



## Let's Talk Canadian Science: Unique STEM Research Shaping the Future

### Introduction:

Scientific research in Canada is helping tackle some of the world's biggest challenges today. From turning everyday waste into valuable resources to protecting wildlife in unique ecosystems, Canadian researchers are driving innovation and discovery. Their work shows how STEM can improve lives, safeguard the environment, and shape a more sustainable future – and how you can play a role.



In this symposium, students will hear from Canadian experts working in diverse research projects and learn how their work highlights Canada's leadership in science and innovation. As students explore the impact of Canadian research, they will consider this big question: **What makes Canadians uniquely positioned to help solve global challenges through science and research?**

Let's Talk Canadian Science is an opportunity for you to hear directly from Canadian experts and come up with your own answers to this big question.

The student handout is divided into three sections, designed to be completed before, during, and after the symposium.

### Before the Symposium - Research

In this section, students will reflect on what they already know and prepare questions to ask the experts. You might ask your students to rely on their prior knowledge to answer the questions, or use this as an opportunity for them to practice online research using our resource page. You can also use our [think-puzzle-explore teaching strategy](#) to support your teaching.

The student handout includes the following questions:

1. What scientific discoveries or innovations has Canada contributed to the world?
2. Which areas of science do you think will be most important for Canada's future?
3. What question would you like to ask one of our speakers?



### **During the Symposium - Active Listening:**

In this section, students will listen actively to the experts and relate what they are saying to our big question. The student handout includes the following questions (short answers only):

According to Dr. Ying Zheng:

1. What is one thing household waste can be turned into through chemical engineering?

According to Dr. Todd Shury:

2. What is one way the Bison Integrated Genomics (BIG) project is helping protect bison?

According to Dr. John Sandlos:

3. What is one type of professional who works in the mining industry? What do they do?

Your students' question(s):

Experts' answer(s):

### **After the Symposium - Reflection:**

In this section, students will reflect on what they have learned and revisit their answer to our big question. You could use our ["Step in, step out, step back" teaching strategy](#) to support a debate in the classroom or use our ["Plus, minus, interesting" teaching strategy](#) to help students draw conclusions.

The student handout includes the following questions:

1. What is one surprising thing you learned from the experts?
2. How has your view of Canadian science changed?
- 3. What makes Canadians uniquely positioned to help solve global challenges through science and research?**

