Plankton

1. How much of global primary production does phytoplankton account for?
   1. ~ 10%
   2. ~ 25 %
   3. ~ 50 % \*
   4. ~ 75 %

* Answer: Phytoplankton account for about half of global primary production!

1. Which is not a type of phytoplankton?
   1. Dinoflagellate
   2. Coccolithophores
   3. Diatoms
   4. Copepods \*

Answer: Copepods are actually a type of zooplankton!

1. Which kind of phytoplankton have the most toxic species?
   1. Dinoflagellate \*
   2. Coccolithophores
   3. Diatoms
   4. Ciliates

Answer: there are ~ 87 known species of toxic dinoflagellates!

1. Diatoms have a cell wall made out of what?
   1. Calcium
   2. Silica \*
   3. Peptidoglycan
   4. Cellulose

Answer: they have a silica wall called a frustule .

1. Ciguatera Fish Poisoning is caused by what kind of phytoplankton ?
   1. Cyanobacteria
   2. Coccolithophores
   3. Diatom
   4. Dinoflagellate \*

It’s caused by the dinoflagellate *Gambierdiscus sp.* which produces Ciguatoxin.

1. Which is NOT considered to be part of “the big 4” to identify phytoplankton species?
   1. Cell wall
   2. Flagella
   3. Pigments
   4. Shape \*

Answer: The big 4 include: cell wall, flagella pigments & storage products. This includes presence/absence, type etc. Shapes can change in the water so does not play a large role.

1. How much energy is transferred when a Zooplankton consumes a phytoplankton?
   1. ~ 10% \*
   2. ~ 50%
   3. ~ 75%
   4. ~ 99%

Answer: The amount of energy transferred at each step in a food chain varies but averages about 10%; 90% of carbon and energy is lost at each step of trophic pyramid

1. Which of the following is NOT a type of algal bloom phytoplankton can cause?
   1. Red Tide
   2. Blue Tide \*
   3. Brown Tide
   4. Green Tide

Answer: Blue tide is NOT a type of algal bloom they can cause. Brown tide, red tide & green tide are all algal blooms caused by phytoplankton

1. There are more nutrients for phytoplankton…:
   1. Towards the equator
   2. Towards the open ocean
   3. Towards the poles \*
   4. Towards clearer water

Answer: towards the poles! This is because of mixing & upwelling of the water. There are always more nutrients towards the coast as well; more turbid water = high nutrients!

1. The word plankton comes from a Greek origin; this word means:
   1. Tiny or small
   2. Plants
   3. Drifting or wandering \*
   4. Water-loving

Answer: drifting or wandering – because planktonic organisms drift with the water movement.