



Educational Resource Primary and Intermediate Student Activities

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Welcome

Welcome to the Waikato Coalfields Museum activity resource for Primary and Intermediate aged students. This resource is aimed at Levels 1 to 4. However teachers may wish to adapt some of the activities to suit students from other levels. The following activities all relate to resources held by Waikato Coalfields Museum and are indicative of the depth and quality of an experience generated by a school visit to this facility.

Activities primarily target the Social Studies curriculum. However tasks include written language work which will link to many English curriculum objectives. Below you will find some achievement objectives relating to the New Zealand Curriculum to use in planning. These objectives have been taken from the Te Kete Ipurangi website.

We look forward to your visit and are happy to answer any queries you may have regarding the information within these pages or the facilities of the museum itself.



Huntly Wildflowers / Antique Postcard / The Pines / now the Waikato Coalfields Museum c.1925 (2006.5.11)

Waikato Coalfields Museum
26 Harlock Place, Huntly
Phone: 07 828 8128
www.coal.net.nz



Achievement Objectives from the New Zealand Curriculum

Social Studies

Level 1

Students will gain knowledge, skills, and experience to:

- Understand how the past is important to people.
 - Understand how places in New Zealand are significant for individuals and groups.
-

Level 2

Students will gain knowledge, skills, and experience to:

- Understand how time and change affect people's lives.
 - Understand how places influence people and people influence places.
 - Understand how people make significant contributions to New Zealand society.
-

Level 3

Students will gain knowledge, skills, and experience to:

- Understand how groups make and implement rules and laws.
 - Understand how people make decisions about access to and use of resources.
-

Level 4

Students will gain knowledge, skills, and experience to:

- Understand how the ways in which leadership of groups is acquired and exercised have consequences for communities and societies.
 - Understand how exploration and innovation create opportunities and challenges for people, places, and environments.
 - Understand that events have causes and effects.
 - Understand how people participate individually and collectively in response to community challenges.
-

English: Speaking, Writing and Presenting

Level 1

Ideas

Students will:

- Form and express ideas and information with reasonable clarity, often drawing on personal experience and knowledge.
-

Level 2

Processes and strategies

Students will:

- Create texts by using meaning, structure, visual and grapho-phonetic sources of information, and processing strategies with growing confidence.

Purposes and audiences

Students will:

- Expect the texts they create to be understood, responded to, and appreciated by others.
- Develop and convey personal voice where appropriate.

Ideas

Students will:

- Begin to add or delete details and comments, showing some selectivity in the process.

Language features

Students will:

- Use a large and increasing bank of high-frequency, topic-specific, and personal-content words to create meaning.

Structure

Students will:

- Organise and sequence ideas and information with some confidence
-

Level 3

Processes and strategies

Students will:

- Create a range of texts by integrating sources of information and processing strategies with developing confidence.

Purposes and audiences

Students will:

- Construct texts that show a growing awareness of purpose and audience through careful choice of content, language, and text form.
- Convey and sustain personal voice where appropriate.

Ideas

Students will:

- Form and express ideas and information with increased clarity, drawing on a range of sources.
- Suggest ideas that show an awareness of a range of dimensions or viewpoints.

Language features

Students will:

- Use oral, written, and visual language features to create meaning, and effect and engage interest.
- Use a range of vocabulary to communicate meaning.

Structure

Students will:

- Organise and sequence ideas and information with increasing confidence.
 - Use a variety of sentence structures, beginnings, and lengths.
-

Level 4**Processes and strategies**

Students will:

- Create a range of texts by integrating sources of information and processing strategies with increasing confidence.

Purposes and audiences

Students will:

- Construct texts that show an awareness of purpose and audience through deliberate choice of content, language, and text form.
- Convey and sustain personal voice where appropriate.

Ideas

Students will:

- Form and communicate ideas and information clearly, drawing on a range of sources.
- Add or change details and comments to support ideas, showing thoughtful selection in the process.
- Show increasing awareness of a range of dimensions or viewpoints.

Language features

Students will:

- Use a range of oral, written, and visual features to create meaning and effect and to sustain interest.
- Use a range of vocabulary to communicate precise meaning.

Structure

Students will:

- Organise and sequence ideas and information for a particular purpose or effect.
 - Use a variety of sentence structures, beginnings, and lengths for effect.
-

Waikato Coalfields Museum Resources

Below is a list of resources held by Waikato Coalfields Museum which will assist with the listed activities.

