

TEACHER PROFESSIONAL DEVELOPMENT PROGRAM

# Mining in Alberta

November 1-3, 2018 | Edmonton - Hinton

An experiential learning event for educators to gain first-hand information about Alberta's mining sector



# Introduction

**Inside Education** developed the 2018 Mining in Alberta education program for teachers to explore what mining means for the province of Alberta, Albertans, and the classroom. The program was designed to guide participants through the full spectrum of mining from Alberta’s geology to the full processes of mining from exploration to reclamation as well as the multiple perspectives that influence our economy, environment, and society. The program aimed to build awareness and understanding of the mining sector and provide teachers ideas and resources to enhance natural resources education in the classroom.

Building upon 33 years of experience designing experiential education programs using a multiple perspectives approach, Inside Education endeavored to provide teachers with a comprehensive overview of mining in Alberta through speaker sessions, tours, workshops, and learning materials.

We are excited to share the outcomes and impacts from this unique teacher professional development program through this summary report. The demand for this program in addition to overwhelmingly positive feedback from teacher participants indicates a strong desire for future mining education initiatives in Alberta.



# The Program

Through this dynamic program 28 educators:

- **CONNECTED** with the people, places, and perspectives that give insight into Alberta's mining sector
- **DISCOVERED** how industrial mining operations work through tours of laboratories and active mine sites.
- **PARTICIPATED** in a unique professional development opportunity that modeled a hands-on, experiential and inquiry-based approach to learning
- **CONSIDERED** issues and innovations through discussions with mining experts representing multiple perspectives
- **CREATED** lasting networks with like-minded educators from across the province
- **ENHANCED** their lessons with current, accurate and meaningful mining content that will engage future generations of environmental stewards

Working with industry experts Inside Education developed a dynamic program that exposed teachers to on-the-ground operations and innovations representative of the mining sector in Alberta. From touring a metallurgical coal mine to a post-secondary research centre we created a one-of-a-kind education event that inspired conversations, ideas and classroom connections.

## PROGRAM THEMES

- **The Process of Mining** - Exploration to Reclamation
- **Mining and the Environment** - Climate change, groundwater, land use
- **Careers in Mining**
- **Mining Education Tools & Resources**

## PROGRAM AT A GLANCE

| <b>Thursday, November 1</b>  |
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| <p>Introduction &amp; Getting to know each other</p> <p>An Overview of Alberta's Geology</p> <p>The what, why and how we mine in Alberta</p> <p>University of Alberta - Engineering Lab Tour</p> |
| <b>Friday, November 2</b>  |
| <p>Teck Metallurgical Coal Mine Site Tour</p> <p>TransAlta Thermal Coal Reclamation Tour</p>   |
| <b>Saturday, November</b>  |
| <p>Land, Air, and Groundwater Mining and the Environment TedTalks</p> <p>Education Workshop featuring Mining Matters</p>   |

## The Participants

The 2018 Mining in Alberta Program attracted many high-quality applications from which Inside Education invited 28 highly engaged educators with varying level of experience incorporating mining topics into their classroom. This group represented both formal and non-formal educators working with students from Grade 2 through to Grade 12. As this was the first program of its kind offered by Inside Education, we can only expect that demand will grow as the success of the program is shared through education networks.

One of the goals of the program was to create a network of educators that are working together to incorporate mining education lessons within the Alberta school system. The survey results suggest that the opportunity to discuss classroom connections with colleagues from across the province was a highly valuable component of the program and this network will go a long way toward supporting program participants.

