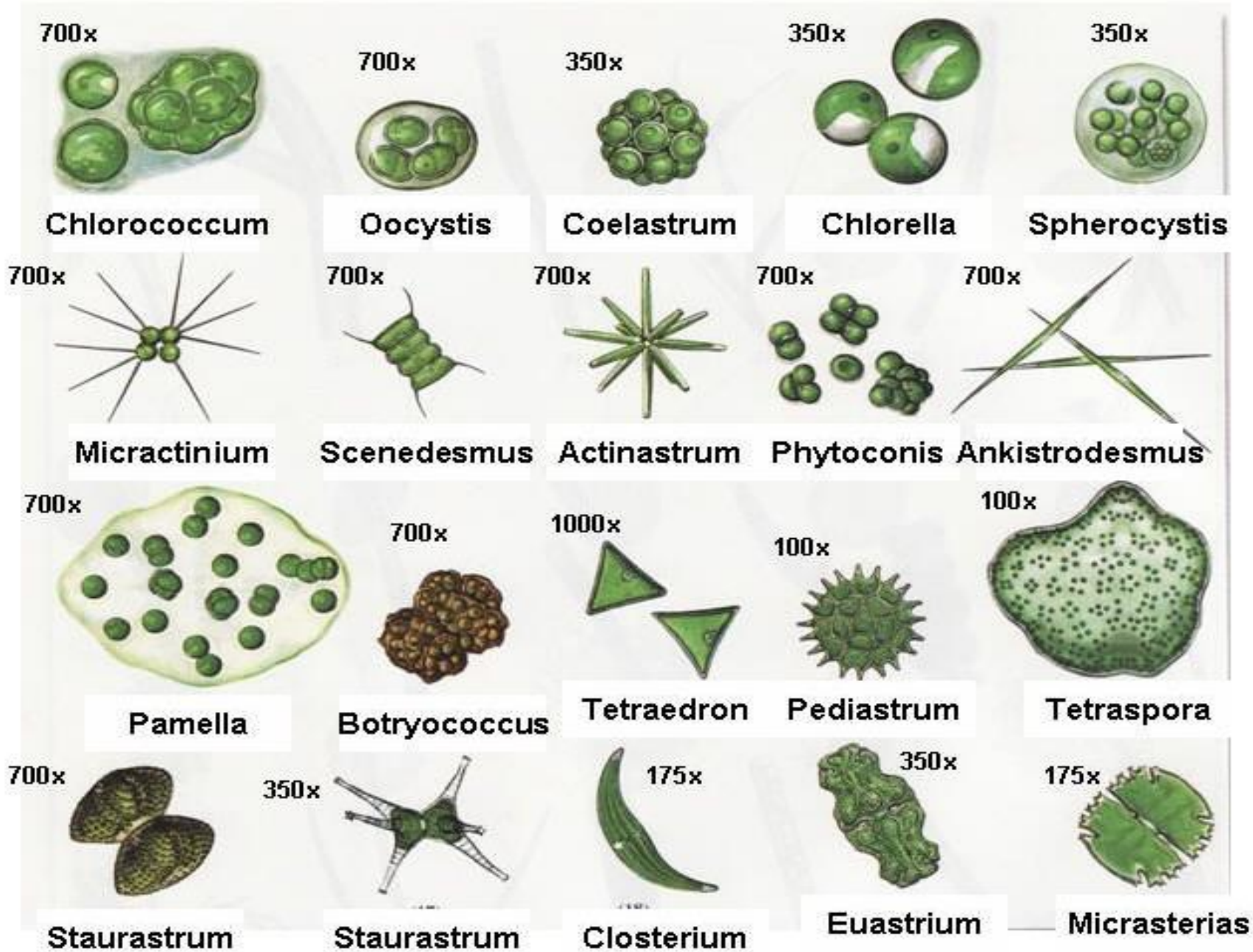
# Plankton Collecting Net



- **Depression glass slide**
- **Place a drop of sample onto depression**
- **No coverslip needed**
- **Observe using stereo microscope**



