

ALBERTA ENVIRONMENT

Coal Mining - Life and Times



Alberta
ENVIRONMENT

Kananaskis Country

This publication is part of a series of field study programs produced by the Environmental Education Program of Natural Resources Service in Kananaskis Country and Fish Creek Provincial Park. The publications have been written to address the mission of Alberta Environment and increase students' environmental awareness, understanding, interaction and responsibility for the natural world in which they live.

The publications are developed in a close working relationship with teachers, community educators and program writers. Programs focus on the areas of environmental education, science, social studies and language arts. They are also developed to emphasize elements of environmental literacy, lifestyle, and citizenship.

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Coal Mining - Life and Times

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1.0 OVERVIEW

1.1 AT A GLANCE

TOPIC

Coal mining and resource extraction

PROGRAM LEVEL

Focus on Grade 4 (with modifications, Grades 3-5)

TIME REQUIRED

varies

STAFF REQUIRED

Coal Mining - Life and Times
is an indoor program and
can be carried out in a
normal classroom setting

BEST SEASON

Any time



1.2 PROGRAM SUMMARY

In this program, students participate in a variety of activities which will help them understand the process of coal mining and the life of a coal miner in the early 1900s. Students first mine in containers of sand to find “minerals” buried there. This is followed by a discussion on the similarities between their mine and a real mine. Students then take part in a readers' theatre entitled “*A Day in the Life*”. This readers' theatre provides them with information, vocabulary and interesting aspects of life as a coal miner. This is followed by a board game called “*Gangway*”, a game in which students encounter some of the difficulties experienced by an underground coal miner.

At the conclusion of the study of *Coal Mining - Life and Times*, the class can show what they have learned by undertaking individual or group projects.

This program is the second of three written for grade four students. The programs can be used separately or in a series as follows:

- Mountain Resources
- Coal Mining - Life and Times
- Towns of the Bow Valley

Mountain Resources is an analysis of the different types of economic deposits currently being extracted in the Bow Valley, while *Towns of the Bow Valley* examines the communities that have sprung up over the years in the Bow Valley as a result of these deposits. Each of these programs tie into the themes and objectives outlined in the Alberta Curriculum for grade four social studies, science, and language arts. The main topics covered are rock resources, resource availability and use, and how resources have effected settlement patterns.

1.3 CURRICULUM TIE-INS

These materials can be used to assist in fulfilling curriculum requirements in the following subject areas of the curriculum:

Subject	Topic Area - Curriculum Tie-In
Social Studies (grade 4)	<u>Topic A</u> <ul style="list-style-type: none">• Alberta - It's Geography and History <u>Topic B</u> <ul style="list-style-type: none">• Alberta - Its People in History
Science (Division II)	A. Matter and Energy: Energy Resources and Conservation B. Living things and the Environment: Environmental Factors
Language Arts	<ul style="list-style-type: none">• reading, listening, using descriptive language, poetry, story-writing
Math	<ul style="list-style-type: none">• varies according to activity

2.0 INTRODUCTORY ACTIVITY: Mine-In-A-Carton

Objective:

Students will appreciate some of the difficulties involved in mining.

Curriculum Tie-ins:

Social Studies: Mining and resource extraction

Science: Geological deposits and stratification

Time:

45 - 60 minutes

Materials:

Every group of two students receives:

- ☐ 1 two litre milk carton (clean and dry)
- ☐ sand
- ☐ two teaspoons
- ☐ two egg cartons
- ☐ 20 pennies or other flat objects (metal washers, rocks, buttons)
- ☐ 1 large garbage bag
- ☐ a dozen pins
- ☐ 50 cm of string

Instructional Procedures:

1. Have the students find a partner that they enjoy working with. Next, divide the class into two teams; Team A will be competing against Team B in the following activity.
2. Explain to the students that minerals collect in layers or seams underground like the icing on a layer cake. The seams aren't always flat though; they may run through the rock in any direction. When big seams of minerals are found, miners are sent in to remove the minerals. In modern mining, this is done with the help of machinery and dynamite; not long ago, however, people had to remove all the material by hand using picks and shovels. Today the students will have a chance to try mining the old-fashioned way.

3. Have each pair of students put their desks together. Hand out one carton to each pair. Have the students unroll the garbage bags and place their cartons inside their garbage bags. The garbage bags can be used to collect spilled and excavated sand.
4. Divide the students into Teams A and B. This means that half of the class will be on one team and half on the other team. For example, if there are ten pairs in the class, five pairs will be Team A and five will be Team B.
5. Issue the following instructions to the entire class: Lay your milk cartons on their sides. Cut the top panel out to form a box. Collect all of the listed materials and have them near you on a table or under your desk. Then follow the instruction packet labelled "Secret Instructions for Member of Team A / B". These are found on two pages at the end of this activity.
6. Once the cartons have been prepared, have each Team A pair switch cartons with a pair from Team B. The task for each pair is now to mine the carton as carefully as possible, to take turns digging, and to find out how the other team placed their penny seams. They should *carefully* remove the layers of sand with their tools (teaspoons) and place the mined sand into their garbage bag or another suitable container. When they find a "mineral" (don't tell them what they will find), remind them to explore to see if it is part of a seam. To help them in visualizing the attitude of the seams, have them trace the position of the seam on the side of the carton, using the pins and string (as described in the two sheets "How to Solve the Mystery - for members of Team A / B").

They should place the minerals they collect into the egg carton so that each egg hollow is occupied by one mineral: this will allow an easy count of minerals collected. At the end, count the extracted coins or tokens to see who is the most successful miner.

7. After students have mined to the bottom of the containers, have them count their minerals (they should have twenty). Then allow them to compare their diagrams of the seam locations with the actual locations according to the instructions provided to the team (see the four pages of instructions to each team).

Tell them to pretend that the egg cartons are actually coal cars, and that each coin represents a load of coal. Have them drive the coal cars to the *tipple*, which can be represented by a book at one end of the pair of desks. A tipple is a machine that tips the coal cars into a central container after they have been weighed. Once the coal cars are driven onto the tipple, have them slowly tilt the tipple so that the coins fall out of the egg carton and into an empty box or milk carton that you can bring around to each desk.

8. Once everyone has mined down to the bottom of their cartons, ask them the following questions:
 - Did anyone develop any interesting mining techniques?

Students may want to share mining techniques, such as combing through waste material to ensure that they had not missed any minerals, etc.

- How many “minerals” did your team find?
- If you had been a real miner how would you have felt upon finding a mineral?
- How is this experience like real mining?
Sometimes have to mine rock to get to coal; you don't always know what you are going to find; problems with waste rock.
- How is it **unlike** real mining?
It's not wet and dark.
- Has anyone in your family worked in a mine?
- What have they said about working in a mine?
- Would you like to work in a mine?

Teacher's Notes:

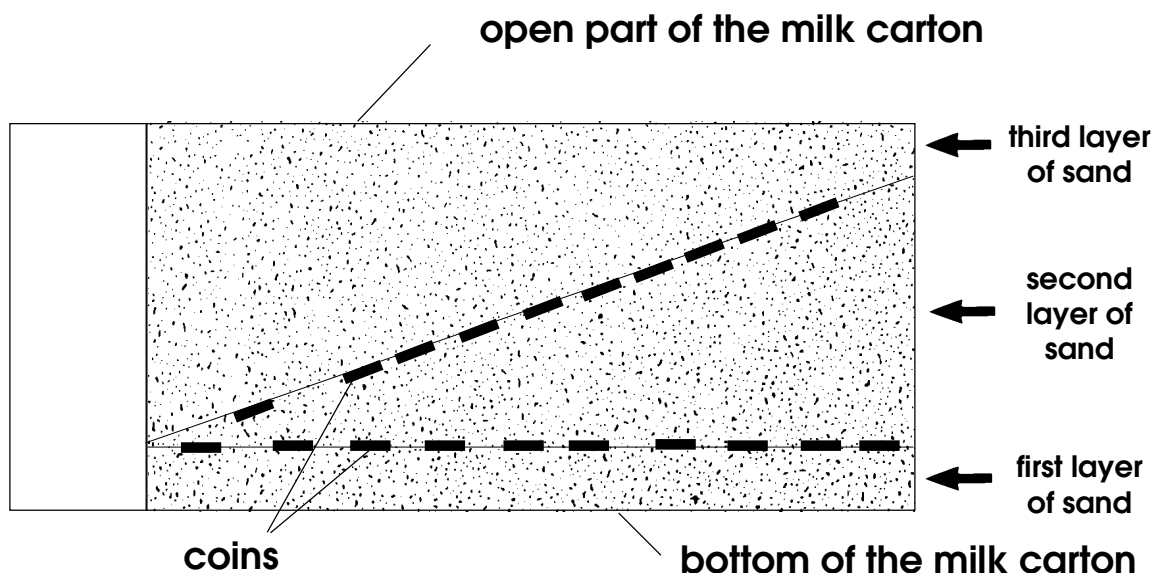
SECRET INSTRUCTION

~ for members of Team A ~

IMPORTANT: DO NOT LET ANY MEMBER OF TEAM B SEE THESE INSTRUCTIONS

Your mission is to place your twenty pennies in the milk carton in exactly the manner described here.

