

## WORLD OF PHYTOPLANKTON

1) You have learned new terms connected to the fascinating world of phytoplankton. For each statement, place the letters in the right order to find the correct term.

1) Microscopic single celled organisms, essential for life.

L P Y T N N O O P A K T H

phytoplankton

2) This process, in which phytoplankton absorb carbon dioxide and produce oxygen, plays a major role in the carbon cycle.

Y H O T S N I S P E H O T

photosynthesis

3) An organism that is capable of synthesizing organic matter from mineral elements by photosynthesis.

P U T T R O H O A

autotroph

4) These prokaryotic organisms dominate ocean ecosystems, except in the Arctic.

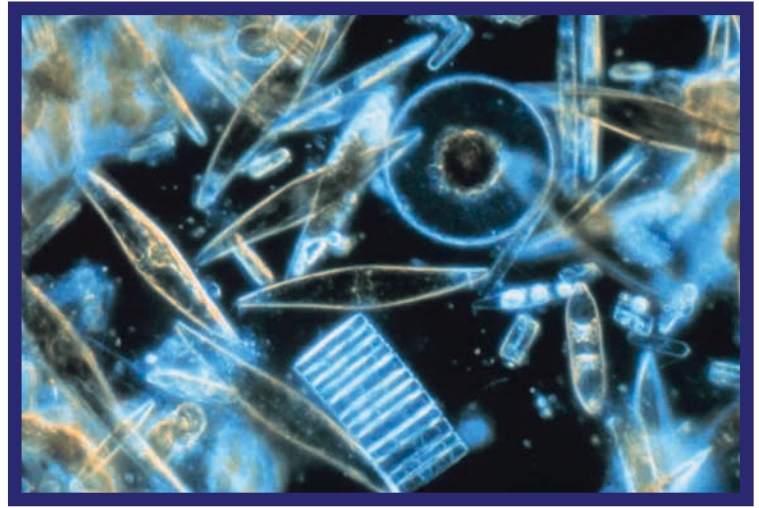
T A B C O Y R N A C E A I

cyanobacteria

5) These large cells are opportunistic species that appear at the beginning of the summer growing season. They represent 57% of the eukaryotes in the Arctic Ocean.

M I A D O S T

diatoms



6) Synonym of flowering, a proliferation of phytoplankton.

M O L O B

bloom

7) This species of phytoplankton is smaller and more specialized. It follows the appearance of diatoms, when nutrient availability declines. It represents 21% of the eukaryotes in the Arctic Ocean. Their name makes reference to two flagella that enables to move.

I L N L O A E F L D G E A T S

dinoflagellates



## PHYTOPLANKTON BLOOM

2) Name the two consequences of the thinning or disappearance of ice floes on the phytoplankton bloom:

1. There will be a second phytoplankton bloom in the autumn
2. Stratification will be more important. Fewer nutrients will rise to the surface and be available for phytoplankton, therefore causing a decrease in their numbers

3) Place the steps the phytoplankton bloom in a coherent order:

- a) Polar night and ice thickening
- b) Spring: ice melting
- c) Access to light and increasing day length
- d) 1st phytoplankton bloom
- e) Autumn: significant wind events
- f) Mixing and rise of nutrients towards the surface
- g) 2nd phytoplankton bloom