**Kevin Andersen** | Parkland Composite High School, Edson  
**Michelle Andersen** | Pine Grove Middle School, Edson  
**Susan Chalmers** | Sherwood Park Next Step, Sherwood Park  
**Christina Cleland** | Patricia Heights Elementary, Edmonton  
**Kerrie-Ann Dalstra** | Gateway Christian School, Red Deer  
**Corey Fester** | J.J. Nearing, St. Albert  
**Ellen Gasser** | Heritage Park, Calgary  
**Sylvia Harnden** | Heritage Park, Calgary  
**Maxine Hildebrandt** | Mother Earth's Children's Charter School, Warburg  
**Kim Hula-Hetu** | W.P. Wagner High School, Edmonton  
**Julie Hur** | McKenzie Highlands School, Calgary  
**Diana Kurila** | Mount Royal, Calgary  
**Amanda Langford** | Landing Trail School, Gibbons  
**Jennifer Lasychuk** | Leduc Composite High School, Leduc  
**Carla Lowther** | Baldonnel Elementary School, Fort St. John, BC  
**Ann Lukey** | Leduc Composite High School, Leduc  
**Kelly McBride** | Mining Matters, Toronto  
**Melissa McQueen** | Christ the King School, Calgary  
**Harriet Minc** | University of Calgary, Calgary  
**Roger Moore** | Norquest College, Edmonton  
**Glenn Newby** | John Barnett, Edmonton  
**Laurie Phillips** | Terrace Ridge School, Lacombe  
**Amanda Rose** | Alberta Chamber of Resources, Edmonton  
**Lorna Rye** | Chiniki Community College, Morley  
**Cathy Samson** | Hughenden Public, Hughenden



## Partners, Expert Guests, and Tour Hosts



We extend deep thanks to our program partners for their laudable support of the 2018 Mining in Alberta Program. Participants voiced their appreciation for making the program such an accessible opportunity and everyone expressed gratitude at being provided a full scholarship to attend the program. A special mention to the Alberta Chamber of Resources and their Mining Industry Advisory Committee (MIAC) for providing essential guidance, speaker recommendations and connections; and teachers were most appreciative for the additional funding directed towards Mining Matters for the Dig Deeper Education Kit. Inside Education is proud to work with partners committed to excellence in natural resource education.

*"This is one of the **BEST PD** sessions I have ever attended. Money in education for anything is not always accessible or even enough. Your sponsors for your programs are a gift to teachers and the education of our students. " - Jen*

**A SPECIAL THANKS TO THE FANTASTIC EXPERT SPEAKERS AND TOUR HOSTS, THEIR COMMITMENT TO ADVANCING ENVIRONMENT AND NATURAL RESOURCES EDUCATION IS GREATLY APPRECIATED.**

