

Who'll Keep the Lights On?: Canada's Nuclear Workforce

Why would a young person want a career in the nuclear industry?



overview

LESSON CONTEXT

The nuclear industry, like many other industries, has an aging workforce. Also, like other industries, the nuclear industry is not attracting nearly enough young employees to replace the “baby boomers” who will start retiring in large numbers in the next few years. If these retirees are not replaced, Canada will have difficulty maintaining, let alone increasing, its energy production.

LEARNING GOALS

- Transfers knowledge of careers to context of the nuclear industry.
- Communicate for different audiences and purposes using multimedia.
- Use vocabulary and terminology specific to careers in the nuclear industry.

LEARNING ACTIVITIES

In this lesson, students will create an awareness campaign for attracting young people to jobs in the nuclear industry.

BIG IDEAS

The retirement of baby boomers has the potential to make available many jobs in the nuclear industry, but young people need to be made aware of this opportunity.

assessment & evaluation

PRIOR KNOWLEDGE AND SKILLS

- Experience locating information using internet sources
- Familiarity with forms of communication favoured by youth (e.g. Facebook, Twitter, YouTube, etc.)
- Experience working in cooperative small groups

SUCCESS CRITERIA

- Students transfer knowledge of careers to context of a youth media campaign
- Students show interest in career possibilities within science and technology-related fields
- Students communicate for a specific purpose using vocabulary and terminology specific to careers in the nuclear industry

ASSESSMENT STRATEGIES

- Review of **Future Workforce Self-Reflection BLM**
- Assessment of **Youth Campaign Survey BLM**



time

50-65

MINUTES PLUS TIME
OUTSIDE OF CLASS



subjects








SCIENCE
CAREER STUDIES



skills

CRITICAL THINKING
COMMUNICATION

resources & materials required

-   **BLM – Careers in Nuclear Info Sheet** – one per student
-   **BLM – Future Workforce Self-Reflection** – one per student
-   **BLM – Youth Campaign Survey** – one per student
-  Curriculum alignment

- LCD projector or Interactive whiteboard
- Electronic device with internet access

minds-on

 15 MINUTES

- Begin with a class discussion about Canada's current labour force.
 - » *What do we mean by baby boomers?*
Baby boomers are part of the birth rate explosion (baby boom) that occurred just after World War II.
 - » *Do you know any baby boomers? What are they doing now?*
Students may have parents and grandparents who are baby boomers. Many baby boomers are now at retirement age or are in the process of retiring.
 - » *With so many people retiring, what do you think this will mean for jobs in Canada?*
There should be more jobs available, given current employment needs.
 - » *What could this mean for you?*
Answers could include less competition, easier to get a job, etc.
 - » *What careers do you think are available in the nuclear industry?*
- Using the LCD projector or interactive whiteboard, visit the Canadian Nuclear Association website and examine the [types of careers](#) available in the nuclear field. Have the students read over the list which highlights the incredible diversity of jobs in the nuclear industry, particularly the electricity sector.
- Discuss the types of careers and young people's knowledge of these careers. Questions for discussion can include:
 - » *How aware do you think young people are of these careers?*
 - » *Are you surprised to see any of the careers on the list?*
 - » *Do you think if young people knew about the looming retirements in the nuclear industry they would want to find out more?*
 - » *What would you like to know about the nuclear industry before deciding to work there?*



DID YOU KNOW?

In Canada, 50% of electricity generation workers will be eligible to retire within the next five to ten years.

action

 20 MINUTES PLUS TIME OUTSIDE CLASS

- Discuss the methods by which organizations reach youth.
 - » *How does anyone (a company, an industry, a cause) get its message out today?*
 - » *What do you think are the most effective ways of communicating with people your age?*
 - » *What are the key components of a good message?*
 - » *What are the key components of good graphics?*
 - » *What would a company put in its message if it wanted you to work for them?*
 - » *What would a company put in its graphics if it wanted you to work for them?*
 - » *What would convince someone your age to choose the nuclear industry over a different industry?*
- Explain that the small group task is to create a short and catchy awareness campaign to inform young people about the upcoming availability of jobs in the nuclear industry. The students will work in small groups to create a campaign which includes:
 - » a message which is no more than 50 words;
 - » graphics; and
 - » a mock-up of the message and graphics in the style of a particular communication vehicle (e.g. email, web page, Tweet, Facebook page, YouTube video, etc.) chosen by the group.

In order for the students to become familiar with the nuclear industry and to find out what companies in the industry are doing to recruit employees, have students read the **Careers in Nuclear Info Sheet BLM**.

IMPLEMENTATION OPTIONS

- Which aspects of the nuclear industry occur in your province? Have the students research where in their province they could work if they were interested in a career in the nuclear industry.

consolidation

 15 MINUTES

- Once the student groups have had sufficient time to complete their campaigns, bring the groups together and provide each group with time to show their campaign.
- As each group watches the other groups, they can fill out a **Youth Campaign Survey BLM** for the group (there are two surveys per page). In this survey students will rate how effective they found the message, the graphics and the method of communication of the group's campaign.
- As a class, discuss all of the campaigns. Questions for discussion could include:
 - » *Which campaigns were you most drawn to? Why?*
 - » *Did any of the campaigns focus on student programs such as high school co-ops, summer work study programs or apprenticeships?*
 - » *What other information would you have liked to see?*
 - » *Do you think these types of campaigns can make a difference?*
 - » *What would you do differently next time?*
- After the discussion, provide each student with a copy of the **Future Workforce Self-Reflection BLM**. On this page, each student will reflect on why he/she would or would not consider a career in the nuclear industry and identify the types of incentives he/she thinks would motivate him/her to consider a specific career.



DID YOU KNOW?

In 2016, nuclear reactors accounted for approximately 15% of electricity generation in Canada. In Ontario, nuclear reactors accounted for 59% of electricity generation in 2016.

additional resources

CANADIAN NUCLEAR ASSOCIATION WEB PAGES

- [Growing workforce](#)
- [Types of careers](#)

background information

[Retrieved August 2019]

- **Canadian Nuclear Careers – Canadian Nuclear Society**

This promotional pamphlet explores the people, careers and opportunities in the Canadian nuclear industry, with particular emphasis on attracting young people to the industry.

- **National Occupation Classification (NOC), Resources and Tools – Government of Canada**

The NOC is the authoritative resource on occupational information in Canada. It is used to understand the jobs found throughout Canada's labour market.

- **Job Bank, Exploring Careers by Essential Skills – Government of Canada**

Search hundreds of job profiles and access free and easy-to-use tools for employers and job seekers.

- **Ontario Skills Passport – Ministry of Education, Government of Ontario**

The Ontario Skills Passport (OSP) provides clear descriptions of the essential skills and work habits important for work, learning and life. The OSP offers high school students, teachers and counsellors resources and tools that help build competence, confidence and connections.

- **Career Page – Ontario Power Generation**

Learn about what it means to work at OPG and join the talent community to receive updates on new opportunities and company news.

- **Career Opportunities & Descriptions – Electricity Human Resources Canada**

This website provides workplace support on an array of subjects including recruitment and retention, training, apprenticeship and skills development, diversity and inclusion, career awareness, empowering futures, and the Green Job Program.