Resources held in Waikato Coalfields Museum Collections

Fact sheets, Booklets and Archival Material:

- Historic mining disasters in the Waikato coalfields
- Mine locations
- Significant socio-economic and cultural activities in the wider mining community

Rotating Displays including the following examples:

- The Ralph and Glen Afton Mining Disasters
- Mining methods used in Huntly – this includes a reconstructed Bord and Pillar mineshaft
- Historical data pertaining to the development of the Mines Rescue Unit
- Wall maps depicting the extent and location of mines in the Huntly coalfields

Artefacts and Photographs from the following:

- Early images of miners and underground mines: regionally, nationally and internationally
- Images of more recent opencast mining
- Photographs depicting changes in environmental responsibility of the mining industry
- Physical artefacts from local mining disasters
- Physical artefacts pertaining to all aspects of historical and contemporary mining

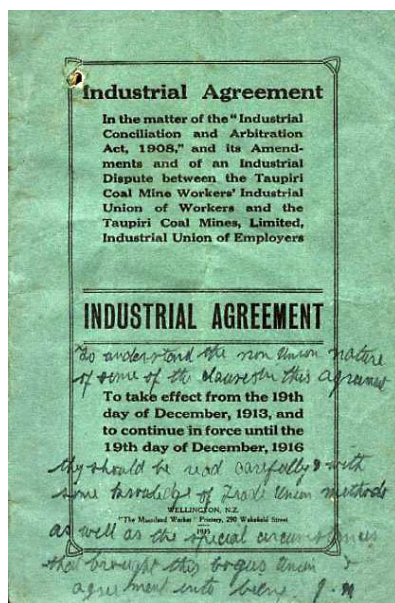
Audio-Visual resources:

- Videos of early mechanised underground and opencast mining
- Video presentations on mining methods
- Video presentations on mining history
- Video presentations on the socio-economic and cultural effects of mining on the community
- Oral history from miners from various mines in the Waikato coalfields

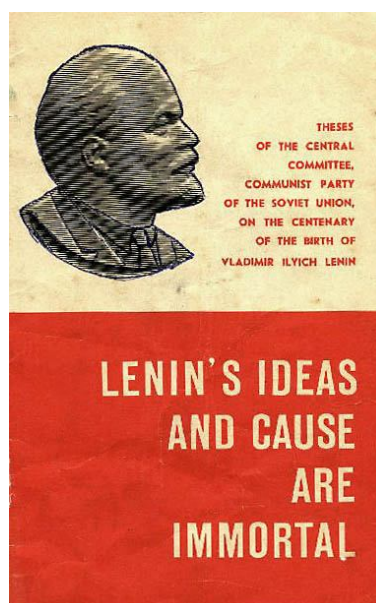
Library:Books, Journal Articles, Audio-Visual resources, Newspaper Articles:

- The historic Solid Energy library
- History of Huntly and districts
- Coalmining – regionally, nationally and internationally
- Mining disasters
- Mining technologies – historic and contemporary
- New Zealand history

(see the Bibliography in the Teacher Resource for examples of these resources)



Taupiri Coal Mine Workers' Industrial Union of Workers Booklet (2004.444.2)



Huntly Miners Union Meeting: 1980s (2004.10.1)

Booklet on Vladimir Lenin (1997.58.1)

Worksheet 1: Waikato Coalfields Museum Visit

Levels 1-2

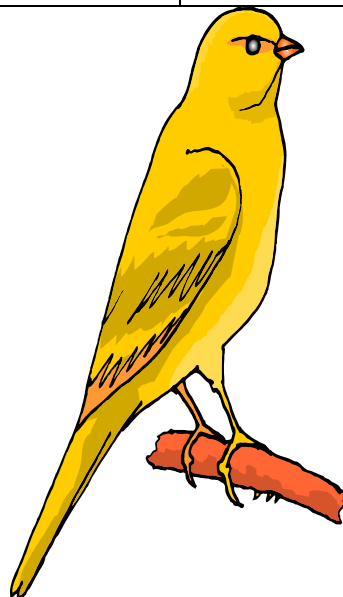
Name: _____

Look around the coal mining displays on the ground floor of the museum. Pay particular attention to the Coal Hall and the entrance foyer. See if you can find some interesting objects that will help you to answer the questions on this worksheet.

<p>Draw a piece of coal</p>	<p>What is coal made from?</p>
<p>What is coal used for?</p>	<p>How was coal mined in the early days?</p>



<p>Mining is very dangerous. Name the two mining disasters mentioned in the Coal Hall</p>	<p>Why is mining dangerous?</p>
<p>Draw a picture of a canary</p>	<p>Why would miners take a canary into the mine with them? Tick the correct box</p> <ul style="list-style-type: none"> <input type="checkbox"/> To keep the miners company <input type="checkbox"/> To detect explosive gases <input type="checkbox"/> For lunch <input type="checkbox"/> To whistle tunes for the miners to sing along to <input type="checkbox"/> To show the miners' wives that they only got as dirty as the birds



Look around the Coal Hall. Describe the following photos and exhibits in words and pictures:

<p>What type of clothing did the early miners wear? Draw a picture.</p>	<p>How was coal moved about inside a mine?</p>
<p>Draw a picture of the King's Hall from the photo in the Ralph Mine Disaster display.</p>	<p>What is a Bowler? Look at the Ralph Mine Disaster display and draw a picture of the Bowler in the cabinet.</p>