**Dean Rokosh** - Alberta Geological Survey

**Brad Anderson** - University of Alberta

**Jennifer Burke** - Suncor

**John Sammut** - University of Alberta

**Ciaran Thompson** - Teck

**Kayleigh Montgomery** - Teck

**Dan Kuchmak** - TransAlta

**Cheryl McNeil** - TransAlta

**Jessica Liggett** - Alberta Energy Regulator / AGS

**Gary Redmond** - West Central Airshed

**Adean Alessandrini** - CPAWS – Northern Alberta

**Kristy Chan** - DiscoverE

**Nicole Paskar** - CPAWS – Northern Alberta

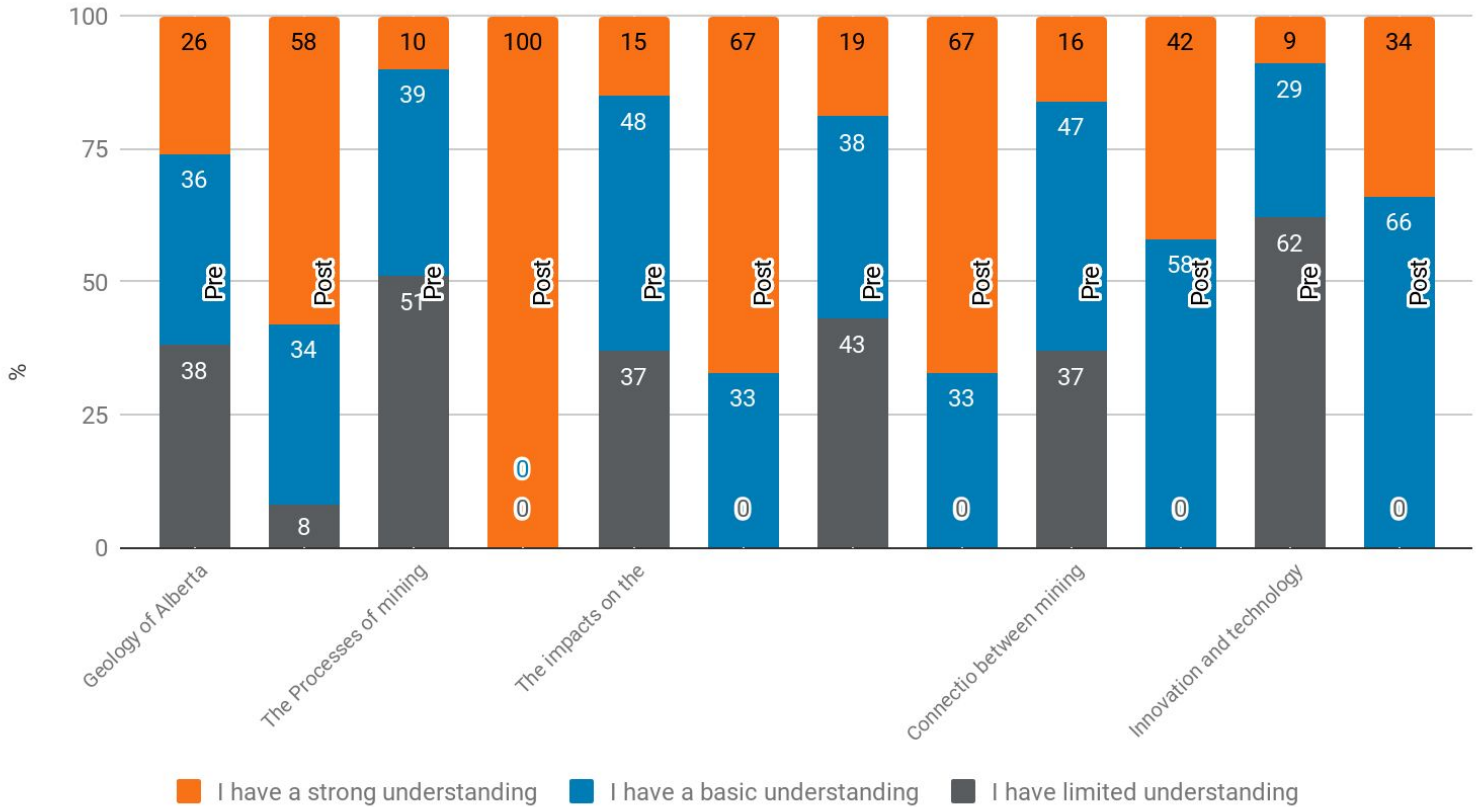
**Kelly McBride** - Mining Matters



# Program Impact and Feedback

Inside Education is proud of the many success of the Mining in Alberta Education Program. The follow-up survey results indicate that it was an exceptional learning experience that will translate into meaningful classroom impact. Inside Education estimates that over **>3000 a year will benefit from the experience of the teacher participants** as they infuse their learning into their lessons. We are pleased to share our program feedback below.

