



Equipment

There are a few different ways that scientists measure the amount of light that penetrates into a lake or stream, which is known as the **water transparency**.

Light Meter

A light meter measures the brightness, or intensity, of light in water using a sensor. The sensor lets scientists get light readings at different depths in a lake. This information shows how light changes across depth.



Underwater light meter used to measure water transparency. PC: DIYLED UK





Secchi Disk

A simpler and less expensive tool, a **Secchi disk**, can also be used to measure how much light penetrates into a waterbody. Secchi disks are 20 cm (8 inches) circular disks with alternating black and white segments on their surface. They are attached to a string or rope that is marked in intervals of meters or feet. The disk is lowered into the water until it can no longer be seen, and the depth at which it disappears is recorded. The disk is then raised back to the depth at which it can be seen again and this depth is recorded. The depth of disappearance and reappearance are averaged to get the Secchi depth.



A Secchi disk is lowered into the water. PC: Minnesota Pollution Control Agency (CC BY-NC 2.0)

