

FILL IN THE BLANK

1. Diatoms are tiny, single-celled organisms that live in water.
2. Diatoms are phytoplankton, which means they are photosynthetic and float in the water.
3. A chemical reaction happens inside green structures inside diatoms called chloroplasts.
4. This chemical reaction is called photosynthesis, in which plants and other organisms like diatoms use energy from the sun to make food.
4a
4b
5. In addition to energy from the sun, diatoms have to take in carbon dioxide. The chemical formula for this is CO₂ because one molecule contains a carbon atom and two oxygen atoms.
5a
5b
6. Diatoms also have to take in water. The chemical formula for this is H₂O because one molecule contains two hydrogen atoms and one oxygen atom.
6a
6b
7. The purpose of this chemical reaction is to create food for the diatom in the form of glucose, which is a simple sugar. The chemical formula for this is C₆H₁₂O₆, as one molecule contains six carbon atoms, twelve hydrogen atoms and six oxygen atoms.
7a
7b
7c
8. The food created by the diatom can be converted into energy through a chemical reaction called cellular respiration.
9. Oxygen is released as a byproduct of photosynthesis. The chemical formula for this is O₂ one molecule contains two oxygen atoms.
9a
9b
10. Diatoms play an important role in the Earth's carbon cycle, as diatoms take in the carbon dioxide released by ocean creatures, humans, and the burning of fossil fuels. Then diatoms release the oxygen we all need to breathe!