Fertilisers for ponds 2

Algae are tiny organisms that live in pond water. You can only see them using a microscope but the more there are, the cloudier the water is.

Prediction

1 Do you think that algae will grow better if fertiliser is added to the pond water?
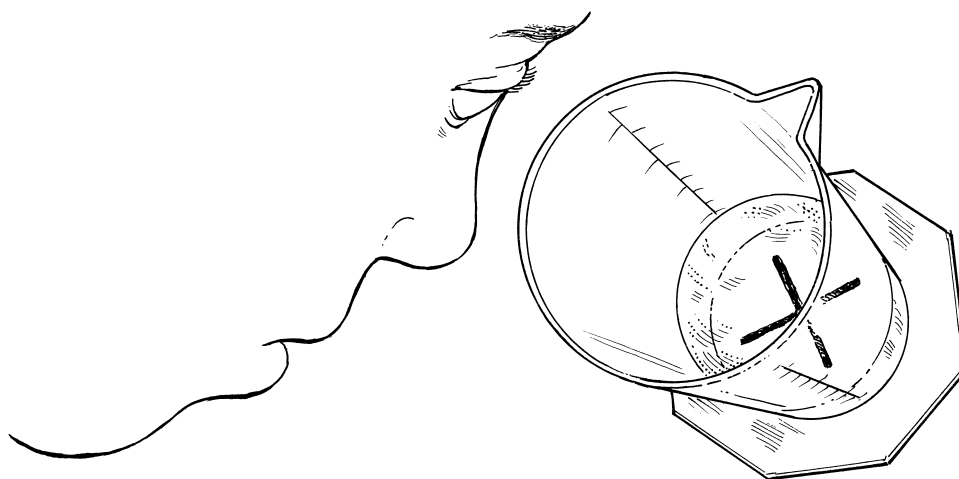
P

Apparatus

- **Four beakers**
- **Fertiliser**
- **Piece of white paper**
- **Measuring cylinder**
- **Pond water**
- **Pipette**
- **Pencil**

⚠️

Wash your hands after handling pond water.

Method

1 Fill each beaker with the same amount of pond water.

2 Do not add any fertiliser to one beaker. Add a different number of drops to each of the other beakers. Record how many drops you are adding to each one.

3 Place your beakers in a light, warm place.

4 On the piece of white paper, write an 'X' in thick pencil or marker pen.

5 After your algae have grown, put a measuring cylinder on top of your 'X'. Slowly fill up the measuring cylinder with water from one of the beakers until the 'X' just disappears. Write down how much water was needed to make the 'X' disappear. Repeat the measurement with water from the other beakers.

2 How many drops of fertiliser did you add to each beaker?

3 How long did you leave your experiment for?

Recording your results

4 Why does the 'X' disappear as you add the pond water?

5 Draw a table to show how much of each pond water was needed to make the 'X' disappear.

6 Draw a bar chart to show your results. The vertical axis should have 'volume of pond water (cm^3)' on it.

Considering your results/conclusions

7 What is the effect of adding fertiliser?

8 Do your results match your prediction? If not, explain how they are different.

Evaluation

9 What do you think would happen if you left your experiment for longer?

10 What do you think would happen if you added even more fertiliser?

11 How would you improve this experiment?

12 Try to find out what things are in the fertiliser that cause the effects you have seen.

S | knowledge, observing, presenting, considering, evaluating, research