1. Place 2 cm of sand in a flat layer in the bottom of the milk carton.
2. Place 10 coins (or other flat objects) on top of the sand. This represents a flat-lying layer of coal, which is called a *seam*.
3. Place 8 cm of sand on top of these coins in a sloping pattern. Look at the diagram below to see how to do this. The diagram is drawn as if you had x-ray eyes and could see through the side of the box and see the coin.
4. Place 10 more coins on top of that sand.
5. Fill the milk carton to the top with sand.



Side View of Carton

6. When the carton is ready, it will be given to one of the teams playing on Team B.

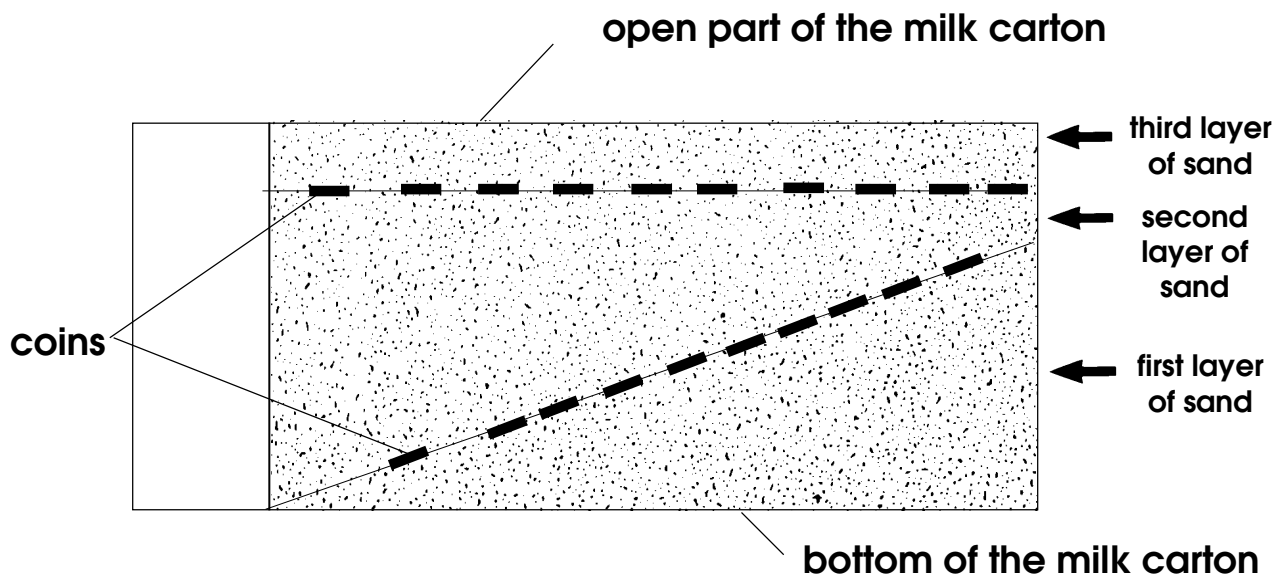
SECRET INSTRUCTION

~ for members of Team B ~

IMPORTANT: DO NOT LET ANY MEMBER OF TEAM A SEE THESE INSTRUCTIONS

Your mission is to place your twenty pennies in the milk carton in exactly the manner described here.

1. Place 8 cm of sand in the milk carton in a sloping pattern. Look at the diagram below to see how to do this. The diagram is drawn as if you had X-ray eyes and could see through the side of the box and see the coin.
2. Place 10 coins (or other flat objects) on top of the sand. This represents a tilted layer of coal, which is called a *seam*.
3. Fill up the milk carton with sand to within 2 cm of the top of the carton.
4. Place 10 more coins on top of the flat sand.
5. Fill the milk carton to the top with sand.



Side View of Carton

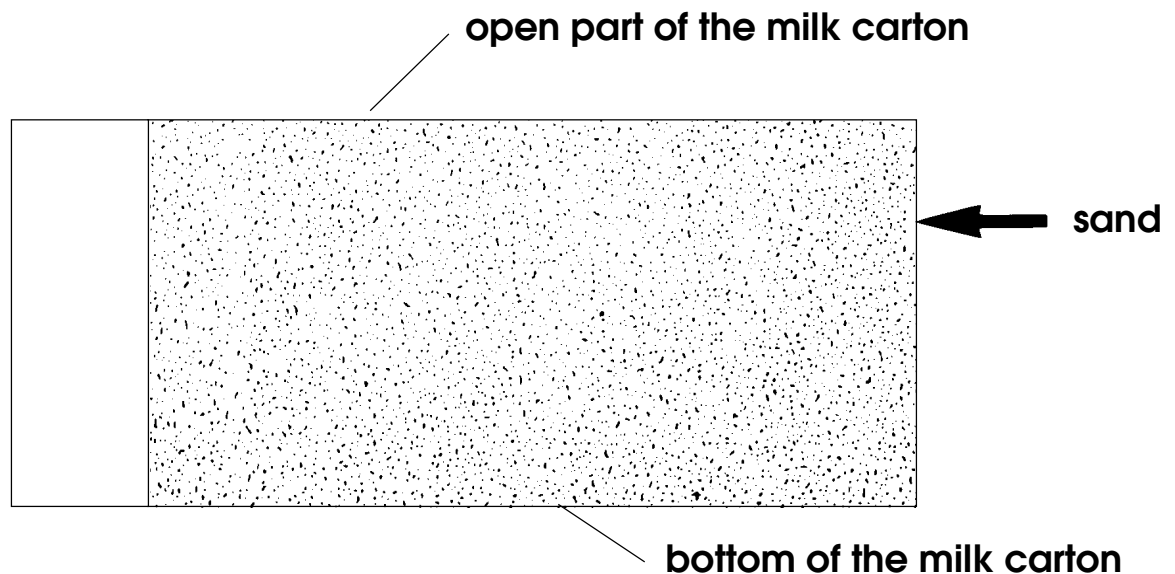
6. When the carton is ready, it will be given to one of the teams playing on Team A.

HOW TO SOLVE THE MYSTERY

~ for members of Team A ~

Your mission is to find the twenty pennies in the milk carton in exactly the manner described here. The carton was prepared by Team B.

1. Dig carefully in the box by pulling sand to one end of the carton and scooping it out into the container in the garbage bag.
2. When you find a coin, pretend you have X-ray eyes and can see through the side of the box and see the coin. Place a pin in the side of the box where the coin is.
3. Keep scooping sand until you find the next coin. When you do, put a pin into the box again, and join them with the piece of string. **When you have found all of the rest of the coins in this seam, draw a line on the diagram below showing how the seam lies in the carton. Do this for all the seams you may find.**
4. When you have emptied all of the sand out of the milk carton and finished your diagram, your teacher will let you compare your diagram with the one that Team B has. Remember to mine carefully so that you find every coin. Place these coins in the egg cartons provided.