Draw a picture and write about your trip to the museum



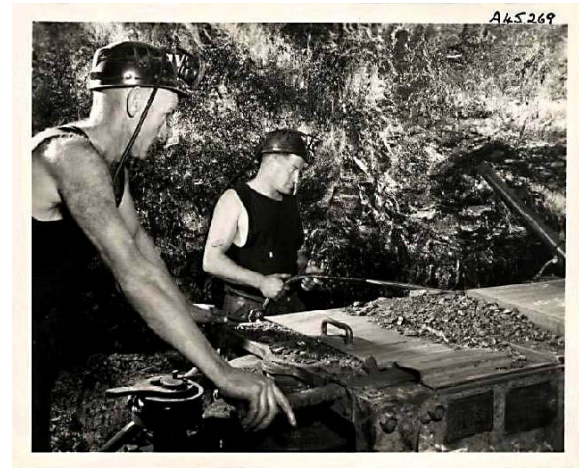
Waikato Coalfields Museum

Worksheet 2: Find a Fact

Level 2-4

Name: _____

You will find the answers to the following questions in displays in the Coal Hall at the museum.



Miners in the Renown Mine
(1999.121.1)

1. What year did mining begin in the Huntly Coalfields?

2.a What do dead plants and trees decompose into?

2.b How does this change into coal?

3. What was the cause of the 1914 Ralph Mine Disaster?

4. What was the name of the mining system used in the first Huntly mines?

5. Which township was closed in 1986 for the extension of a mine?

6. Which opencast mine was transformed into a lake?



Worksheet 3: Find a Fact

Name: _____

You will find answers to the following questions in the displays in the Coal Hall at the museum.

1. Identify THREE coalfields on the maps at Waikato Coalfields Museum

- 1. _____
- 2. _____
- 3. _____



2. Complete the tables below for two disasters in the Waikato coalfields since 1900.

Disaster 1

Name	Number of deaths
Date	Number of injuries
Cause	

Disaster 2

Name	Number of deaths
Date	Number of injuries
Cause	

3. What was the purpose of canaries in the mines and what might have happened without them?



Worksheet 4: Weaver's Opencast Mine (now Puketirini)

Name: _____

Find this photograph in the Coal Hall at the museum.



The photograph shows water testing at Kimihia, an opencast mine no longer in use. A similar process would have taken place at Puketirini, previously known as Weavers Lake, a recreational reserve which used to be Weaver's Opencast Mine. When you find the photograph, you will find information about the mine, the lake and water testing. Use this information to answer the questions below.

1. How long was Weaver's Opencast Mine in use?

2. What size is the lake at Puketirini?

3. What is the lake used for now?

4. What might the man in the photo be looking for in the water?

5. The lake at Puketirini used to be a mining site. Why is it important to regularly check the water now that it is a recreational area?

Worksheet 5: Coal Mining in the Waikato Region

Level 2-4

Name: _____

The first commercial coal mine in the Waikato region was Kupakupa Coalfield. It is also the district's longest serving mine as it is still in use. Go to the Kupakupa display in the Coal Hall and answer the following questions:



1. Where is the site?

2. When was coal first discovered at this site?

3. Who owned the land at this site when it first was used?

4. What township lies opposite this site?

5. What was the name of the government inspector who surveyed this outcrop in 1859?

5. Put together a timeline for the Kupakupa Coalfield in the box below:

Photo Analysis: Ralph Mine Disaster

Level 2-4

Name: _____

This is a photograph of one of the funerals following the Ralph Mining Disaster. The first funeral was held on 14 September 1914.



Funeral of victims of the Ralph Mine Disaster
(1997.47.1)

1. What does this photo tell you about the spirit of the Huntly community at the time of the Ralph Mining Disaster?

2. How does Huntly look different to the way it looks today (the photo is of the main street of Huntly) – look at the road, buildings, people, clothing etc.

3. How does funeral transport differ to what we might use today?

4. Why is there is more than one coffin in this funeral procession?

Poetry: Huntly Mining Disasters

Level 3-4

Name: _____

Pictures in the Fire

When you sit in retrospection in the evening's failing light,
 'Ere the falling shades of sunset merge into the dark of night,
 And you're musing and you're dreaming, 'twixt the Heavens and the mire,
 And in fancy seeing pictures being painted in the fire.

And you've wondered why those pictures always reek of blood and strife;
 Do you know that every picture represents a human life?
 And there's blood on every piece of coal that makes each little flame,
 The blood of human sacrifice to our undying shame.

Do you know that every moment, quickly as a moment flies,
 A man's life has paid the toll to cross the bridge of sighs,
 Has paid the toll to nature's laws far down beneath the earth,
 Whilst comrades maimed have lived to curse the day that gave them birth.

So in the future when we're dreaming let us also kneel and pray,
 For those poor souls condemned to toil far from the light of day;
 And we'll send a prayer to Heaven that will rouse the angels' ire;
 For there's blood on every brush that paints those pictures in the fire.