# Phytoplankton



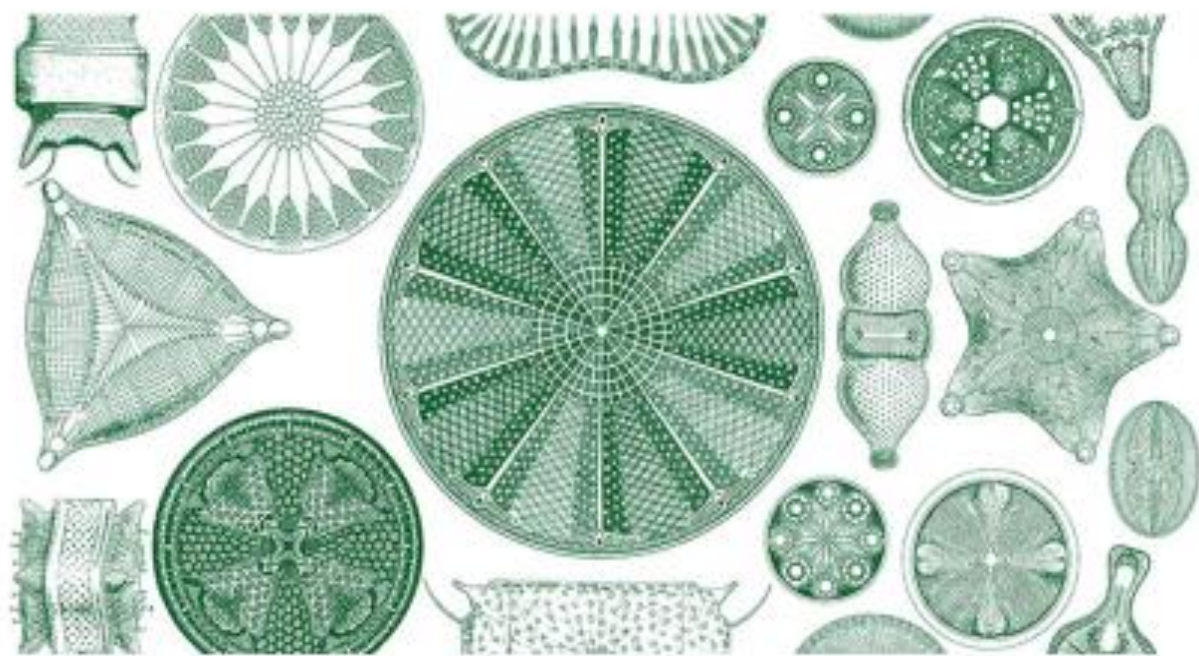
# ALGAE

## The Producer

Phosphorus & Nitrogen pollution can cause blooms

