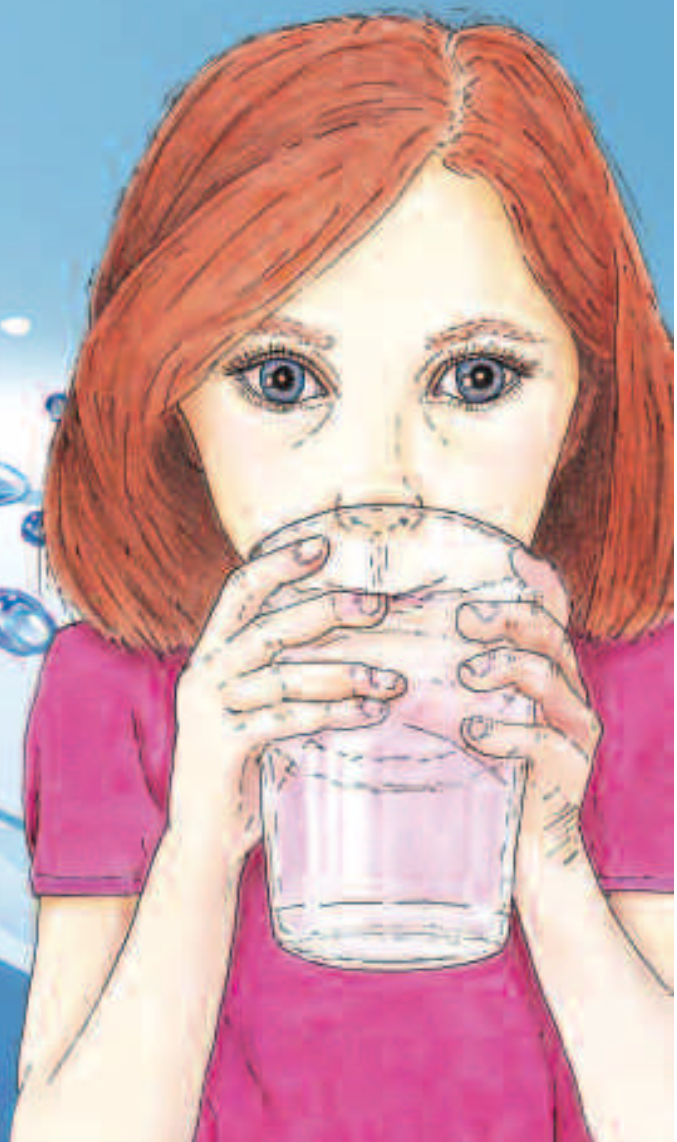
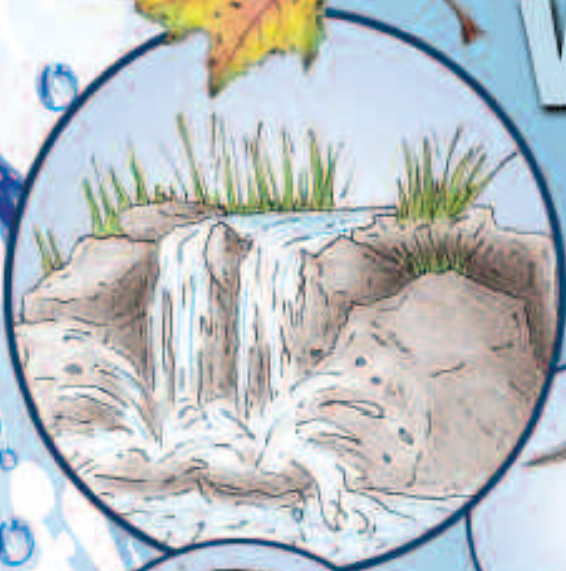
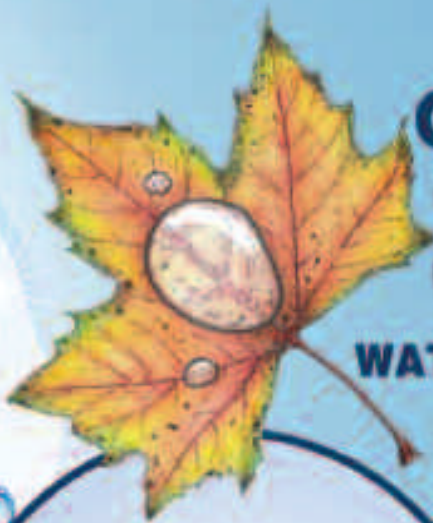


**OUR WATER,
OUR RESOURCE,
OUR RESPONSIBILITY**

WATER MANAGEMENT FOR THE 21ST CENTURY

WORKBOOK



Our Water, Our Resource, Our Responsibility - Water management or the 21st Century

Tutor Notes

Acknowledgements

The authors wish to acknowledge the National Heritage Council whose grant aid helped finance the preparation of this course. Conservation, Ontario provided us with a useful model through their excellent work in building water awareness in that part of Canada.

