

Exploring Plant Propagation, Water Quality and Pollution

Duration: 2 hours 

Learning objectives:

- Students will learn about wetland plant growth and propagation techniques including seed sowing and cuttings.
- Students will explore how to test the quality of water and learn about water pollution and its hidden impacts on plant growth and ecosystems.

Equipment provided:



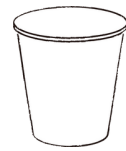
Wetland plant seeds and cuttings



Gloves



Pots for planting



Cups for cutting propagation



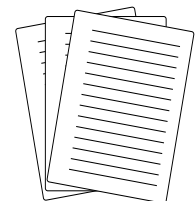
Compost



Watering cans



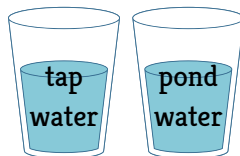
Nutrient test kits



Activity sheets



Stopwatch



Water samples

Part 1: Introduction (20 minutes)

1. Welcome and Introduction

- GroWet project officer to greet the students, provide a brief overview of the lesson and introduce the GroWet project.

2. Icebreaker Activity

- Engage students with a short activity to get them thinking about freshwater habitats and their significance. Example: Ask students to name as many different types of wetland habitats as they can in 2 minutes.

Part 2: Wetland Plant Propagation (30 minutes)

3. Seed Sowing

- Explain the concept of seed sowing and how it would occur naturally.
- Health & safety brief.
- Demonstrate how to sow wetland plant seeds in pots or trays.
- Have students sow seeds in their own pots.
- Class room experiment: Water half of plants with rainwater and half with tap water to see how this influences plant growth.

4. Cutting Propagation

- Introduce cutting propagation as an alternative method.
- Explain how to take cuttings from wetland plants and how to root them.
- Students to practice taking cuttings and helping them to root.
- Class room experiment: Place half of cuttings in rainwater and half in tap water to see if this influences plant growth.

10 minute tidy up

60
minutes

Part 3: Water Quality Testing & Water Pollution (40 minutes)

6. Introduction to Water Pollution and Water Quality Testing

- Introduce the concept of water pollution and its sources (hidden nutrient pollution from phosphate & nitrate).
- Discuss where pollution can come from, its sources (sewage, agriculture, industry, urban).
- Discuss how polluted water can negatively impact plant growth and the surrounding ecosystem.
- Explain the importance of testing water quality for environmental and plant health.

7. Hands-on Activity: Water Quality Testing

- Test water samples for invisible nutrient pollution using rapid colour change kits. Discuss what students expect the results to be.
- Record and discuss results. Are they what they expected to find?

Part 4: Conclusion and Reflection (10 minutes)

8. Review and Discussion

- Lead a discussion about what students learned during the lesson.
- Example questions: What are the key contributors to water pollution? What can we do to help prevent water pollution? Why is wetland plant propagation important for conservation?

10 minute tidy up

Optional homework activity (preparation for session)

In advance, students can be supplied with cups to collect water samples that can be tested in class during the school session. Samples could be collected from tap or rain water, or (with supervision) a garden or school pond, a local stream or river.

60
minutes