Mining and Environmental Education Modules

Assessing Need
- 10% of the U.S. energy reserves
- 30% of coal west of the Mississippi
- 50% of potential uranium reserves
- Nearly all uranium mining operations occur on tribal land

- 2 million acres of tribal land
- 15 million more acres of tribal land are potential lands for resource extraction
Mining and Environmental Education Modules

Carine Lechner-Koch

Next Steps

- Gain feedback from local tribal communities
- Continue teaching at Tohono O’Odham Community College
- Present at the Society for Mining Metallurgy and Exploration (SME) in February
- Further develop partnerships with tribal colleges and universities

Acknowledgements

This work is supported by the University of Arizona, School of Earth, Atmospheric, and Planetary Sciences, and the Center of NanoScience and Nanotechnology (CNNS) at the University of Arizona. Special thanks to the Tohono O’Odham Nation for their support and collaboration.

Bibliography

[List of references related to mining and environmental education modules]
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Project

The Mining and Educational Modules project is a partnership between University of Arizona and Tribal Colleges.

Develop mining and environmental educational modules for tribal colleges to enhance the understanding of:
• Mining and processes
• Environmental impacts
• Remediation techniques
• Sociocultural impacts
Mining Education

Objectives

1) Enhance the understanding of mining processes, mining-induced environmental and sociocultural impacts, and remediation techniques.

2) Explain the history and current status of mining on tribal lands.

3) Apply what is learned to environmental challenges the tribal nation faces.

4) Continue to build partnerships with tribal colleges and universities.
Methods

Four educational mining modules were developed including:
1) Copper mining and processes
2) Environmental impacts of mining
3) Reclamation
4) Socio-cultural impacts of mining

Modules contain:
- instructional guide
- power point
- activities
- field trips
Results

Sociocultural Impacts

Reclamation Approaches

Mineral Effluents

Mining Phases

- Mining on Tohono O'odham land

- CU Process

- Results

- Reclamation Approaches

- Mine Effluents

- Mining Phases

- Sociocultural Impacts
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Superfund Research Team
Acknowledgements

This work is supported by the University of Arizona NIEHS Superfund Research Program Grant P42ES04940 and the Center of Environmentally Sustainable Mining which is funded by the University of Arizona Technology and Research Initiative Fund through the Water Sustainability Program.
Bibliography


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Acknowledgements

This work is supported by the University of Arizona Project Interdisciplinary Program in Sustainability and the Center for Environmental Education and Sustainability.

Prezi

Bibliography

Resources
- Mining and environmental education modules at Tohono O’Odham Community College
- Environmental education programs at tribal colleges and universities
- Collaboration with local tribal communities for environmental education initiatives

Prezi

Mining Education

Visualizations

Strategies
- Incorporate interdisciplinary and sustainability perspectives
- Use case studies and real-world examples
- Engage with local tribal communities
- Develop partnerships with tribal colleges and universities

Prezi

Project

The mining and environmental education modules at a partnership between University of Arizona and Tohono O’Odham Community College.

Development and implementation of environmental education modules for tribal colleges, focusing on environmental sustainability, mining practices, and community engagement.

Establish partnerships with local tribal communities and universities for continuous improvement in environmental education.