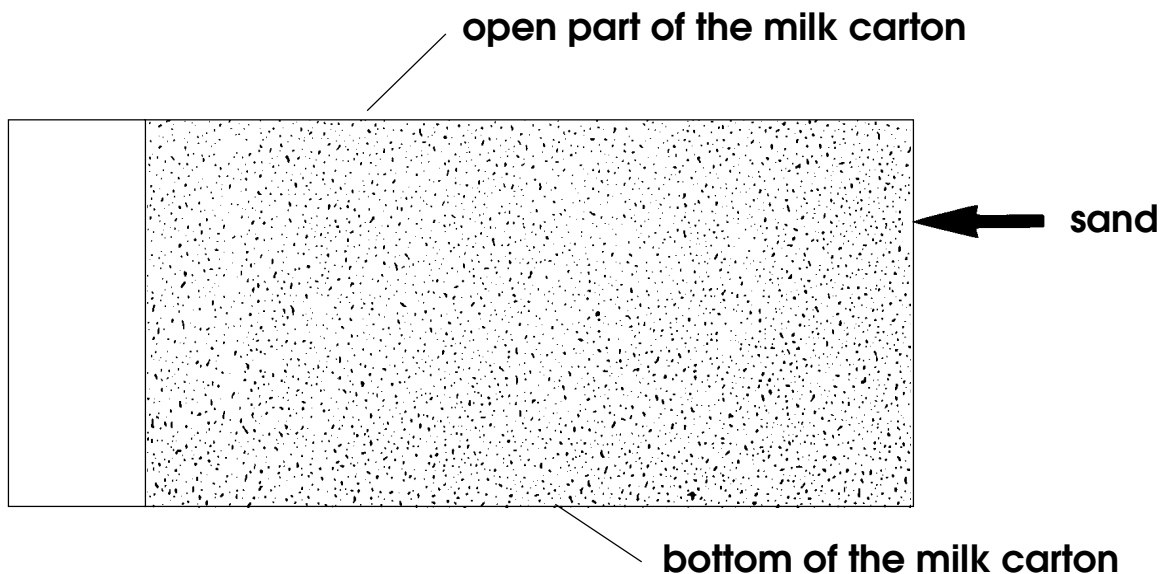
Side View of Carton

HOW TO SOLVE THE MYSTERY

~ for members of Team B ~

Your mission is to find the twenty pennies in the milk carton in exactly the manner described here. The carton was prepared by Team A.

1. Dig carefully in the box by pulling sand to one end of the carton and scooping it out into the container in the garbage bag.
2. When you find a coin, pretend you have X-ray eyes and can see through the side of the box and see the coin. Place a pin in the side of the box where the coin is.
3. Keep scooping sand until you find the next coin. When you do, put a pin into the box again, and join them with the piece of string. **When you have found all of the rest of the coins in this seam, draw a line on the diagram below showing how the seam lies in the carton. Do this for all the seams you may find.**
4. When you have emptied all of the sand out of the milk carton and finished your diagram, your teacher will let you compare your diagram with the one that Team A has. Remember to mine carefully so that you find every coin. Place these coins in the egg cartons provided.



Side View of Carton

3.0 Reader's Theatre- A Day in the Life

Readers' Theatre is a reading experience in which students read the character roles from a play. Acting is not required, although costumes can be used to add a dash of flavour.

Readers' Theatre - A Day in the Life is a play about a day in the life of a coal miner and his family. In Act I, Frank Stefanek and his family awaken to a cold winter morning in the coal mining town of Canmore, nestled in the Rocky Mountains in Alberta. Act II takes place in the mine, where Frank and his partner Antonio carry out their daily mining tasks.

Objectives:

Using the readers' theatre technique, students will become aware of the daily life of a coal miner in the early 1900s.

Curriculum Tie-in:

People and events in the history of Alberta have affected settlement and development patterns.

Time:

90 minutes

Materials:



1 copy of the script for each student (see Appendix)



hats or props (optional)

Instructional Procedures:

1. Remember that readers' theatre is a special medium that emphasizes the written word; it is not a substitute for regular theatre. Tell students that in a readers' theatre:
 - roles may be shared, rather than one person having one part, as is common in regular theatre
 - scripts are always used during the performance
 - the scenery is imagined
 - emphasis should be on what the students hear, rather than what they see
2. Give each student a copy of the script. Assign parts for Act 1 and Act 2 to different students. "*A Day in the Life*." has two Acts and students who do not have a part in Act 1 can be assigned a part in Act 2. Act One has fifteen characters and Act Two only has nine; some characters are found only in one act.

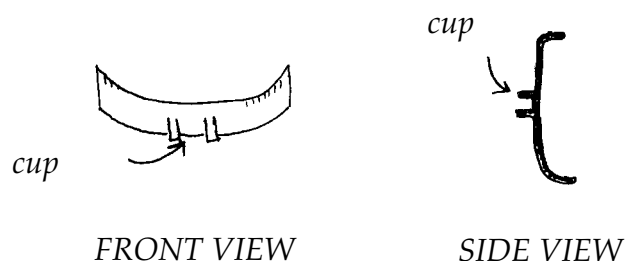
Allow time for each student to go through the script and star (*) or highlight their parts. This will remind them when their part is coming up. In the interest of conserving paper, ask them to neatly mark their character's part and return the script to you at the end of the theatre.

3. Group students for the readers' theatre. Use one of the following arrangements:
 - have the desks in a circle
 - have the 'actors' at the front of the class in desks, on stools of various heights or on chairs
 - provide a varied grouping that will allow the class to see every readers' face

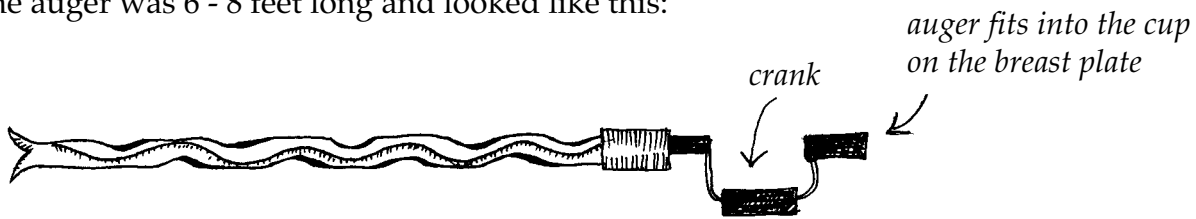
There are several ways to handle entrances and exits. Students can:

- walk on and off the stage area
 - stand during their scene and sit for an exit
 - turn their back for an exit and face the class for an entrance
 - lower their heads to signal they have left
 - sit quietly to prevent distraction from the scene in progress when they are not speaking
 - address the class rather than turning and talking directly to the characters beside him/her (when the Narrator speaks, remind him/her to do the same)
4. Students can wear their own clothes or stimulate their classmates' imaginations with costume details. For example, boys could roll up long sleeves and leave their collars open, and girls could wear long skirts made from inexpensive material. Hats might be used to suggest different jobs. Avoid jewellery and props that jingle or are not historically accurate. This story is set in 1915, during the time of the first world war.
 5. The students can create their own mine sounds — timbers creaking, the train moving on the tracks, etc. You may ask the audience to make these noises. Painted scenes may be used for the home, coal mine, or lamp house scenes.

NOTE TO TEACHER: In the play, a breast plate and an auger are discussed. The breast plate was a curved metal band about 2 to 3 inches wide. The plate fit around the miner's waist and had a cup into which the auger fit. The breast plate looked like this:



The auger was 6 - 8 feet long and looked like this:



The auger fit into the cup on the breast plate and was cranked by hand. It was very heavy.

6. Emphasize to the students that:

- most miners were immigrants and did not speak English as well as Rudi, Frank, Gus, and Tony.
- because families needed the money, most boys quit school early to go to work in the mines. They took on hard jobs in the mines because in those days any job was considered a good one.
- There were none of the modern conveniences that we have today, such as electricity, flush toilets, hot water from the tap, electric stoves, washing machines, and central heat.

Discussion

7. Ask the students the following questions:

- What did you learn about the life of a miner from this play? What was the most unusual thing that you learned about miners?
- How would you like to be a miner's wife in 1915? (with no modern conveniences).
- What would you do without modern conveniences such as electricity, toilets, hot water from the tap, electric stoves, washing machines and central heat?
- Why do you think Frank was worried about the Union going on strike?
He had a large family with only \$8.00 a month from the Union Strike Fund to live on.
- What was the job of the fire boss?
To inspect the mine chambers to ensure that they were safe before the miners started work each day; to fire the shots or charges that set off the explosives; and to inspect the chambers after they've been scaled and propped.
- Who was in charge of all the men underground?
The pit boss.