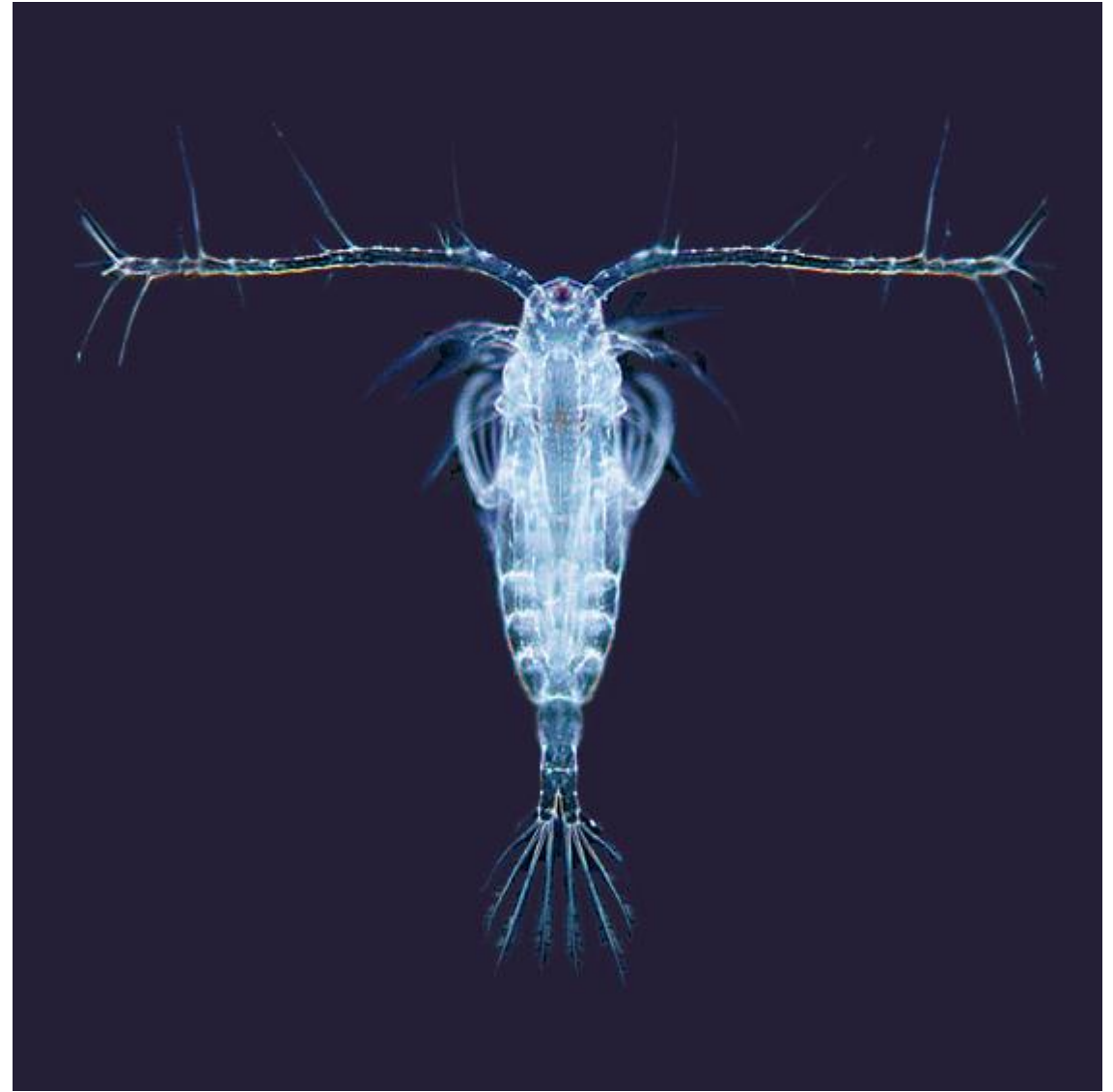
SOME CAN PRODUCE TOXINS



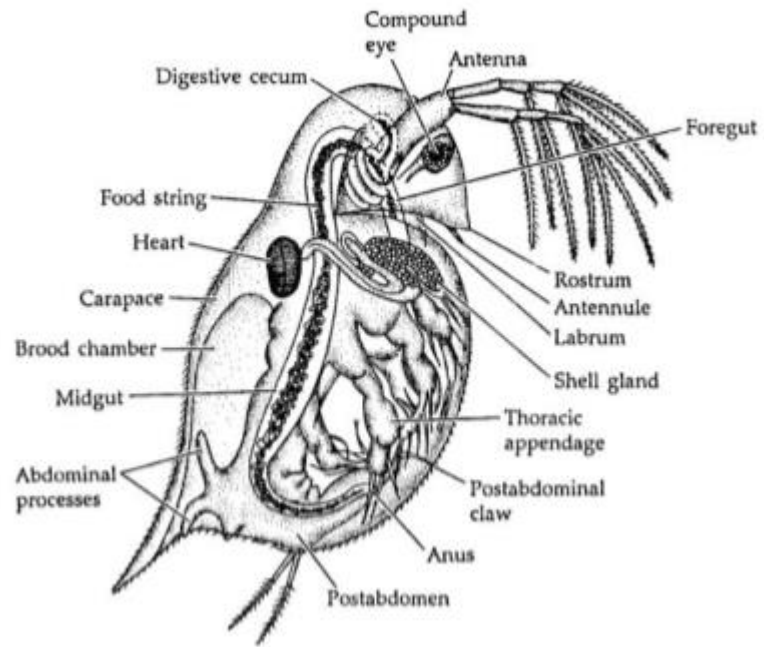


# DIATOMS