Adult and Transition Year Programme

Course tutor is provided with a CD with 12 presentations, tutor course notes designed to accompany the CD and this Course Activity Guide and Student Workbook. Course topics include:

Module 1: Water Matters

- Unit 1 – Water Resources and Water Protection
- Unit 2 – Global Issues and Water Conservation

Module 2: Water Management

- Unit 1 – Roles, Responsibilities and Legislation
- Unit 2 – The Water Framework Directive
- Unit 3 – The Local Authority – What's Happening

Module 3: Water Status

- Unit 1 – Current Status
- Unit 2 – How We Got Here

Module 4: Water and Biodiversity

- Unit 1 – An Introduction to Freshwater Ecosystems
- Unit 2 – Assessing Biodiversity

Module 5: Water Protection

- Unit 1 – Threats to Water
- Unit 2 – Control Measures
- Unit 3 – Protecting Our Drinking Water Sources

Support for tutors is provided by a website www.worldofwater.ie and The Ballybay Wetlands Centre, Co. Monaghan (www.ballybaywetlands.ie). This centre has a range of reference material, DVDs, field equipment and can arrange student field study days.

This Programme combines environmental studies, geography, computer skills, report writing, research activities, local history, civics, engineering and art. In addition, through the use of guest speakers or site visits, students can explore the range of job opportunities in environmental management.

How to get started:

The tutor should read the course notes in conjunction with presentations and remember the slides notes pages and references contain more information.

Guest Speakers

While planning the course activities check with your local authority, Regional Fisheries Board and Group Water Scheme to see if Environmental Awareness Officer, Heritage Officer, Water Services or Water Protection Personnel or Group Water Scheme Development Officer may be available to assist or advise you, act as a guest speaker or assist with a site visit.

Check if your local authority participates in the Junior Achievement Programme – check with Junior Achievement coordinator what this programme provides. Can the programme assist with the delivery of this course or parts of it.

Other public authorities, government agencies (listed in Module 2, Unit1: Roles and Responsibilities (notes pages) or third level colleges may offer advice or opportunities for site visits/guest speakers. Local industry or business may also undertake activities relevant to water management. It is important to discuss module and activity in advance with guest speaker.

Group Activities/Ice-breakers/Games

Water Relay Race!

Split into small groups for the water relay race! Each team member is given a spoon, straw, cup or sponge. Using the instrument of choice, have the teams compete to see which one can fill their container the fastest!

Musical Glasses!

This is a take on musical chairs! Label plastic drinking glasses (one less than the amount of players) with possible threats to source water e.g. improper use of pesticides, lack of buffer zones along river banks, leaky septic system etc.

The students should sit in a circle and, when the music starts, pass the glasses from person to person. When the music stops, the person (or people) not holding a glass takes a glass from their neighbour and steps out of the circle. Continue until there is only one person left, who is not a 'contributing threat' to source water!

Card Game with water related topics

Make up a bank of cards 10cmx5cm, with words/formulae printed on each that relate to water and water pollution. Ask the students to work in pairs, giving a bank of 5/12 cards to each pair. The cards are spread face down. In turn they each pick up a card, examine the word printed and then try to explain that word/formula to their partner (without saying any part of the word).The partner has to guess the word on the card based on the other person's explanation/description. For example a card with the symbol H₂O on it might be explained as follows: This is the symbol for water. There are two elements in it etc.

Health and Safety Issues

Consult your Science/geography teacher regarding precautions to be taken during field studies, handling water/contaminated water samples and use of equipment. Take appropriate care working near waterways.

Other Project Ideas

Groundwater/Well Model Making

TY Competition for

- Best web based research project – water related topic of your choice
- Best project on Water Quality in my County (or River Basin District) (use interactive mapping tools)
- Best field studies report.
- Best lake catchment model making
- Report on career opportunities in water management
- Best essay on global water problems
- Best site visit report (include photographs, process flow diagrams, map etc where appropriate)

Tutors Reading/Reference Material

- Water Matters - Have your say!
- River basin Management Plan (for your own area – check with your local authority)
- Groundwater Protection in Europe (European commission)
- Water Wise – Water is Precious – Let's Conserve it (Voice Ireland)
- Monaghan's Wonderful Wetlands (Monaghan County Council)
- See Something, Say Something, (EPA)