Teddy Johnson (Pukemiro Junction)

Activity	
What?	Write a poem about one of the following disasters in Huntly's mining history: <ul style="list-style-type: none"> • Ralph Mine disaster • Glen Afton disaster
Where to find information?	You can find information on each of these in the Coal Hall in the museum. Look at the emotions of the people shown in the displays, photos, letters etc
Ideas about poetry styles	<p>You can choose your own style of poem. For example you may choose to write a quatrain or a diamante.</p> <p>Quatrains: Quatrains are made up of four lines. The rhyming pattern can be AABB or ABAB (ie either the first two and the last two lines rhyme or the first and the third and the second and the fourth lines rhyme).</p> <p>Diamante: The words in a diamante form the shape of a diamond. Line 1: Noun or subject - one word Line 2: Two adjectives that describe line 1 Line 3: Three 'ing' words that describe line 1 Line 4: Four nouns - the first two are connected with line 1; the last two are connected with line 7 Line 5: Three 'ing' words that describe line 7 Line 6: Two adjectives that describe line 7 Line 7: Noun synonym for the subject</p>

Think about:

- Emotions of the miners and their rescuers during the disaster
- Emotions of the family and friends left behind
- What happened before, during and after the disaster
- The effect on the people involved and the community in general

A brainstorm will help to organise your ideas. You can use the box below.

Brainstorm ideas about the disaster you have chosen:

Write your poem here:



Letter Writing: Huntly Mining Disasters

Level 3-4

Name: _____

Here is an opportunity to think about safety issues in coal mines between the years 1900 to 1950. Use the details on display in the Coal Hall at the museum to gather information relating to the Glen Afton and Ralph mines during this era.



Waikato District Mines Rescue Unit - 1942
(2004.81.1)

Activity	
What?	Imagine that you are a miner working in the Waikato coalfields somewhere between the years of 1900 to 1950. You are aware that there are problems in the mine and you would like to let the Minister of Mining know that he should be concerned about the safety issues endangering miners working in your mine.
Where to find information?	The Coal Hall exhibits in the museum. You will need to collect information from photos, displays, letters and reports about the Glen Afton and Ralph mining disasters.
Think about:	<ul style="list-style-type: none"> • How to voice your opinion about the safety issues and make your argument sound by providing examples • The cleanliness of the workplace • How you access the mine. Are the shafts easy to get in and out of? How stable are they? • How is your workplace illuminated? Is this safe? What safety gear is available to miners at this time? • Anything else you find which is relevant to concerns you might have about safety in the mine or your working conditions • Any suggestions you might wish to argue for the improvement of the working environment

Write your letter here

Drawing: Historic Mining Tools / Machinery

Level 2-4

Name: _____

Activity	
What?	<p>Choose a tool or machine used by miners in the Huntly region. A range of these are displayed in the foyer of the museum. Draw this tool.</p> <p>Describe the tool or machine, considering the following:</p> <ul style="list-style-type: none">• Its size, weight, the materials it is made from, ease of use, what it was used for• What would it feel like to use this equipment for a full working day? Would it be tiring or easy work?• What problems might you encounter?
Where to find information?	<p>The displays in the foyer, Coal Hall and outside of the museum.</p>



Draw the mining tool or machine you have chosen here

Write notes about your chosen piece of mining equipment here

Drawing and Labeling: Historic Mineshaft

Level 3-4

Name: _____

Activity	
What?	<p>Sketch the reconstructed historic Bord and Pillar mine working in the Coal Hall at the museum</p> <p>Label the following: mineshaft, mineroof, pit-head, cart, miner, shovel, railway tracks, helmet, headlamp, clothing the miner is wearing. Describe the use for each of these items.</p>
Where to find information?	The Coal Hall at the museum



Reconstructed Mine Shaft.

Draw a diagram of the historic mine working here (include labels)

Case Study: Effect of the Ralph Mine Disaster on the Skellern & Patterson Families

Name: _____

The Ralph Mine Disaster on 12 September 1914 was devastating for the families left behind. Forty-three men died in the explosion. Many children were orphaned. Below are details relating to two of these families: the Skellern and the Patterson children.



Ruth, Elsie and Thelma Skellern
(2010.164.8)

Skellern Family

John Skellern was 36 years old when he was killed in the explosion at the Ralph Mine.

John left four daughters behind. His wife Euphemia had died previously following the birth of their twin daughters, only one (Mavis) of whom survived. After the death of his wife, John cared for his other three daughters Ruth, Thelma and Elsie. Mavis was fostered and eventually adopted by neighbour Mavis Greenacre.

After John died, Ruth, Thelma and Elsie were raised by their grandfather, Richard Skellern.

The three older girls lost contact with Mavis for many years.

Patterson Family

William Patterson was also killed in the explosion at the Ralph Mine. He was 44 years of age.

William also left children behind. The Patterson children were not as 'lucky' as the Skellerns. William, at 14, was regarded as an adult and able to fend for himself. Eileen (3), Bridget (5), Lil (6) and Kathleen (8) spent an unhappy childhood in an Auckland orphanage. At 11 years old, Maria was deemed capable of housework and escaped her sisters' fate.

