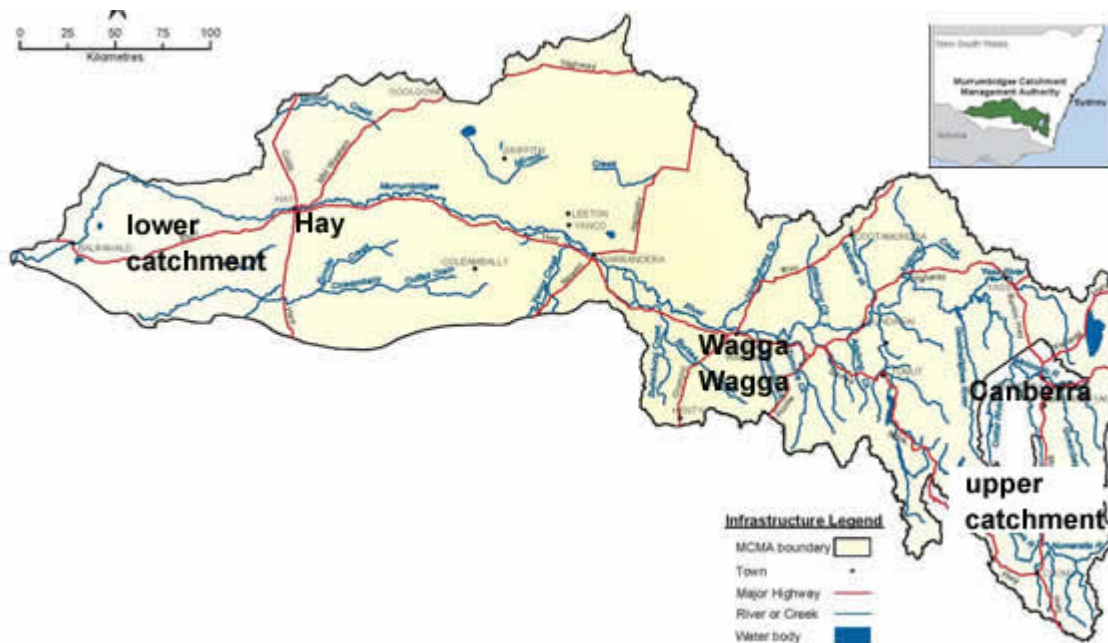


Investigation: water quality of the Murrumbidgee River



1. I am going to investigate.

How do turbidity (muddiness) and phosphorus levels in the river change downstream from the upper to the lower catchment?

2. What I think will happen.

3. Why I think it will happen.

4. What I am going to do?

- Collect 3 samples of river water from three different locations: Canberra, Wagga Wagga and Hay.
- Test each sample for:
 - turbidity (muddiness) caused by soil erosion in the catchment; and
 - phosphorus, a nutrient in fertiliser (farms and gardens) and a cleaning agent in some detergents (households).

5. What I will need.

- Turbidity tube, pour water down the tube until the black cross on the bottom is no longer visible. The measurement units are called NTU's.
- Phosphorus tablet test, place a tablet in 5 millimetres of test water then wait 5 minutes until it dissolves. The tablet reacts with phosphorus and stains the water blue. The units are in mg/L (milligrams of phosphorus per litre of water).
- Bucket to collect water.
- Goggles and gloves to protect the eyes and hands when doing the phosphorus test.

- Waste container to put the old phosphorus test water into.

