

## Determining water transparency using a Secchi disk

Water transparency, or water clarity, is one of the first things to notice while visiting a water body. The more particles that are present in the water, such as algae or sediment, the lower water transparency will be. Measuring water transparency has been done since the start of water research. In 1865, Angelo Secchi came up with a way to measure this consistently by using a Secchi disk.

*Please read the entire protocol before starting! Normal health and safety precautions should be taken at all times, for more information see website: [www.nioo.knaw.nl/en/Netlake-Citizen-Science](http://www.nioo.knaw.nl/en/Netlake-Citizen-Science)*

### Preparations and materials

- CD or DVD
- Thin rope, up to 10 meter.
- Black waterproof marker, waterproof paint or tape
- Measuring tape/ruler
- Weights -something heavy as rocks, bolts etc.

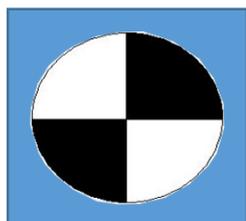


- Take an (old) CD and divide the CD in 4 equal wedges.
- Color two opposing wedges black with a marker, paint them or use black tape.
- Attach the weight at the end of the rope and put the CD on top. Place a bolt on top of the CD or use a straw to make it more stable.
- Mark the rope every 0,5 meter by tying a knot or by using the marker. Start measuring at the CD!

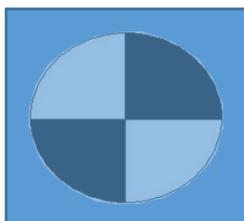
### Method

Because we want to know how far sunlight can penetrate the water column, use **a boat or dock** or even **swim** to a part of the lake where you can't see the lake bottom!

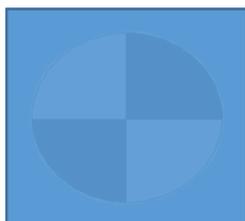
- Note the weather conditions (sunny, partially cloudy (%))
- Have your back to the sun (best reading are between 10.00-14.00h)
- Take off sunglasses
- Lower your Secchi disk into the water slowly until it disappears completely and note the depth using the markings on the rope.
- Lower the disk a little further and pull the Secchi disk back up gently and note when it comes back into view.
- Average both readings to determine your Secchi depth.
- Please send in your results via [www.nioo.knaw.nl/en/Netlake-Citizen-Science](http://www.nioo.knaw.nl/en/Netlake-Citizen-Science)



Lower your Secchi disk into the water



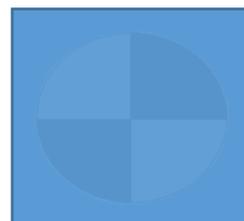
..further..



..further..



Until it disappears.  
Note down this depth.



Pull up the disk and record the level it appears again.