

Extension Activity

Extension Activity Title: Water and Wastewater Careers	Duration: Multiple periods
Introduction:	
<p>In this activity, students will learn about and research careers in the water and wastewater industry. Students will select a career option and research what is involved in the role, why the role is important and what skills, attributes and experience are needed for the role. There are many different roles as a water professional and students are encouraged to think about the possibility of working or studying in this field in the future. This activity works well after completing the Water Treatment Virtual Tour.</p> <ul style="list-style-type: none">• Suitable for grades 8-12	
Activity Set-up	
<ul style="list-style-type: none">• Have students watch one or more of the following videos:<ul style="list-style-type: none">○ Sampling Technician Matt – Gathering samples for detecting COVID-19○ Water Distribution Operator Jonathan○ Investing in Water• As a group, brainstorm professional water careers that the students may be aware of using the discussion starters below.• Have students select a role or career to research and learn more about. You can assign roles or students can select a role that it is interesting to them. Some resources that may be a useful starting point for research are:<ul style="list-style-type: none">○ Water and Wastewater in Peel○ OCWA's Dive into A Career in Water○ Work for Water○ Ontario Water Wastewater Certification Office○ Ontario: Drinking Water Operations: Training and Certification○ Walkerton Clean Water Centre – Entry-Level Course for Drinking Water Operators○ Exploring Careers in Water and Wastewater -AWWOA○ Industry Job Boards such as OCWA, Ontario Water Works Association, Canadian Water and Wastewater Association	
Background Information:	
<ul style="list-style-type: none">• Careers in water and wastewater are dynamic and exciting and offer individuals the opportunity to support their local community and provide an essential service. If you like problem-solving, working as part of a collaborative team and are looking for a career with a future and excellent pay and benefits, then a career in water and wastewater may be for you!• In Peel, staff from the Region and from the Ontario Clean Water Agency (OCWA) work on water and wastewater treatment. The Region has four lake-based water and wastewater treatment plants as well as smaller groundwater plants and wastewater pumping stations. Learn more about Water and Wastewater in Peel.• To be hired as an Operator (or Trainee), you need to obtain your Operator in Training (OIT) certificate. There are different types of certificates you need to get to operate in different water and wastewater systems. The higher the level of certificate, the more education and experience you need. Learn more about requirements and training.	

Class discussion with students:

- What kind of educational background or skills do you think you might need for a career in water or wastewater? Read out the following statements and have students reflect. If they answer yes to any of the following questions, a career in water or wastewater may be a great fit for them:
 - Do you enjoy problem solving?
 - Do you like math and science?
 - Are you drawn to help the environment?
 - Do you want a job with excellent pay and benefits?
 - Are you interested in a career that is dynamic and always changing?
 - Do you enjoy working outside and working with your hands?
 - Are you interested in working in your community and providing an essential service?
- What professional water careers do you already know about? Even if you aren't sure of the title of the job, what kind of roles or responsibilities might there be in water and wastewater?
- Does anyone know of someone that works in this field? What is their job like?
- Is anyone interested in this field? Why or why not?

Suggested Water Professional Careers:

Career	Short Description
Water Distribution Operator	Monitors and controls water supply and distribution
Water Treatment Operator	Monitors the equipment and facilities that are responsible for water treatment
Wastewater Treatment Operator	Monitor the equipment and facilities that are responsible for wastewater treatment
Wastewater Collections Operator	Monitors collection of wastewater and manages the system that transports it to treatment facilities
Environmental Control Inspector or Pollution Control Inspector	Inspect and investigate sources of pollution to protect the public and the environment, participate in spill prevention and response
Laboratory Technician	Perform laboratory tests on water/wastewater samples
Sampling Technician	Collect samples of water/wastewater for analysis
Water Quality Analyst	Analyze drinking water and ensure that all quality and safety standards are met
Project Manager	Manages large water/wastewater projects related to Health & Safety, Contract Admin, Analytics, Hydraulic Modelling, Source Water Protection, Assessments & Studies, Asset Management, Engineering
Engineer	Design, build or maintain water supply and water/wastewater treatment and distribution systems
Regulatory Compliance Personnel	Monitor all water/wastewater staff and systems to ensure they meet all regulatory standards
SCADA (Supervisory Control & Data Acquisition) Technician	Technicians are responsible for maintenance and operation of the SCADA software that is used to control largescale water and wastewater processes and data

Activity Wrap-up:

- Have students share their findings with the class (presentation, career profile, class discussion, role play, report)