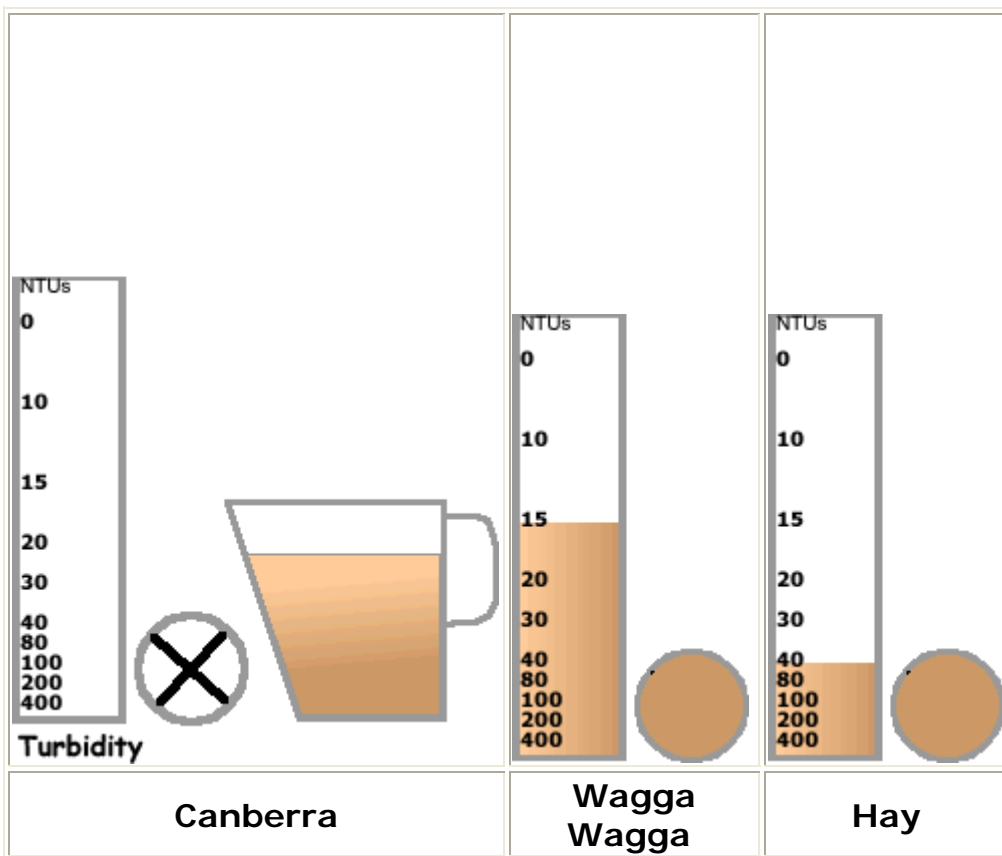
6. How I will make it a fair test?

- Are three test samples enough?
- Should they be collected in the middle of the river or near the edge?
- Should I collect them only once or should I repeat the tests several times over a year?

7. What happened? Look at the diagrams below and take your own readings.

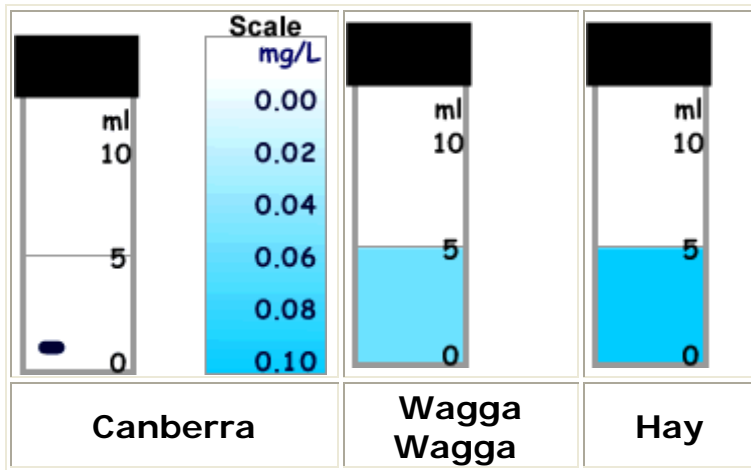
Turbidity Results

Pour water down the turbidity tube until the black cross on the bottom is no longer visible. The measurement units are called NTU's.



Phosphorus Results

Phosphorus tablet test, place a tablet in 5 millimetres of test water then wait 5 minutes until it dissolves. Compare the colour of the test water to the scale and estimate the amount of phosphorus in the sample



8. Was this what I expected?

9. Why did it happen?

10. What was difficult for me?

11. How could I improve this investigation?

12. How can I apply this knowledge?