



## Nuclear Science Week is Oct. 19-23: What it is and what you can do

By Matthew Mairinger, North American Young Generation Nuclear Canadian Operating Officer

[Nuclear Science Week](#) is an international, week-long celebration to focus local, regional and international interest on all aspects of nuclear science. The week explores what it means to “Think Clean. Think Solutions. Think Nuclear.” We do this by educating the public on five pillars of nuclear science:

1. carbon-free energy,
2. global leadership,
3. transformative health care,
4. innovation and technology, and
5. Space Exploration.

Nuclear Science Week is a time to celebrate and learn about nuclear science. With the ongoing COVID-19 pandemic the public has seen the importance that science and communication plays in protecting lives. During #NuclearSciWeek we need to keep the current pollution and climate change issues front and centre – and learn how amazing nuclear power is at addressing these problems. I call on students, I call on teachers, and I call on the public - take some time to attend nuclear science week events to learn more about how nuclear can tackle the major problems of today. For those students currently in school – you are the ones who can truly change the future with nuclear fusion, small modular reactors, advanced isotope research, and a number of key areas – you are the future!

Although nuclear science often gets a bad reputation (probably from Godzilla, The Simpsons or other pop culture references), it is a useful and interesting technology with a lot of cool applications!

Did you know there was a naturally occurring nuclear “reactor” in Africa 2 billion years ago? It is referred to as the Oklo Reactor.

As an energy, it is really dense (72 thousand times more dense than any fossil fuel), space efficient (more than 100 times less land area usage than wind energy) and emits zero carbon (just like solar, wind and hydro).

What about the radiation? Radiation (or energetic particles) is all around us. You are radioactive! I’m radioactive! The ground is radioactive. You eat radioactive food every day. The air you breathe is radioactive. Radiation is natural and has always existed in nature. Your body cannot tell the difference between man-made radiation or natural radiation. The radiation from a nuclear power plant is miniscule (about 300 times less than the radiation you receive naturally every day).



What about the waste? Since nuclear energy is so dense, the waste is very tiny and can be contained (instead of being emitted via a smokestack like fossil). In fact, if you were to get your *lifetime supply* of energy from nuclear, the waste would fit inside a pop can.

### How to celebrate Nuclear Science Week

With the COVID-19 pandemic changing how we connect, the big event for NSW has gone virtual this year. [Tune in each day of the week to watch.](#) [Other events during NSW can be found here.](#)

During Nuclear Science Week, NAYGN will be launching an essay contest for high school students. Prizes include a laptop, so be sure to check our [website](#) or email [schooloutreach@naygn.org](mailto:schooloutreach@naygn.org) for details!

As in previous years, NAYGN will host a Post Card Push Day, which encourages our members (and all advocates for nuclear energy) to contact their elected officials and share their enthusiasm for nuclear technology. This year a GIF will be provided to post on Facebook. For more information, please contact [governmentoutreach@naygn.org](mailto:governmentoutreach@naygn.org).

If you are looking for inspiration, check out our [2019 slides](#) and our [2020 NSW webinar](#). You can also [read the Nuclear Science Week report here](#).

If you are a teacher looking to have a virtual classroom visit from a nuclear professional, please email [pi@naygn.org](mailto:pi@naygn.org)! We would be happy to talk to your students about nuclear science. You can also find fun and informative lesson plans on the [Nuclear Science Week](#) (including NAYGN's Global Fuel Cycle Game) and [TeachNuclear](#) websites.

You can also find some useful Canadian resources to educate and inform at the:

- [NAYGN Public Information Library](#)
- [NAYGN Student Outreach](#)
- [Knowing Nuclear series](#)
- [Energy Education](#)
- [Teach Nuclear](#)

Social media posts could include [Bright Future Baba Brinkman music video](#), which has an Ontario shout out at 1:38 and further reading in the video description or the [Climate Clash game](#) video. And don't forget to use the hashtag #NuclearSciWeek on your social media posts!

For adults, Fedoruk Centre and the Centre for the Study of Science and Innovation Policy are co-hosting [NuclearFACTS 2020](#). The eighth Annual Peer-to-Peer Forum allows Fedoruk Centre-supported researchers to report on the progress of their research, share research highlights and issues and discuss the impacts of their research including its benefits to Saskatchewan citizens. NuclearFACTS 2020 is Oct. 20 and 21, during #NuclearScienceWeek.



*Figure 1: NSW Student Job Fair*



Figure 2: NAYGN Classroom visits