- What was the main tunnel into the mine called?
The gangway.
- What do the terms *inbye* and *outbye* mean to a miner?
Inbye means going into the mine; outbye means coming out of the mine.
- What did miners mean when they said “in the pit”?
They meant working underground, in the mine.
- How could a fire boss or pit boss tell which men were in the mine?
The fire boss and pit boss could tell which miners were in the mine by checking the brass tags at the lamphouse .
- What was scaling and propping?
After a controlled explosion, knocking down any loose pieces of coal was called scaling; putting up timbers to support the walls and roof of the coal chamber was called propping.
- How many hours a day did a miner work at the time of this story?
A miner worked eight hours a day - it had only recently been reduced from twelve hours a day.
- What was a tippie?
A tippie is a machine that tips the coal cars into a central container after they have been weighed.

4.0 EXTENSION ACTIVITIES

4.1 THE GANGWAY GAME

Objective:

Students shall review what they have learned about coal mining by playing an educational and entertaining game.

Curriculum Tie-ins:









The availability and use of natural resources affects people and the environment.

Time:

Forty minutes (although the game can be played more than once).

Materials:

Each group of four students needs:

-  1 copy of the 4 parts of *The Gangway Game* board (see Appendix II)
-  1 copy of the Tipple Card sheets (see Appendix II)
-  1 copy of the Question Card sheets (see Appendix II)
-  1 copy of the Coal Cards sheets (see Appendix II)
-  1 set of game rules (see Appendix II)
-  1 piece of poster board or cardboard 32 cm x 46 cm (13" x 19")
-  dice (single or set)
-  playing tokens, one for each player (may be old bottle caps, etc.)

Instructional Procedures:

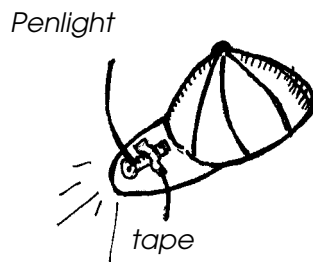
1. Glue the four parts of the game to the poster board, making sure that the corners match up.
2. Make up the game cards. The Question Cards, Coal Car Cards, and the Tipple Cards can all be made by laminating the pages and cutting out the individual cards.
3. Read the instructions in class immediately before playing the game. The teacher can act as a monitor while the game is being played. You may wish to play a sample game in front of the class.

4.2 OTHER EXTENSION ACTIVITIES

The following are options for concluding the study of coal mining:

Class or Group Projects

- Have the class help you develop a mural about coal mining. Use the information that you have learned during the study of coal mining in Canmore.
- Create a mine in your room! Have a cassette tape play dripping water, stopping and starting train sounds, creaking timbers. Place a sign on the front door telling the name of your mine. Make the desks into tunnels; rig a cardboard cave-in; give each person who visits the mine a baseball hat and a flashlight.



Cover the windows with dark paper and turn off the lights. Plant the room with coal seams that others can try to find. Use real coal or rocks painted black. Lay down rope for railway tracks. Invite another grade to visit.

Individual Projects

- Do a mini-text (5 or 6 pages) on coal mining for the school or public library. Write neatly or print the text. Do illustrations. Place the mini-text in a folder with the title on the front. Let the students choose a part of coal mining that they are interested in researching.
- Do posters for Heritage Day, the first week in August. The posters could tell about Canmore's coal mining heritage. Give the poster to your teacher or the Chamber of Commerce to distribute to local businesses in the middle of July. Have them display the posters for 2 weeks prior to Heritage Day.
- Create a song about coal mining.. Use a favourite tune and substitute words: e.g.
"Old [name of town] Had a Mine" sung to the tune of "Old MacDonald had a Farm"
"[name of town] is Your Town" sung to "This Land is Your Land"
"Mine, Mine, Mine Your Coal" sung to "Row, Row, Row Your Boat"

Write the words on the board and have the class sing along.

- Write a letter back home about working in the coal mines in the early 1900s. You might tell about:
 - a visit to the a neighbouring coal mining town or to the big city

- your job
 - a mine accident that you were involved in
 - the men you work with
 - mine horses
- Do more research on one of the following:
 - a coal mining town in Alberta
 - horses in the mine
 - different jobs in the mine
 - mining hazards
 - Create a crossword puzzle using mine words. Have the teacher photocopy copies for the class. Distribute them to parents and see how much they know about mining!
 - Have students make up their own Tipple Cards and Question Cards. Type them up, photocopy and glue them together just as you did the originals.
 - A trip to Bankhead in Banff National Park will provide students with a look at the remains of a mining town. Students can follow the self-guiding trail markers. A display of coal miners working inside a mine (actual size; students look in the display as if they were in a mine) is particularly interesting for students with some knowledge of coal mining.
 - Visit the Canmore Centennial Museum. Call ahead and they will usually have some on duty who can help explain the coal mining displays.

5.0 COAL MINING - LIFE AND TIMES

Program Evaluation

Kananaskis Country Environmental Education materials have been developed to provide you with teacher-directed units of study. These are *living documents* that undergo changes on a continual basis.

The purpose of this questionnaire is to find out if these materials are meeting your teaching needs. Your comments are valuable to us. Please take a few minutes to complete this evaluation so that we may continue to improve your materials.

School name

Grade level taught

Your name
(optional)

- ★ How did you hear about the program?
- ☐ workshop ☐ administration ☐ in-service ☐ newsletter ☐ fellow teacher
☐ other (please specify) _____

- ★ Did you use all of the program? ☐ yes ☐ no
- If you answered **no**, which part did you **not** use and why?
- _____

- ★ On the bar line below how would you rate the program in the following categories:

	YES					NO
• appropriate for grade level (✓)						
• clear instructions						
• text easy to follow						
• relevant to curriculum						
• materials easy to use						
• did you enjoy the material?						
• did your students like the material?						
• program of appropriate length						

- ★ Approximately how long did it take you to complete these materials?
- ☐ 1-2 weeks ☐ 3-4 weeks ☐ 5-6 weeks ☐ longer than one month
- ☐ program was spread over the year

- ★ Were you satisfied with how these materials fulfilled the curriculum objectives?
- ☐ yes ☐ no
- If you **were not** satisfied, please elaborate:

- ★ Did you require any additional information to complete any part of the program?
- ☐ yes ☐ no
- If **yes** please tell us what was required:

- ★ Would you use these materials next year?
- ☐ yes ☐ no
- If you answered **no** please tell us why:

- ★ Any additional comments about the program in general?

Thank you for completing this questionnaire. Please place the completed questionnaire in an envelope and mail to:

Environmental Education Coordinator
Alberta Environment, Natural Resources Service
Kananaskis Country
Suite 201, 800 Railway Avenue
Canmore, AB
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Phone: 403-678-5508 Fax: 403-678-5505

"A DAY IN THE LIFE "

~ Reader's Theatre ~

ACT 1:

*At home with Frank Stefanek:
Going to work in the No. 2 Mine*

1. Narrator
2. Frank Stefanek.....*a Polish immigrant, coal miner*
3. Maria Stefanek.....*his wife*
- The Stefanek children (oldest to youngest):
 4. Theresa,
 5. William
 6. Paul
 7. Mary
 8. Jon
 9. Anne
10. Antonio D'Amico*an Italian immigrant, coal miner, Frank's partner*
11. Rudi Mueller.....*a German immigrant, coal miner*
12. Gus Niemi.....*a Finn immigrant, coal miner, Rudi's partner*
13. Alex Walters.....*fire boss*
14. Angelo.....*lampman*
15. John Lewis.....*pit boss*

NARRATOR: This is a story of one of the coal miners that lived in the mountain town of Canmore, Alberta in the early days, around 1915. Almost everyone in town worked for the coal mine in those days. We are going to spend the day with a coal miner, Frank Stefanek, a Polish immigrant. What would a typical day be like? Let's start at home, when the family wakes at six o'clock in the morning ...