Understanding of Mining Topics Pre Program vs. Post Program



# 100%

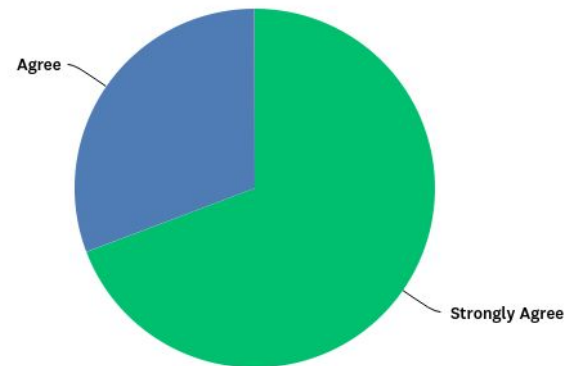
*“This is my favorite type of PD - hands-on, interactive, experiential”*

- *Kelly McBride*

After participating in the program 100% of survey respondents indicated that they have increased confidence bringing mining related topics into their classroom.



**THIS PROGRAM HAS ENHANCED MY TEACHING AND WILL HELP ME PROVIDE INFORMATIVE, ACCURATE, AND HIGH-QUALITY LEARNING EXPERIENCES FOR MY STUDENTS**



“There is a greater emphasis on environmental stewardship than the Media would have us believe. Great advances in responsible resource management have been made in the past thirty years or so. All of the presenters took this **RESPONSIBILITY** very seriously.”

- Sylvia Harnden





## Classroom Connections

Below are just some of the ways teachers are incorporating the content shared on the program into their lessons.

*“Students have been taught for a long time that anything that produces greenhouse gases and pollutants is bad and should be stopped immediately. It’s very rare for a class to have a more in-depth discussion about what does that mean to us and to the community. When I got back from my PD and asked students what they know about mining, a lot of them said: “it’s bad”. This made me realize the importance of bringing in different perspectives during class discussions, and the PD showed me that there are so many resources that relate to where we live I could use to do this successfully.”*

**- Julie Hur, Calgary**

*“My colleagues and I are creating a historic coal mine tunnel exhibit and developing associated programs, displays, and signage. This PD has given us information and resources to make the project relevant to today’s children as we look at the past, present and future of mining in Alberta”*

**- Sylvia Harnden, Calgary**

*“I teach an AP Environmental Science Class. We will use the content from this program for our course and we will use the contacts to **ENHANCE** our field trips in the Edmonton and Jasper areas.”*  
**- Kevin Andersen, Edson**





*Teaching Grade Three, there is so much that is applicable to the curriculum. I will be revisiting the unit just to use some of the resources that were given."*

**- Christina Cleland, Edmonton**



*"The posters went up on the classroom walls first day back. Discussed Alberta's current and future diverse resource economy. Discussed post-secondary, job and career opportunities (gr 11 and 12s)"*

**- Dr. Ann Lukey, Leduc**



*"Knowledge of mining processes will greatly improve my Planet Earth unit in Science 7. The minerals kit will also be a great hands-on addition to my program. I can also use some of the career information to encourage my CALM students to explore new possibilities"*

**- Cathy Samson, Hughenden**

## “ Ah-Ha Moments ”

*"Thank you so much for such an amazing PD experience. The amount of information and questions I have walked away with leave me so excited to get back to the classroom and keep plugging away with helping our students grow, learn, and shape the future!"*

**- Corey Fester, St. Albert**

*"I feel so much more informed about the mining industry in Alberta, but also all the environmental controls that are in place to protect our province."*

**- Cathy Samson, Hughenden**

*"I can't wait to get back to my students to share with them, inspire them, and make them more curious and more critical thinkers and better humans."*

**- Kim Hula-Hetu, Edmonton**

## Summary and Futures

Inside Education is thrilled by the outcomes of the 2018 Mining in Alberta Teacher Professional Development Program and we received an overwhelmingly positive response from participants. We are currently working on complementary student programs and teaching resources to embed mining into Inside Education’s full suite of programs. We expect demand for mining programs and resources to grow as teachers share their knowledge, ideas, and experience with their colleagues from across Alberta. We are committed to developing high-quality learning opportunities to support mining education in Alberta. Inside Education recognizes that mining is an important area of study for today’s students; the key to creating a generation of informed stewards and decision makers.

### Contact

For More Information Contact:

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