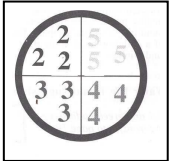


Water & a Healthy Environment

2. TURBIDITY TEST



A comparative test of water clarity



What do we need?

- Nearby river/stream/pond
- Gloves (in pack)
- 2 x turbidity disks (in pack)
- 2 x plastic 2 litre bottles
- Prestik

Questions we are asking, and how we plan to take our investigation further:

Think carefully about what makes water turbid (murky). Has there been a heavy rainstorm? Is the turbidity caused by soil erosion? Or is it caused by sewage or waste from factories or farms?

Is the river naturally turbid because of the type of soil structure and land formations in the area? Where can we find out if this is the case?

Why is it difficult for plants and animals to live in very turbid water? Think about why plants and animals need light. What kind of living water organism (creature) would you create to live in turbid water? What kind of adaptations would it need to survive?

What do you think the turbidity test is telling us? Do you get the sense that it is safe to drink? What would we need to do in order to find out about chemicals or sewage in the water?

When we are doing the turbidity test, what does the smell (sniff test) tell us? Do you get the sense that we can find out different things from the turbidity and sniff tests? What does this tell us about water testing in general?

What else do we need to find out now? Where could we take our investigation next?

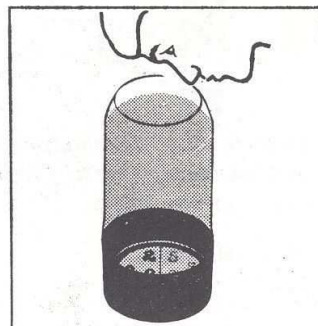
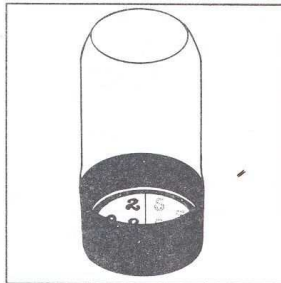
How do we use the kit?

Here, we are doing an initial screening test, to get a sense of what environmental issues and risks there may be.

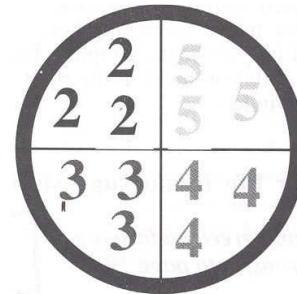
Here is a suggested activity to help you learn more about what is happening in your river/ stream/pond:

Turbidity test: a comparative test of water clarity

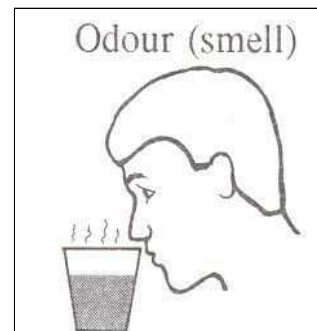
- Take off the label of two transparent 2 litre plastic drink bottles (e.g. Fanta or Coke).
- Cut off the top of the plastic bottles where it narrows.
- You should now have two plastic columns that are about 20cm deep.
- Use a lump of Prestik to stick the turbidity disks inside the bottom of each column - with numbers facing up.
- Fill one column to the top with tap water, and the other with water from a clear place in the river/stream/pond. Do not let in mud or sand from the banks.
- Stand in a shady place (out of direct sunlight), and look down into the column (from above).
- Which numbers you can see on the disks?



- What parts of the disk can you see?
- Use the following as a guide:
 - *Disk is not visible at all* : water is very murky/turbid
 - *Outer ring + 222 + 333 visible* : water is less turbid
 - *Everything up to 555 visible* : water is clear



- Do you think you have a reliable result?
- Repeat the test if necessary.
- You can also smell the water while you are looking at it ...



- What do you smell in the water?
- Does the smell give you a better sense of what might be in the water?