MAMA: Oh! It's co-o-ld. I'd better get up and get the stove going and fix Papa's breakfast. Wake up, Papa!

FRANK: I'll just splash some cold wa- ... HEY! The water is frozen in this bowl!

MAMA: It must have been minus forty last night. Ah, you can break the ice with your hands. That'll wake you up!

MAMA: Would you light the kerosene lamps, Papa? Ah, the stove is getting nice and warm now. You should have some hot water soon to wash up before you leave for the mine.

FRANK: I'll stand by the stove and warm up.

MAMA: Breakfast is almost ready, here, have some coffee. Sit. Eat your porridge while it is hot. The bacon is cooking and there's some of your favourite dark bread on the table.

I must go wake Theresa. Theresa, wake up. Come and help with Papa's lunch before I wake the young ones.

THERESA: (Yawn.) Yes, Mama.

MAMA: Now, Papa, I shall put cheese, sausage and bread in your lunch bucket. Theresa, finish making Papa's lunch. Put in a baked potato, a jar of the soup we had last night for supper, some leftover apple pie... oh, and don't forget his chewing tobacco.

FRANK: I must go now, Mama, it is getting late.

THERESA: Good-bye, Papa.

(Papa leaves)

MAMA: Put the kettle on the stove, Theresa, while I clear this table. I'll go wake the children, you finish making their breakfast.

THERESA: Yes, Mama.

MAMA: William! Paul! Wake up! Here, Paul, take Mary and Little Jon into the kitchen and help them get dressed there. It's warmer by the stove. Ah ... good morning Baby Anne. How are you today?

ANNE: Ma-ma.

THERESA: Breakfast is ready!

WILLIAM: Come on, Jon. Paul, you take Mary. Mama, do I have to go to school today? Papa says soon I can start picking rock at the *tipple*. I could be

making three dollars a day!

MAMA: William, you have to go to school. Now, hurry and get the little ones to the table. You'll be working in the mine soon enough.

JON: Goo-goo gah-gah.

MARY: Me bread, pl-lease.

PAUL: Pass the bacon. Ick! Porridge. Here, Jon, want some good stuff to eat? You'll really like it.

JON: NO, dat.

MARY: Me want bread too.

WILLIAM: Come on, Paul, give 'em a sweet roll. And I'll take the last one.

PAUL: That's not fair, you had the last one yesterday.

WILLIAM: No, I didn't!

MAMA: Quiet, you two. Here, Anne, have some milk.

ANNE: Ma-Ma.

MAMA: Theresa, hold Anne while I get down the big copper pot. I'll start boiling the water so that I can do the wash this morning.

NARRATOR: The children get dressed and leave the house for school. Mama will stay home with the infants and do the chores: washing — the hard way, with only a scrub board; baking; mending; cleaning; shopping; fixing lunch and supper. Meanwhile, let's join Papa at the dry — the place where miners hang their work clothes overnight. It is now about seven thirty in the morning.

FRANK: Good morning, Tony.

TONY: Frank, how's the baby?

FRANK: Doc says she'll be okay... Thank goodness; you know, the Wendells lost their baby son last week... Sure had us scared; not much you can do when they get the flu... 'cept pray, I guess...

RUDI: Morning. Have you seen my partner? Ah, here he comes now. Sleep in again, Gus? When are you going to find a nice young lady and settle

down?

TONY: Yeah, my sister says you're the catch of the town... If they could only see you when you come crawling out of the pit at 3:45 covered with coal dust, they might change their minds!

GUS: O.K., O.K., enough.

FRANK: See you at the lamphouse. Come on, Tony.

NARRATOR: The miners' clothes are coal black even though they are washed every day. The shirts are buttoned tight at the collar to keep coal dust out, and the shoes are tall leather boots with hobnails on the bottom for better grip. A cloth brim hat keeps dust out of the miners' eyes — hard hats haven't been invented yet!

FRANK: Morning, Angelo. Is my lamp ready?

ANGELO: You know the rules, Frank. Where's your brass tag?

FRANK: (laughs) Just thought I'd see if you were awake this morning!

NARRATOR: The miners were all responsible for bringing their brass tags to work and leaving them at the lamphouse when they went to work in the mine. By reading the brass tags, the fire boss could tell who was in the mine at any given time.

ANGELO: Your tag, Tony? Here are your lamps, all cleaned and ready to go... You're running a little late this morning aren't you, fellahs? I see from my tags that everyone else is here — except Rudi and Gus.

RUDI: And here we are now. Morning, Angelo. My lamp ready?

ANGELO: Here you are, Rudi. And, Gus, here's your lamp, all locked and filled.

RUDI: Yeah, well, I think I'll check it to make sure. I don't want to be blown up like poor Arnie.

NARRATOR: Poor Arnie. One day, his lamp accidentally came unlocked and the flame set off an explosion of methane gas.

TONY: He was lucky to get out of that with only a few bruised ribs and a couple of broken bones.

ANGELO: Here comes the pit boss. See you men after the shift is over.

JOHN: Everybody here, Angelo?

ANGELO: Yessir! All the lamps have been picked up.

NARRATOR: The pit boss is the man in charge of all the underground workers and fire bosses. The four miners leave the lamphouse and go to the minekeeper's office to record the time they start work. They walk to the mine entrance and head in on foot. Walking into the mine is known as INBYE, leaving it is called OUTBYE. The main tunnel they enter is called the gangway and it is about a kilometre walk to their workplace.

FRANK: Let's turn on our lamps, men.

RUDI: Hey, Tony, doesn't your wife get mad at you for hooking your lamp on your pocket all the time?

TONY: Ah, sure, she tells me she's tired of mending my ripped pockets and buttons. I don't like the lamp on a leather strap around my neck. It gets in the way. I tell her I work faster with it hooked on my pockets... and the faster I work the more money I make — hey, she can't argue with that!

FRANK: Well, if it makes you work harder, wear it anywhere you want. The more coal we dig, the more money we make — and today is payday!

TONY: Step aside... here comes the coal car.

NARRATOR: The trains were used in the coal mine to carry the load of coal outside. The trains were all small: the engines and cars stood about 1.5 m tall, so they could fit into the low, narrow tunnels that were dug by the miners.

GUS: Looks like the loaders have the train filled and ready to go to the tippie.

FRANK: Humph. I liked it better when the horses did all the work in the mine!

TONY: I brought an apple for the horse that's working in our part of the mine — where the air locomotive can't go.

GUS: (laughs) Oh, you mean Pancake? You kinda like that old horse., don't ya?

FRANK: At least our horses come outta the mine. In Nova Scotia they keep the horses underground all the time — until they can't breathe or go blind from coal dust... Pancake is lucky, at least; she has her stable outside the mine.

RUDI: Maybe we'll see you at lunch. Come on, Gus. There's Alex. Hey, Alex, did you use the canary to check our chamber for safety?

ALEX: Yeah, and the canary didn't pass out so there's no methane gas in your chamber... and everything else looks safe, so start work. Frank, Tony... your chamber has been inspected, you can go on up and get started.

FRANK: Tony, hand me the drill bit. (crank, crank) Put it in the breast auger, lift it up to the coal face NOW. Crank the bit in... (huff, huff)

TONY: Move it over. I'll crank it for the next shot hole.

FRANK: A-a-rgh. There! The last one. Hand me the dynamite. One- two- three- done. Go tell Alex we're ready.

TONY: Sure.

NARRATOR: Alex, the fire boss, has the job of checking the men's work and making sure that the packing of the dynamite had been done right. He was the only man in the mine that was allowed to carry the blasting caps that set off the dynamite.

FRANK: (alone) Maybe I could be a fire boss like Alex some day... It takes too many years... and you have to study... and I hear the government exams are tough... nah, I'm too old... still, I'll bet their paycheques are fat... Oh, hi Alex. We are ready to fill the holes.

ALEX: This work looks fine, men. Now I'll add the blasting powder... then, the cap... the fuse and... igniter cartridge... and pack it in (thump, thump, thump)... some clay to seal off the charges. Let's get out of here, men.

FRANK: Had me the boards.
(grunting) Now we've got the chamber sealed off. Duck, men, I'm going to set off the blast..... FIRE !