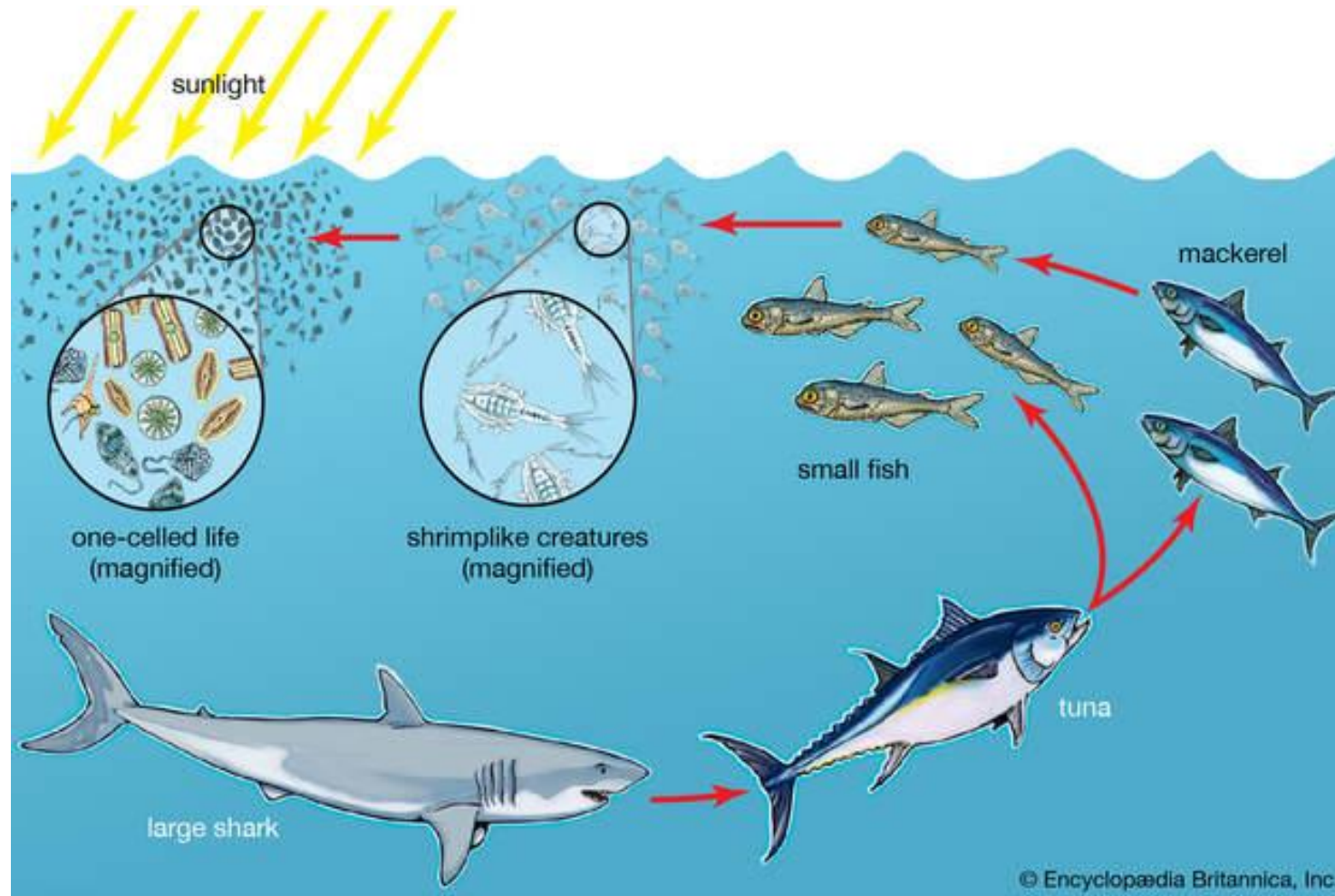
Zooplankton



**COPEPODS**



# DAPHNIA



**Producer--Primary Consumer—  
Secondary Consumer--Tertiary Consumer**