

Questions

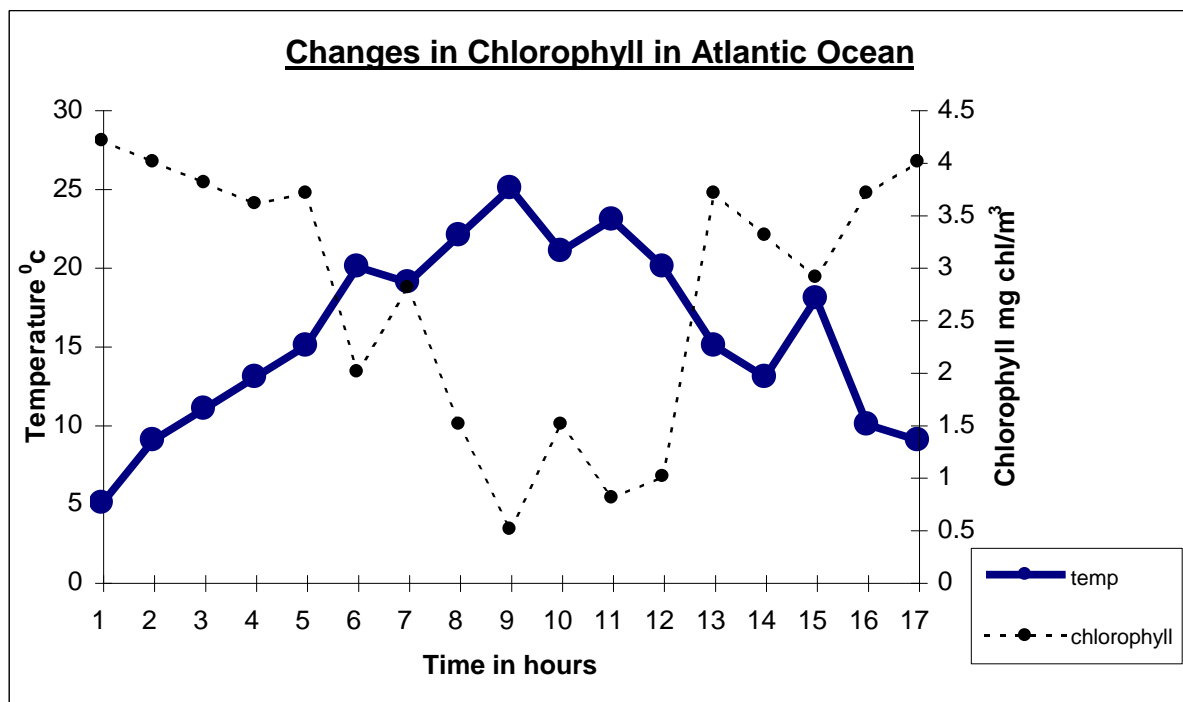
Key Stage 3

Like all green plants, phytoplankton contain chlorophyll, which they use to convert sunlight into food. We can estimate how much chlorophyll there is in the sea by using a piece of equipment called the 'fluorometer'. It tells us how much chlorophyll there is in seawater, measured in milligrams of chlorophyll per cubic metre of seawater (mg chl/m^3). This is used together with a 'temperature recorder', which measures the temperature of the sea.

The graph below shows the sea temperature (thick line) and the amount of chlorophyll (broken line) at the surface of the sea.

You should be able to see that the temperature changes many times as the 'temperature recorder' measures areas of warm and cold water.

For example: after 5 hours there is a patch of water with a temperature of approximately 15°C . The amount of chlorophyll in the water after 5 hours is 3.8 mg chl/m^3 .



1. What is the temperature after 12 hours?
2. What is the amount of chlorophyll after 15 hours?
3. Is there more or less chlorophyll in the water after 9 hours?
4. We can conclude from the graph that chlorophyll production is greater in _____ water.