(Everyone in the class: BOOM!)

"A DAY IN THE LIFE OF A CANMORE COAL MINER"

~ Reader's Theatre ~

ACT II:

In the Mine

1. Narrator
2. Antonio D'Amicoan Italian immigrant, coal miner, Frank's partner
3. Rudi Mueller.....a German immigrant, coal miner
4. Gus Niemi.....a Finn immigrant, coal miner, Rudi's partner
5. Alex Walters.....fire boss
6. Angelo.....lampman
7. Frank Stefanek.....a Polish immigrant, coal miner
8. John Lewis.....pit boss
9. Stan.....the machinist

- ALEX: The dust is starting to settle. Wait here and I'll check the coal face... (a few minutes later) Looks good. Start shovelling the coal in the cars.
- NARRATOR: Frank and Tony shovel all the coal in waiting coal cars, then begin what miners call scaling and propping... let's listen...
- FRANK: Grab the crowbar, Tony, and let's knock down any loose pieces of coal from the roof of the chamber. LOOK OUT!
- TONY: Yeow — that one almost hit me on the head!
- FRANK: Slow down, Tony, if you get too hungry for coal you'll get clobbered on the head... and you might not wake up for a day or two.
- NARRATOR: (Pick, pick, bang, bang. The two miners are scaling the roof — knocking off loose pieces of coal.)
- TONY: Now for the REAL work. Let's go get the timbers to prop the roof. Are there any in the *gangway*?
- FRANK: Yeah, let's grab this one. On three, now. One- two- three, lift! (huff, puff)

NARRATOR: Frank and Tony have to carry the heavy timbers to the coal face they just blasted. The timbers are cut to size and knocked into place using sledgehammers. They are set a meter out from the wall and form a tunnel that supports and props the sides and roof. The tunnel gets longer and longer as the coal seam is worked.

TONY: Whew! That's finished.

FRANK: Scaling and propping are hard work alright. Go get Alex to check the chamber.

NARRATOR: A few minutes later...

ALEX: Well, let's have a look at your work... H-m-mm... I think you'd better reset these timbers; they look a bit loose to me.

TONY: We can do that right now. I'll get my sledgehammer. (bang, bang)

ALEX: That looks better. Don't want the roof falling on your heads! Take a lunch break.

FRANK: Tony, hand me my lunch. Well, I see Theresa remembered to put some water in the bottom of my lunch bucket today.

TONY: Say, Frank, how come you weren't at the Union meeting last night?

FRANK: I don't want no more strikes. I'll stick with all the other miners, of course, but that 8-month strike in 1911 was really tough. \$8 a month to live on, from the Union strike fund, don't go very far when you've got six hungry kids. We even had the kids scrounging in the slag heaps for coal 'cause the company wouldn't sell coal to the striking miners!

TONY: Yeah, but the Union Hall will be finished soon and then we won't have to meet in the woods... Heck, I hated that! It felt like we were hiding, like we were doing something wrong. And, well, things are getting better for miners... We only work 8 hours a day now; just two years ago we worked 12 hours a day.

FRANK: The men are real proud of that Hall. A place of our own, where the company can't make us leave — like they did to those men at the Finn Hall.

TONY: Hey, here comes Stan. Hi ya, Stan, what cha' fixing in the mine today? Don't tell me the pumps are gonna break down.

STAN: Nah. Everything's okay. The pit boss wanted me to check the pump; he wants to make sure it stays in good shape. How's it going down here?

FRANK: Good, only we've got to get back to work now. Fifteen minutes is about all we can take for lunch... I've got a big family to feed, you know. Let's go drill the shot holes, Tony.

NARRATOR: Frank and Tony go through the same steps again — drill the shot holes, load with dynamite, the fire boss sets off the charge, coal is loaded, the newly-blasted area is scaled and propped. They stop work at 3:45 and go outbye.

GUS: Another day finished. Here's my lamp, Angelo. Let's go wash up, Rudi.

FRANK: Here's my lamp, Angelo. See you tomorrow.

JOHN: Angelo, is everyone out of the mine?

ANGELO: Yessir, I've got all the lamps.

TONY: Come on, Frank. Let's go wash this coal dust off.

RUDI: You know, Gus, there's nothing I like better than coming up to the surface after being in the cold, dark mine all day and seeing that little speck of light get bigger and bigger the closer you get to the surface, and finally, getting to the entrance and seeing the sun and feeling the warmth... Everybody ought to have to go down in a mine — just to appreciate life... Yes sir, there's nothing I like better than being outside the mine... except, for payday!

(In the wash house)

TONY: Yeow! The water's cold! I pay 50 cents a month to the company for water, at least it could be warm.

FRANK: When you've been around for awhile, like I have, you'll be glad you've got water at all.

TONY: After the company takes off my rent, wash house, doctor, repair of my tools, powder for blasting shot holes and store purchases... I don't have much left of my three dollars a day in wages.

RUDI: Hey - hurry up! There's a hockey game after work today. Let's go!

The End

THE GANGWAY GAME - RULES

1. The purpose of the game is to get four coal cars and return to the mine entrance. The first player to do so wins the game.
2. **Tipple cards** should be shuffled and placed face down on the game board at the tipple in the top left hand corner. The **coal car cards** should be placed on the coal car, in the bottom left hand corner of the game. The **question cards** should be shuffled and placed face down on the ? mark on the left side of the board, just above the mine entrance.

When a player lands on a question space the player to their left must read the card aloud. If the question is answered correctly by the player whose turn it is, then that player may take another turn. The correct answer is marked by this sign: © It stands for "**correct**".

3. Roll the dice for the order of play. The highest number goes first. Start at the mine entrance. After rolling the dice, a player can move in any direction. In order to get a coal car, a player must end up on the coal car space. A player cannot go back to the same coal car twice in a row.
4. Players can move through spaces where others have landed.
5. Where a ladder rung ends or begins in a space, go up or down the ladder only if the directions for that space tell you to do so.
6. Draw a **tipple card** if you land on a tipple card space. After you have followed directions, return the card to the bottom of the deck.
7. Once a player has four coal cars, any other player who lands on his space can send him to any space on the game board - the farther away from the mine entrance, the better. To win, a player must roll the exact number that will place him on the mine entrance space.
8. All of the things that happen to you in the game are things that have really happened to coal miners. Enjoy - and watch out for falling timbers!

