Where's That Mine of Mine Intro Activity

Introductory Class Discussion

Ask the students what they know about mining. How are their lives affected by mining? Could they live without it? What do they think life would be like without mining? Ask them to identify things in the classroom, their homes and in their possession that come from mining. Even more challenging: Ask them to identify things that are not made with, made by or processed with the products of mining.

If there is active mining in your area (don't forget aggregate mining!), ask (1) if they know what is mined locally and if they know how it is used and (2) if any of their parents are involved in the mining industry, and if so what they do. Ask them what sort of jobs they think exist in mining. Would they be interested in working in the mining industry? Why or why not?

Class Activity

Watch the video "**Ground Rules: Mining Right for a Sustainable Future**" (22-min) to learn about the challenges being addressed by modern mining.

English version:	https://youtu.be/CWt36I8JgVQ
Additional languages available at:	https://www.youtube.com/catgroundrules

About the film

"Ground Rules: Mining Right for a Sustainable Future" is a documentary film created by Caterpillar and Science North. It follows the development of new and operating mines as geologists, engineers and mine managers tackle complex problems. It draws on the experiences and achievements of modern mine sites to illustrate creative and core concepts of sustainable development and social responsibility. It does not endorse any companies or products, nor does it engage in debate over past mining practices or climate change.

Post-Film Discussion

Incorporate Key Concepts and Vocabulary (above) while you discuss the film and mining in general.

Ask Students:

What did you learn about the nature of mining? What, if anything, surprised you?

Based on the film, where does mining take place? (All over the world) Some mining appears to take place in some pretty remote areas where conditions are harsh. Why do you think that is? (We have to mine where the minerals are found and most economically and safely extracted from the Earth in a sustainable manner.)

What sort of challenges does the film identify for mining? (Examples: Engineering, safety, environment, social impact, sustainability.) If challenges can't be overcome, what happens? (The mine may not be built.)

What sort of safety precautions did you observe in the film? (Examples: Use of guard rails, seat belts and hand-holds, PPE (helmets, safety vests, hearing protection, gloves, etc.), safety checks, warning lights, automated operations taking place away from humans, etc.)

Name some of the minerals and elements identified in the film. (Iron, aluminum, gold, copper, gypsum, clay, silica, lead, lithium, cobalt, salt, nickel, calcite, talc, etc.)

Describe some of the steps taken before opening a mine. (Exploration, road building, community involvement, training of people, construction of housing for mine workers, planning for the closure of the mine and reclamation.)

What are some possible career fields in mining? (Engineer, geologist, physicist, chemist, environmentalist, medical professional, machine operator, accounting, roboticist, IT professional, data analyst, etc.)