

# Diversity in STEM Teaching



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## Smart Metal Rally

The teaching project with three ways of processing

Many critical metals are used to produce smart products in the world. Is it *smart* communication at all?

This teaching project called Smart Metal Rally had an interdisciplinary approach to understand the role of metals in IT-related products.

### Metals in modern technology

#### Niobium, Nb

Niobium is a light grey, crystalline, soft and ductile transition metal. Pure niobium has a Mohs hardness rating similar to pure titanium and it has similar ductility to iron.

Biggest producers are Brazil and Canada.

Niobium is used in alloys including stainless steel, conductors and capacitors.



### Ethical discussions of sourcing elements



Smart Metal Rally was driven by three disciplines:

- Chemistry 
- Information Technology 
- Drama 

The project had five checkpoints:

- foundation
- metals in modern technology
- ethical discussion of element sourcing
- AI-assisted theatrical interpretation
- reflection and review



The project introduced students to international project management and communications tools, like Trello and Slack, equipping them with real-world skills that transcend classroom and state boundaries.

