

KANSAS HISTORY: MINING

Essential Question: How have humans changed the geography of Kansas?

The late 1800's and early 1900's were the peak of mining in Kansas. Students can take a trip back in time to learn about how important natural resources like coal were mined and understand how the mining of the past impacts Kansas today. Teachers will be asked to provide a Hostess-type cupcake per student.

Kansas College and Career Ready Standards for Science:

4-ESS3-1 - Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

Materials (for each student)

- plate or paper towel
- plastic knife
- pencil
- cupcake w/ cream center - Hostess style (does not have to be that brand though)
- 1 clear straw
- lab sheet

For sanitary reasons, please have students wash their hands prior to the start of the program.

Activity: Overview of Kansas mining

Activity: Strip Mining Lab

Materials: cupcake w/ cream center, plate, scissors, plastic knife, 3 straws, metric ruler, lab sheet, pencil

Attached is a brochure from the Miners Hall Museum in Franklin, Kansas about a traveling trunk they have available for check out. If you are interested in it please contact the museum directly.

Program Connection Information

Please use an external microphone (conference style) rather than the integrated one in the computer for the audio for your class and locate it centrally in the room. It can be difficult for the Greenbush teacher to hear the students using the computer microphone and therefore it reduces the interactive nature of the lesson. It is fine to use the computer webcam for your video source though.

All classes will take place using Zoom desktop video. If your building is already set up to use a desktop video application with a computer, simply open a browser and enter <https://zoom.us/j/3662120241> in the URL space. You may need to download Zoom launcher software (free download) if you don't already have it. This needs to be done in advance of the lesson.

If using a Polycom video conferencing unit (or any legacy type video conferencing unit) to connect to a ZOOM conference, make sure the unit is in "encrypted mode" then dial the following IP on the internet: 162.255.37.11 or 162.255.36.11 and once connected, they will ask for a MEETING ID: enter 3662120241 (for Sharon at Science Center).

It's always a good idea to touch base with your district technology facilitator prior to your program to make sure all systems/equipment are in place and operational and no firewalls that might prevent you from connecting to Zoom.

Classes take place at the following times:

9:00-9:45
10:00-10:45
12:15- 1:00
1:15-2:00
2:15-3:00

If you log in during one of those times, you may connect during another class' lesson. If you do, please check your connection to make sure things are working properly and then leave the meeting until your scheduled time by selecting "End Meeting" in the lower right corner of your Zoom screen and click on "End Meeting". You will need to rejoin the meeting at your scheduled time. This prevents your site from interfering with the lesson currently in progress. After your lesson is finished, please leave the meeting.

If you have questions, please call Sharon Bertolio at Greenbush (620-724-6281).



Strip Mining Lab

Name _____

Materials

*cupcake w/ cream center
*paper towel or plate

*plastic knife
*1 clear straw

Procedure:

1. Find Exact Location of Mineral - Take Core Samples: Plunge the straw into the top of the cupcake until you reach the bottom. Twist the straw slightly and pull it out. Take at least 2 core samples. You are trying to find the cream center, which represents your valuable ore.

Hypothesize where do you think the valuable ore is located:

3. Remove Overburden & Extract Mineral: In mining, the overburden is waste earth & rock covering a valuable mineral deposit. Using your knife as a mining tool, carefully remove the overburden & extract your mineral ore.

Evaluate the accuracy of the hypothesis you made using core samples.

4. Mine Reclamation: Replace Overburden & Study Effects on Mine Area: Carefully replace the overburden to reclaim the land. Try to make it realistic... true soil and rock will settle completely, and will not allow any caverns or empty spaces.

Does the area mined look the same once the mineral is extracted? What differences do you notice?

Argue your point: Is it important to reclaim mined land or is it an expensive process that has little benefit?



Contents of "Coal Camp Voyage"

Frequently Asked Questions?

- What is the cost of the trunk?
"Coal Camp Voyage" is loaned free of charge.
- How do I reserve the trunk?
You may contact Alan Roberts, Education Committee Chair alroberts@pittstate.edu or (913) 717-7190.
- How long may I keep the trunk?
You may keep the trunk for up to two weeks.
- When or where do I pick up the trunk?
The trunk will be delivered to Your school or organization by one of our Education Committee Members or Collections Manager.
- What grade level is the trunk?
The trunk is set up to be utilized by all grades from K-12, post-secondary audiences as well. A college class or civic organization is welcome to reserve the trunk.

Contact Us:

Phone: (913) 717-7190

Email: alroberts@pittstate.edu

Web: www.minershallmuseum.com



"COAL CAMP VOYAGE"

Miners Hall Museum
701 South Broadway
Franklin, Kansas 66735
(620) 347-4220



"COAL CAMP VOYAGE"

Traveling Trunk Program brought to you by Miners Hall Museum through a grant from Community Foundation of Southeast Kansas



“Coal Camp Voyage” will tell the story of coal mining in Southeast Kansas. The students will learn about working in a mine and the lifestyle of the miners and their families. The coordinating materials involved with the artifacts in the trunk allow teachers to utilize this learning experience in their classroom.

Traveling Trunk Includes:

- Coal Miner’s Hat
- Coal Miner’s Lunch Bucket
- Iron
- School Bell
- Glass Ink Well
- Milk Can
- Coffee Pot
- Coalfield Map
- Chunks of Coal
- Carbide Lamp
- Slovenian Bonnet
- Family Tree Sheets
- Coloring Sheets, Word Searches, etc.
- Notebooks Containing Narratives to Accompany Coal Mining Categories



“Coal Camp Voyage”

“Coal Camp Voyage” is brought to you by Miners Hall Museum through a grant from the Community Foundation of Southeast Kansas. If you or other teachers of your school are interested in our Traveling Trunk program please contact, Alan Roberts, Education Committee Chairman, at alroberts@pittstate.edu or (913) 717-7190.