

Lesson Plan: The biochemistry of water and pond ecology

Water is one of the smallest and lightest of molecules with a unique collection of properties.

Life in aquatic habitats has many advantages over life on land, but there are also a range of problems that come with living in such habitats.

Starter Activity: Hydrogen bonds

Demonstration of Water and Ice cubes in a beaker

The ice should be clearly floating in the water for this demonstration.

The majority of students will be aware that solid water unlike other substances floats rather than sinks as it is regularly demonstrated at KS3/KS4. However they are unlikely to be able to explain why this is the case in detail.

This activity focuses on understanding the biochemistry of water and linking this to ecological concepts

Question- If the particles in a solid are more densely packed than in a liquid, why does ice float on water?

What are some of the likely responses?

