

COPPER CONNECTS US



Educator Guide | Grades 6–12

Copper Connects Us: Video Topic Series

Discovery Education has partnered with Freeport-McMoRan to create an interactive educational program for students grades 6–12 that explores the use of metals such as copper in our everyday life and provides students a deeper understanding of today’s hard rock mining industry. The initiative equips educators, students, and families with dynamic resources designed to give students a front-row seat to nature’s geological wonders and inspire further exploration of the world around them.

About the Video Series

Throughout *Copper Connects Us*, a five-part video topic series, students will explore copper—the natural resource essential for helping the world meet its future environmental, economic, and societal needs. They will discover how this critical resource plays a role in everything from turning on a light switch or making a call on a cell phone to driving an electric vehicle.

Classroom Use

Each video in this five-part topic series is paired with a classroom activity lasting 30–45 minutes. The activities are designed to bring students into the world of mining. Students will use the videos as inspiration while they work through the various activities and hands-on experiences.

Each activity is presented using the following sections:

- **Engage:** Students will begin with an introductory explanation or discussion that introduces them to the video’s main concepts.
- **Investigate & View:** Students will watch the video using guided notetaking activity handouts to enhance their understanding.
- **Apply:** students will have the opportunity to apply their learning to unique and engaging situations.

Each video and accompanying activity focuses on an element of copper mining that will lead students to a better understanding of the power of copper.

Video & Activity Overviews

Video & Activity 1: Overview

In this special Overview segment, students will be introduced to what copper is and what it is used for, as well as the important role it plays in connecting our world. The accompanying activity will reinforce and extend learning from the video and allow students to further explore some of the many ways copper is used. Students will create an infographic to visually represent how copper unites and connects us.

Video & Activity 2: Energy

In this video, students will learn about the importance of copper’s conductivity and the high demand for copper as the world strives to reduce greenhouse gas emissions. The corresponding activity will guide students in creating simple circuits as they investigate copper’s conductivity in real life. It also will extend learning from the video as students perform research to better understand exactly how copper and its conductive properties are used in sustainable innovations.

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Video & Activity 3: Innovation

The third video presents the techniques and technologies used in copper mining to enhance safety, efficiency, and sustainability. The accompanying activity will deepen students' understanding of copper leaching through a hands-on activity and discussion, as well as allow students to explore copper innovations that improve sustainability, increase safety and efficiency, and advance technology.

Video & Activity 4: Sustainability

In this video, students will explore the natural resources used and affected by the hard rock mining process, as well as the steps the industry is taking to minimize environmental impacts and replenish these resources. The corresponding activity will reinforce and extend learning from the video as students further investigate sustainability and create a comic that educates others about sustainable mining practices to inspire them to make sustainable choices at home and school!

Video & Activity 5: Community

In the final video, students will learn about the community members who are critical to the mining industry and to improving communities with copper. The accompanying hands-on activity challenges students to think more deeply about the impact companies and industries can have on communities and the people who live in them.