



Use Internet to find answers to the above questions, but don't forget to site your information sources.

Use keywords:
- biological pump
- carbon cycle
- phototynthesis
- mineralization
- sedimentation

COMPLETE THE DIAGRAM

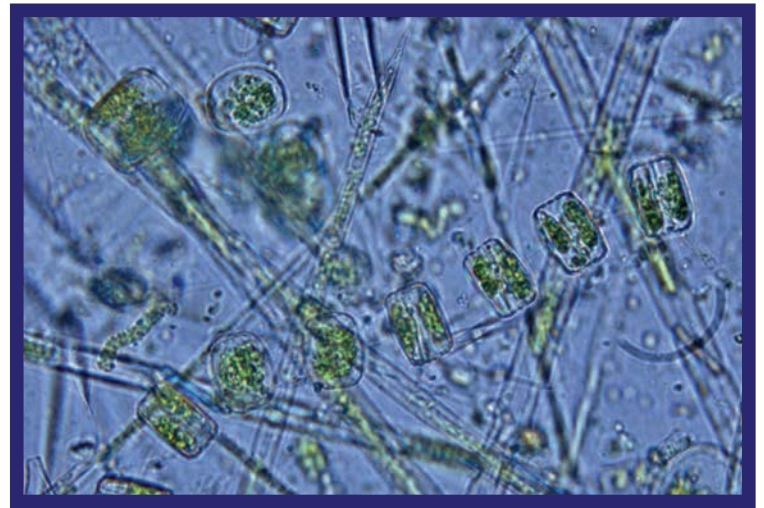
1) Complete the diagram of the biological pump :

a) Write the numbers in the appropriate blue circles:

- 1- Atmospheric carbon
- 2 - Carbon assimilated (dissolved) by photosynthesis
- 3 - Carbon transferred into marine biomass
- 4 - Surface carbon remineralized and exported to atmosphere
- 5 - Carbon exported to depth (CaCO_3)
- 6 - Carbon exported to depth (organic)

b) Place the statements in the right white circles:

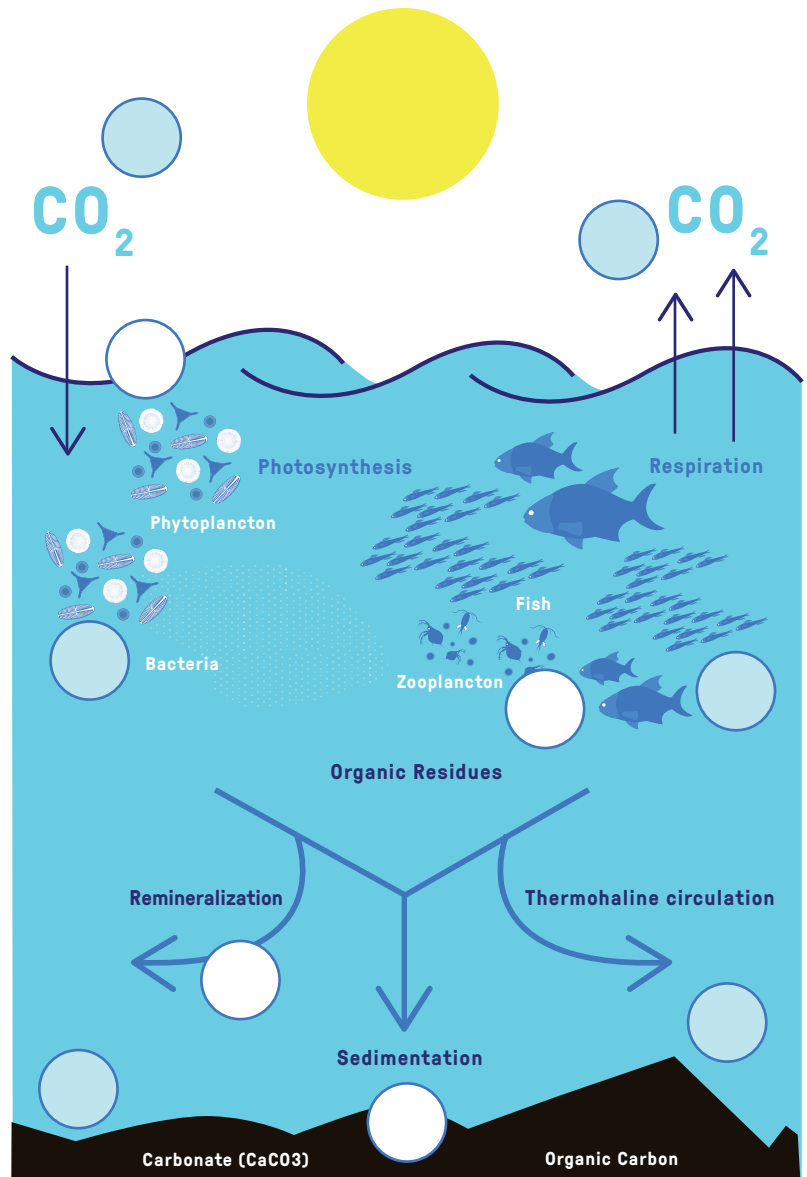
- 1 - photosynthesis:
- absorption of light energy, minerals and carbon
- production of oxygen and sugars
- 2- Remineralization: decomposition of phytoplankton into mineral parts
- 3- transfer of carbon in the food chain
- 4- sedimentation of carbon in the ocean floor



Ocean Surface

Deep Ocean

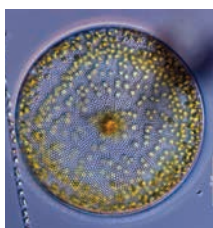
Ocean Floor



EXPLAIN IN YOUR OWN WORDS

2) Explain in your own words, the important role the biological pump plays with regard to climate regulation.

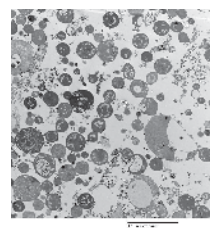
3) What unites these images?



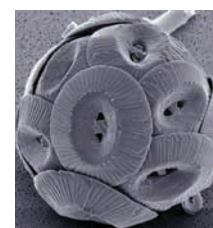
PHYTOPLANKTON



ARCTIC COD



BACTERIA



COCCOLITHOPHORE