After reading the above information answer the following questions:

1. What might have happened to the Skellern children if their grandfather had been unable to look after them?

2. How do you think the Skellern family felt when they lost contact with their baby sister?

3. In what respects were the Patterson family more unfortunate than the Skellerns?

4. William Patterson had to look after himself at the age of 14. How do you think children today would cope if they found themselves in a similar situation?

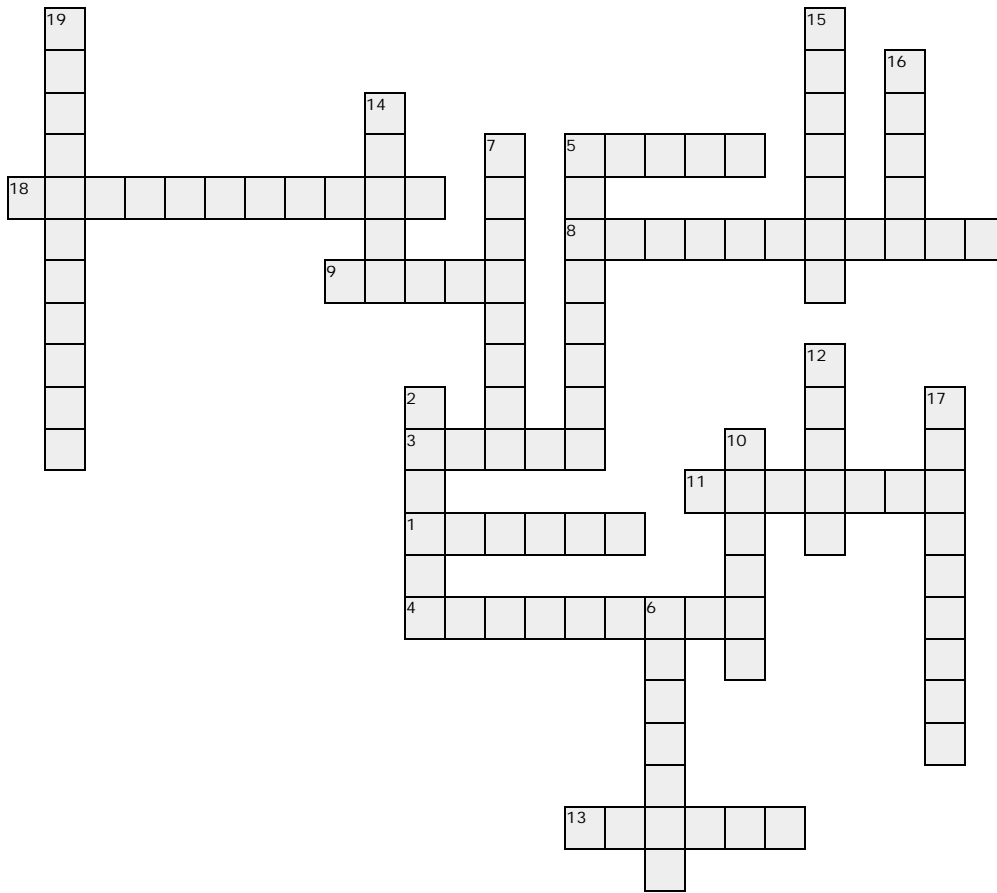
5. What do you think it might have been like living in an orphanage?



Wedding of Euphemia and John Skellern
(2010.164.7)

Crossword: Huntly Coalmining History

The answers to the clues below can be found in the displays in the Coal Hall and foyer areas of Waikato Coalfields Museum - if the answer is a number write the word in full