mine
entrance

**DRAW
A
TIPPLE
CARD**

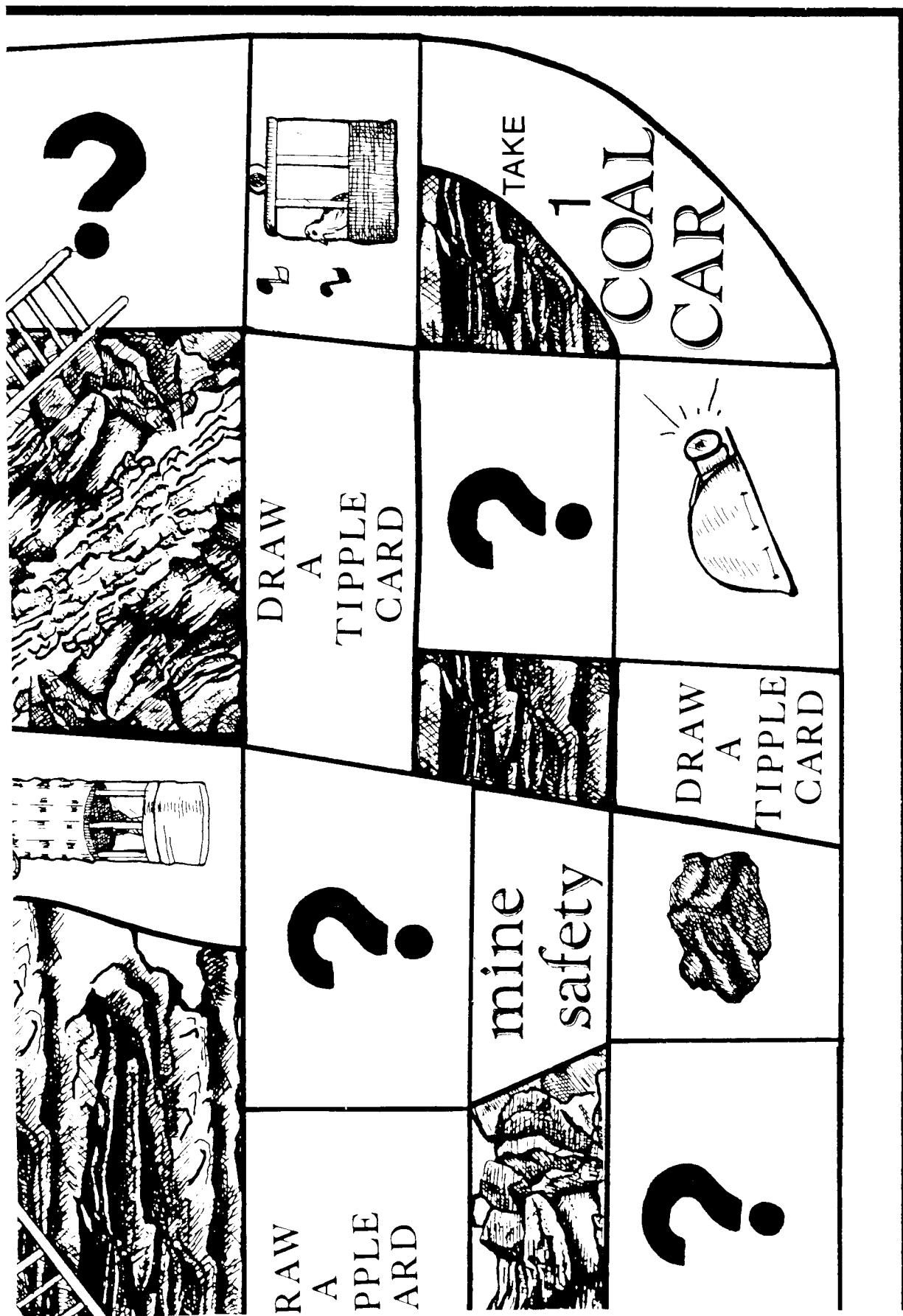
LADDER
TO THE
COAL
CHAMBER
WHERE
YOU WORK

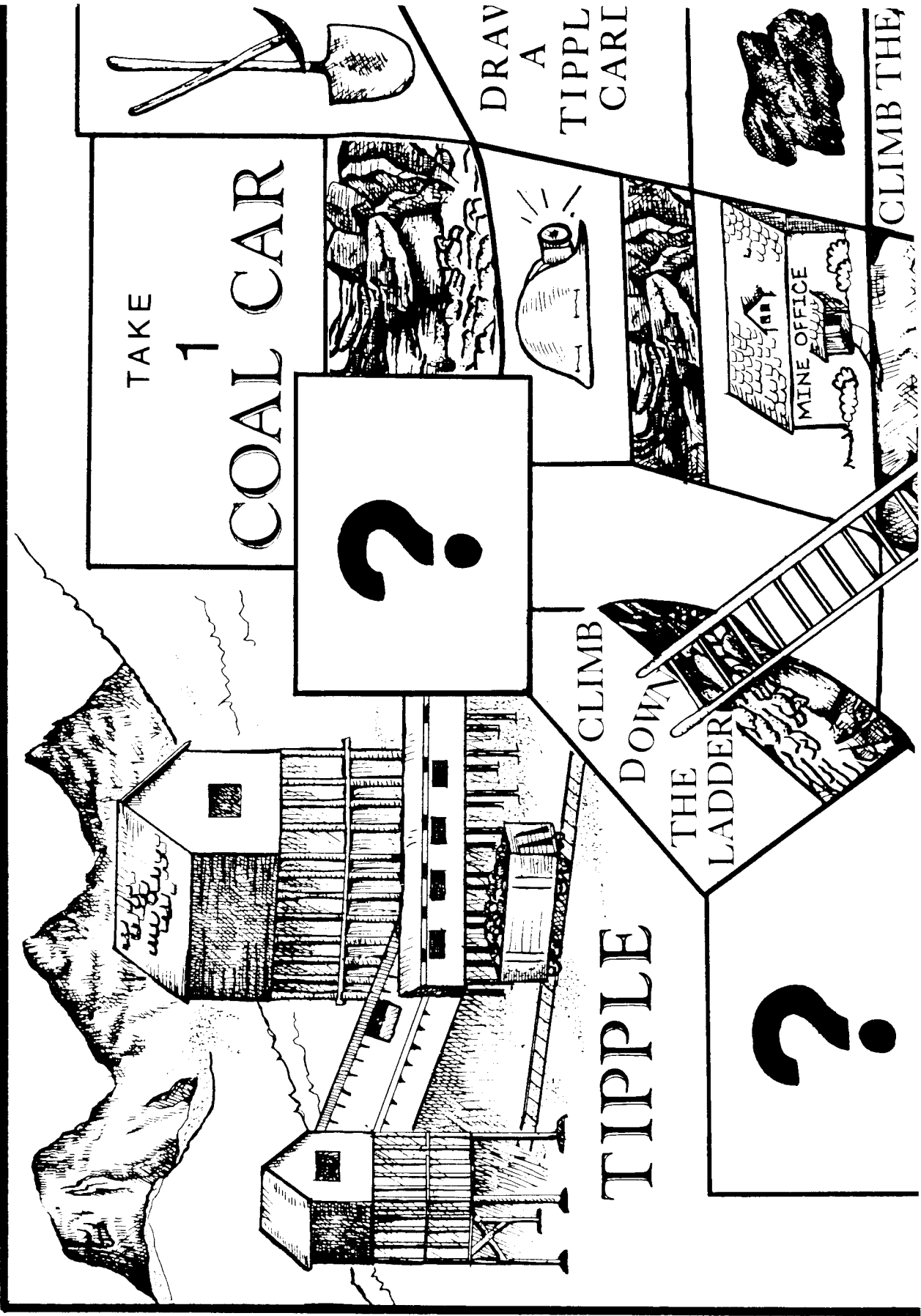
**PICK UP YOUR LAMP
AT THE LAMPHOUSE -
MOVE TO ANY
TIPPLE CARD SPACE**

**PAYDAY!!
TAKE
NOTHING
TURN**

DRAW A TIPPLE CARD







TAKE

1

COAL CAR

?

DRAW
A
TIPPL
CAR



CLIMB
DOWN
THE
LADDER

?



MINE OFFICE

CLIMB THE



TAKE
2
COAL
CARS

mine
safety

?

coal
chamber

DRAW
A
TIPPLE
CARD

CLIMB DOWN
THE
LADDER

DRAW
A
TIPPLE
CARD

PAYDAY!!
TAKE
ANOTHER
TURN

DRAW
A
TIPPLE
CARD

?

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DRAW
A
TIPPLE
CARD

V
E
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coal
car

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CARD

YOU COLLECT EXTRA WAGES
FOR WORKING IN A VERY WET
PART OF THE MINE

...TAKE ONE COAL CAR

DANGER!
RUNAWAY COAL CAR!

...LOSE ONE COAL CAR

COAL MINERS
GO ON STRIKE

...LOSE ONE TURN

MOVE TO THE PAYDAY SPACE

...AND TAKE ANOTHER TURN

METHANE GAS IN THE MINE!
CRAWL ON YOUR HANDS AND
KNEES TO THE NEAREST MINE
SAFETY SPACE.

