

## 2<sup>nd</sup> experiment: Nutrients in water

# We share a sea. Diet for a clean Baltic

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In *We share a sea* the fisherman Poul Elo tells the children what damage the nutrients from the arable land do to the marine environment if they are washed into the sea. You may read page 16-21 again to repeat.

### This is what you need:

- 5 similar jars - a liter each
- Approximately 1 liter of sea water, lake water or water from an aquarium with plants and fish
- Liquid flower fertiliser (for experimental use - not allowed in organic farming)
- Measuring cup
- Self-adhesive labels and markers

### This is what you do:

1. Put numbers on the jars
2. Fill  $\frac{3}{4}$  liter of tap water in each jar
3. Add 10 ml of sea water or aquarium water to each jar
4. Add liquid flower fertiliser to the jars: Jar 1: no fertilizer. Jar 2: 1 ml. Jar 3: 2 ml. Jar 4: 5 ml. Jar 5: 10 ml.
5. Put lids on the jars, shake them and place them in the light for instance on the windowsill. Unscrew the lids and place them next to the jars to allow oxygenation the water.
6. Stir the water every day.
7. Now, observe what is happening and write down your observations in a logbook. Does the colour of the water change? Do you observe any sediment on the bottom of the jars? (take a look before you stir the water). What is the difference between the jars? Together with your teacher you should decide when to stop the experiment, but the jars must be left long enough for you to see significant changes.
8. Do not throw out the water when you have finished the experiment. You will need it for experiment 3

### Questions:

- What does your study show? Write about it and make a drawing.
- Check the label on the liquid fertiliser bottle: How much nitrogen (N) and phosphorus (P) does it contain? It is shown as a percentage.
- Calculate how much N and P you have added to each jar.
- What does your research tell about the relation between nutrients and the growth of algae?