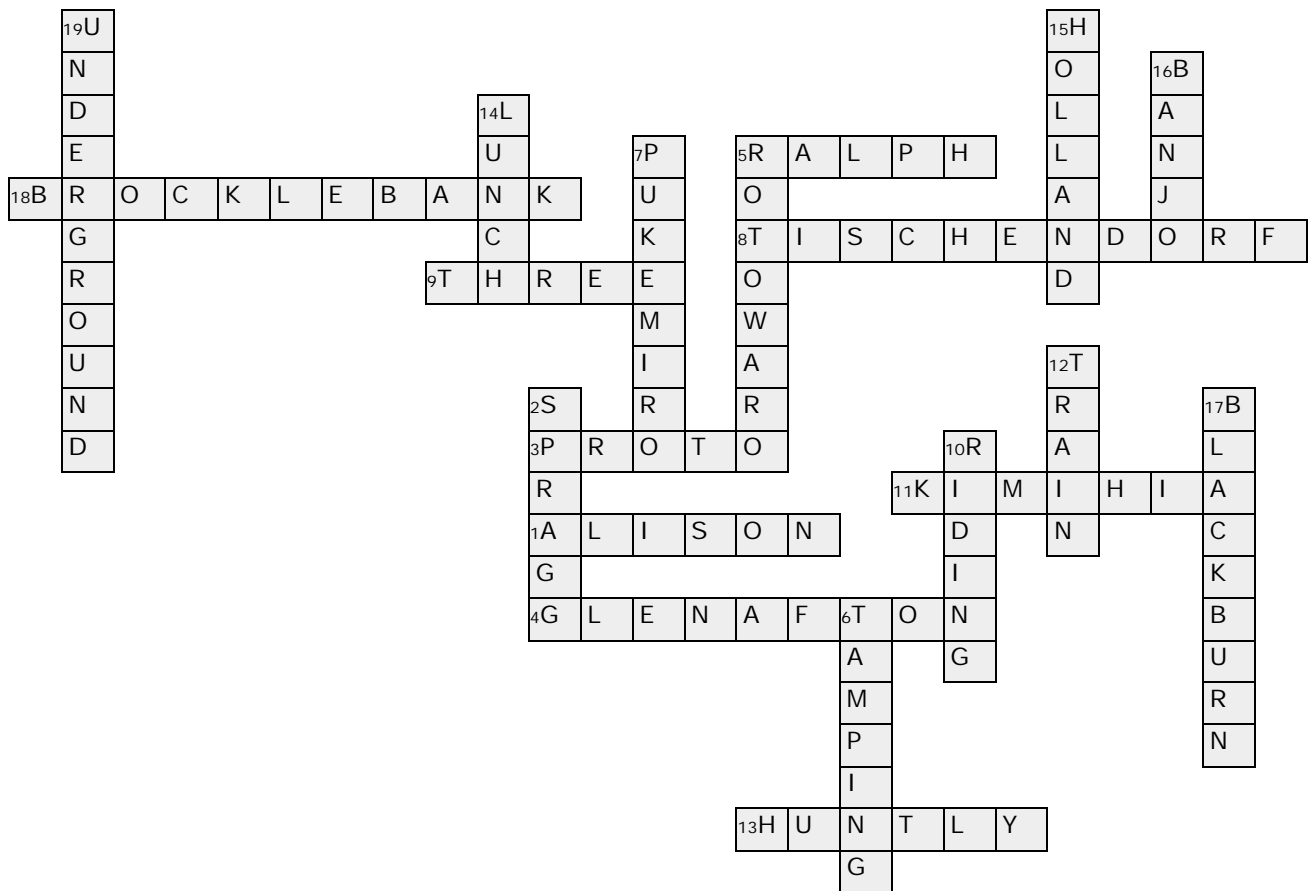
Across:

1. Mr E W was Chairman of Taupiri Coal Mine Ltd from 1899 -1943?
3. A breathing apparatus is also known as a Set
4. Which disaster was caused by carbon monoxide suffocation.
8. Find the photo labelled 28 February 1992. What is the last name of the miner at the end of the back row?
9. How many tugs of the life-line are needed for "Help Me Out"?
11. Taupiri Reserve Mine began on the southern bank of Lake
13. Where was the Taupiri Extended Mine?
5. Which mining disaster was caused by naked flames from John Martin's headlight?
18. Mr Bill owned the crib tin taken down in the Ralph Mine disaster?

Down:

2. What is the brake on a coal skip called?
5. This opencast mine used to be a town.
6. What type of rod was used for ramming explosive into holes before detonating?
7. What mine features in Ray Starr's painting?
10. What was prohibited on skips?
12. What transported coal from Huntly to Auckland in the early days of mining in the region?
14. What was carried in a crib tin?
15. Mr H E wrote *The Huntly Explosion Report*
16. What type of shovel did early miners use?
17. Mr Christopher was Mine Manager of the Glen Afton mine at the time of the disaster?
19. Huntly coal was first mined using this method.

Crossword: Huntly Coalmining History – Answer sheet



Across:

1. Mr E.W. ? was Chairman of Taupiri Coal Mine Ltd from 1899 -1943? (ALISON)
3. A breathing apparatus is also known as a WHAT Set (PROTOS)
4. This disaster was caused by carbon monoxide suffocation. (GLENAFTON)
8. Find the photo labelled 28 February 1992. What is the last name of the miner at the end of the back row? (TISCHENDORF)
9. How many tugs of the life-line are needed for Help Me Out? (THREE)
11. Taupiri Reserve Mine began on the southern bank of Lake ...? (KIMIHIA)
13. Where was the Taupiri Extended Mine? (HUNTLY)
5. Which mining disaster was caused by naked flames from John Martin's headlight? (RALPH)
18. Mr Bill ? owned the crib tin taken down in the Ralph Mine disaster? (BROCKLEBANK)

Down:

2. What is the brake on a coal skip called? (SPRAGG)
5. This opencast mine used to be a town. (ROTOWARO)
6. What type of rod was used for ramming explosive into holes before detonating? (TAMPING)
7. What mine features in Ray's Starr's painting? (PUKEMIRO)
10. What was prohibited on skips? (RIDING)
12. What transported coal from Huntly to Auckland in the early days of mining in the region? (TRAIN)
14. What was carried in a crib tin? (LUNCH)
15. Mr H.E. ? wrote *The Huntly Explosion Report* (HOLLAND)
16. What type of shovel did early miners use? (BANJO)
17. Mr Christopher ? was Mine Manager of the Glen Afton mine at the time of the disaster? (BLACKBURN)
19. Huntly coal was first mined using this method. (UNDERGROUND)

Easy Wordfind: Coal Mining Terminology

Level 2-3

Name: _____

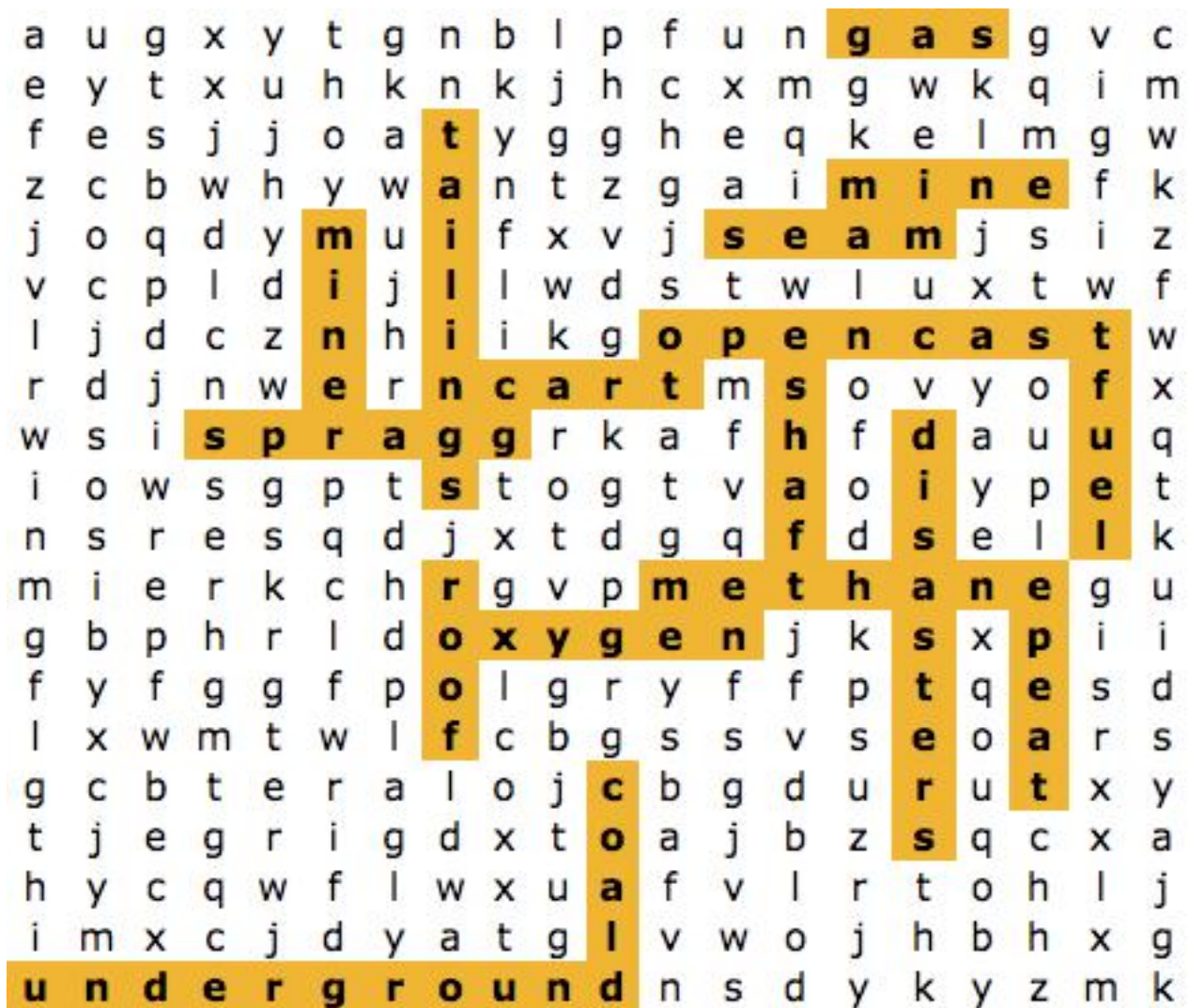
Find the words in the list below in the wordfind. You will find them across and down.