THE MINE MANAGER REPORTS
THAT THE MINE IS LOSING MONEY
AND DECIDES TO CUT WAGES

...LOSE ONE COAL CAR TO THE COMPANY

THE UNION GETS YOU A PAY
RAISE

...TAKE ONE COAL CAR

YOU REMEMBER NOT TO SMOKE
IN THE MINE

...TAKE ONE COAL CAR FOR SAFE MINING

COAL MINERS GO ON STRIKE

...LOSE ONE TURN

THE VENTILATION FAN BREAKS
DOWN. THERE IS NO FRESH AIR
IN THE MINE

...GO BACK TO THE MINE ENTRANCE

YOU EAT LUNCH QUICKLY- THE
MORE COAL YOU GET THE MORE
MONEY YOU MAKE

...MOVE TWO SPACES

YOUR WIFE JUST HAD YET
ANOTHER BABY - ONE MORE
MOUTH TO FEED

...LOSE A TURN

TIPPLE
CARD

TIPPLE
CARD

TIPPLE
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CARD

THE TIMBER YARD SENDS YOU
TIMBERS TO SUPPORT THE ROOF
OF YOUR TUNNEL

...TAKE ONE COAL CAR

MINE ACCIDENT

...LOSE ONE COAL CAR

THE FIRE BOSS CONGRATULATES
YOU FOR BEING A SAFE MINER

...MOVE THREE SPACES

THE MINE MANAGER GIVES YOU
A CHRISTMAS BONUS

...TAKE ONE COAL CAR

THE FIRE BOSS SAYS IT IS UNSAFE
TO ENTER YOUR CHAMBER

...MISS A TURN

MOVE TO ANY SPACE THAT HAS
A MINER'S PICK AND SHOVEL

MOVE TO ANY SPACE
THAT HAS A CANARY
IN A CAGE

YOU FORGET TO PUT A BRASS
TAG ON A COAL CAR THAT YOU
AND YOUR PARTNER FILLED

...LOSE ONE COAL CAR

CRASH! A TIMBER THAT IS SUP-
PORTING THE ROOF OF YOUR
CHAMBER BREAKS!

...LOSE ONE COAL CAR

AT LUNCH, YOUR CIGARETTE
CAUSES A METHANE EXPLOSION

*...SMOKING IS BAD FOR YOUR HEALTH. LOSE
TWO COAL CAR*

YOU ARE HIT ON THE HEAD BY A
ROCK THAT FALLS FROM THE
ROOF OF YOUR CHAMBER

...LOSE ONE COAL CAR

YOU AND YOUR PARTNER WORK
VERY WELL TOGETHER

*...COLLECT ONE COAL CAR FROM EACH
PLAYER*

TIPPLE
CARD

TIPPLE
CARD

TIPPLE
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TIPPLE
CARD

THE PUMP THAT KEEPS WATER
FROM FILLING UP THE MINE
BREAKS

...GO TO THE MINE ENTRANCE

YOUR COAL CAR IS HAULED TO
THE TIPPLE WHERE IT IS WEIGHED
AND YOUR NUMBER RECORDED

...TAKE ONE COAL CAR

YOUR DYNAMITE IS DAMP AND
WILL NOT BLAST ANY COAL
LOOSE FOR YOU

...LOSE A TURN

OOPS! YOU FORGOT TO PICK UP
YOUR MINERS LAMP BEFORE
STARTING WORK

...GO BACK TO THE MINE ENTRANCE

COWABUNGA, DUDE! YOU HIT A
RICH SEAM OF COAL

...TAKE ONE COAL CAR

A MINOR EARTHQUAKE SHAKES
THE MINE

...MOVE TO THE NEAREST MINE SAFETY SPACE

YOU HIT A LAYER OF VERY HARD
ROCK BETWEEN YOU AND THE
NEXT COAL SEAM

...LOSE ONE COAL CAR

THE CANARY JUST DIED! THERE IS
METHANE GAS IN THE AREA

...LOSE ONE TURN AND ONE COAL CAR

YOUR NEW PARTNER IS SHORT
BUT VERY STRONG - PERFECT FOR
MINE WORK

...TAKE ONE COAL CAR

YOUR PARTNER HURT HIS BACK IN
THE HOCKEY GAME LAST NIGHT

...LOSE ONE COAL CAR

THE TOWN NEWSPAPER EDITOR
CALLS FOR BETTER WORKING
CONDITIONS FOR MINERS

...TAKE ONE COAL CAR

THE HANDLE OF YOUR PICKAXE
BREAKS

...LOSE A TURN

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WHY DID MINERS TAKE CANARIES INTO THE MINES?

- a) *So that they would sing sweetly*
- b) *to test for methane gas ©*
- c) *to eat the flies*

A TIPPLE IS:

- a) *a type of whiskey*
- b) *a machine that empties coal cars ©*
- c) *a tall building*

TRUE OR FALSE: FRANK STEFANEK AND HIS FAMILY HAD AN AUTOMATIC DISH-WASHER?

False

TRUE OR FALSE: THE JOB OF THE FIRE BOSS WAS TO INSTAL TIMBERS IN THE TUNNELS

False

WHO WAS IN CHARGE OF ALL OF THE MEN UNDERGROUND?

- a) *The lampman*
- b) *the pit boss ©*
- c) *the pit ponies*

THE MAN IN CHARGE OF SETTING OFF EXPLOSIVES IN THE MINE WAS CALLED:

- a) *the fire boss ©*
- b) *the lampman*
- c) *Arnie the Destroyer*

THE TOWN OF CANMORE IS LOCATED:

- a) *in the mountains ©*
- b) *in the prairies*
- c) *at the bottom of Canmore Lake*

TO DRILL HOLES IN ROCK, MINERS USED A TOOL CALLED

- a) *an auger ©*
- b) *a hand drill*
- c) *a toothpick*

WHAT COUNTRY WERE FRANK STEFANEK AND HIS WIFE FROM?

- a) *Yugoslavia*
- b) *Taiwan*
- c) *Poland ©*

TRUE OR FALSE: FRANK AND HIS FELLOW MINERS WERE MEMBERS OF A UNION?

True

THE MAN IN CHARGE OF LOOKING AFTER THE MINER'S LAMPS WAS CALLED:

- a) *the lampman ©*
- b) *a pit pony*
- c) *the pit boss*

WHAT WAS THE MAIN TUNNEL INTO THE MINE CALLED?

- a) *The gangway ©*
- b) *Bert*
- c) *the tippie*

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WHAT DOES THE TERM INBYE MEAN TO A MINER?

- a) *Inbye means to drink a lot of whiskey*
- b) *Inbye means to buy something inside*
- c) *Inbye means going into the mine ©*

WHAT DID THE MINERS MEAN WHEN THEY SAID THEY WERE "IN THE PIT"?

- a) *It meant that they were depressed*
- b) *It meant that they were in the mine ©*
- c) *they were riding a pit pony*

WHAT DOES "SCALING" MEAN?

- a) *it means to pick the scales off fish*
- b) *It means to sing scales in a mine*
- c) *it means to knock loose pieces of coal off the roof ©*

AT THE TIME OF THIS STORY, HOW MANY HOURS A DAY DID MINERS HAVE TO WORK?

- a) *eight ©*
- b) *twelve*
- c) *they could choose how long*

IN THIS STORY, WERE THE PIT PONIES EVER ALLOWED TO COME UP TO THE SURFACE?

- a) *yes ©*
- b) *no*
- c) *only on their birthdays*

COAL SOMETIMES GIVES OFF A GAS THAT IS VERY DANGEROUS BECAUSE IT CAN EXPLODE. THIS GAS IS CALLED:

- a) *methane ©*
- b) *carbon dioxide*
- c) *propane*

WHAT DOES THE TERM OUTBYE MEAN TO A MINER?

- a) *An outbye is a kind of motor for a boat*
- b) *Outbye means to buy a thing outside*
- c) *Outbye means coming out of the mine ©*

HOW COULD A PIT BOSS TELL WHICH MEN WERE IN THE MINE?

- a) *He could phone their wives*
- b) *He could check the brass tags that were left at the lamphouse ©*
- c) *he could yell down the gangway*

WHAT DOES "PROPPING" MEAN?

- a) *It is something that pit ponies do*
- b) *It means to make popping noises*
- c) *it means to put up timbers to support the roof of the mine ©*

TRUE OR FALSE: FRANK STEFANEK'S CHILDREN HAD TO GO TO SCHOOL?

True

WHAT KINDS OF HATS DID THE MINERS WEAR IN 1915?

- a) *plastic safety hats*
- b) *a cloth brim hat ©*
- c) *Viking helmets with real horns*

THE MINERS HAD A FAVOURITE WINTER SPORT THAT THEY PLAYED AFTER WORK. IT IS CALLED:

- a) *snow boarding*
- b) *hockey ©*
- c) *ski jumping*