a u g x y t g n b l p f u n g a s g v c
e y t x u h k n k j h c x m g w k q i m
f e s j j o a t y g g h e q k e l m g w
z c b w h y w a n t z g a i m i n e f k
j o q d y m u i f x v j s e a m j s i z
v c p l d i j l l w d s t w l u x t w f
l j d c z n h i i k g o p e n c a s t w
r d j n w e r n c a r t m s o v y o f x
w s i s p r a g g r k a f h f d a u u q
i o w s g p t s t o g t v a o i y p e t
n s r e s q d j x t d g q f d s e l l k
m i e r k c h r g v p m e t h a n e g u
g b p h r l d o x y g e n j k s x p i i
f y f g g f p o l g r y f f p t q e s d
l x w m t w l f c b g s s v s e o a r s
g c b t e r a l o j c b g d u r u t x y
t j e g r i g d x t o a j b z s q c x a
h y c q w f l w x u a f v l r t o h l j
i m x c j d y a t g l v w o j h b h x g
u n d e r g r o u n d n s d y k y z m k

-
- | | | | |
|---------------|-----------|-------------|------------|
| • cart | • coal | • disasters | • fuel |
| • gas | • methane | • mine | • miner |
| • opencast | • oxygen | • peat | • roof |
| • seam | • shaft | • spragg | • tailings |
| • underground | | | |

Easy Wordfind: Coal Mining Terminology Answers

Level 2-3



cart
gas
opencast
seam
underground

coal
methane
oxygen
shaft

disasters
mine
peat
spragg

fuel
miner
roof
tailings

Hard Wordfind: Coal Mining Terminology

Level 3-4

Name: _____

Find the words in the list below in the wordfind. You will find them in any direction (forward and back, up and down and diagonally).

t m q y o x z q l j l a o c v s l r f z
c a r b o n i s a t i o n r f t f a h s
a p s t o p p i n g u o j y u g y c o w
m d c l i e m e z r j i c e e h f x s b
e w n x s n z l i i f j g u l x p e y k
o r y l x a g d i s a s t e r s e l q c
k m a e s h s d l f o o r y n f c r u v
h c w b g t z n k e o d p f n n v x r s
k h h i c e r u r n t p b w x n q j t r
f w g t w m g o b i u i e r s c q w s v
s g c u h c t r u m s o n n a q s q g x
a s r m s o t g v f x b e g c t s s g c
g g e i o a c r m i l n c g i a t y l o
o n o n r r m e l r g w h a g l s i r l
i i s o m o e d b e n p a r o m g t c k
b l o u k o l n y d b e r p n a r a i e
e i t s v h y u i a z n g s z a f e o h
u a e v n r k s h m l q i y c e v p g m
w t p u m k l o c p l t j f x t k m i y
u b e q g s v e n t i l a t i o n i v k

-
- biogas
 - bituminous
 - brattice
 - carbonisation
 - cart
 - char
 - coal
 - creosote
 - disasters
 - firedamp
 - fuel
 - gas
 - lignite
 - methane
 - mine
 - miner
 - opencast
 - oxygen
 - peat
 - roof
 - seam
 - shaft
 - slack
 - spragg
 - stopping
 - sulphur
 - tailings
 - tar

Mix and Match: Coal Mining Definitions

Level 3-4

Name: _____

Choose a word from the list below to match each of the definitions. Write the correct word in the space provided.

	A person who works in the mines
	The type of equipment used in underground mines to disperse poisonous gases
	A layer of coal
	The passageway allowing access to a mine
	A mine which is not opencast
	Sudden events resulting in great damage or loss of life
	A pale yellow non-metallic element with a suffocating smell that occurs in coal
	The entrance to a mine shaft
	A flammable gas created by rotting organic matter, which is released when coal is mined
	A site where you extract coal or other minerals
	A soft, dark brown coal
	A mine which is worked from the top surface
	Vegetable matter, decomposed in water, which is the precursor to coal
	A hard black substance mainly made from compressed, carbonised plant and vegetable matter found in layers and used as a fuel
	This was used to transport coal in the mines
	A fine powder which is a residue of coal

Word Bank

Bituminous coal	Disasters	Mine shaft	Slack
Cart	Methane	Opencast mine	Sulphur
Coal	Mine	Peat	Underground mine
Seam	Miner	Pit-head	Ventilation fans

Mix and Match: Coal Mining Definitions - Answers

Level 3-4

Choose a word from the list below to match each of the definitions. Write the correct word in the space provided.

Miner	A person who works in the mines
Ventilation fans	The type of equipment used in underground mines to disperse poisonous gases
Seam	A layer of coal
Mine shaft	The passageway allowing access to a mine
Underground mine	A mine which is not opencast
Disasters	Sudden events resulting in great damage or loss of life
Sulphur	A pale yellow non-metallic element with a suffocating smell that occurs in coal
Pit-head	The entrance to a mine shaft
Methane	A flammable gas created by rotting organic matter, which is released when coal is mined
Mine	A site where you extract coal or other minerals
Bituminous coal	A soft, dark brown coal
Opencast mine	A mine which is worked from the top surface
Peat	Vegetable matter, decomposed in water, which is the precursor to coal
Coal	A hard black substance mainly made from compressed, carbonised plant and vegetable matter found in layers and used as a fuel
Cart	This was used to transport coal in the mines
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Word Bank

Bituminous coal	Disasters	Mine shaft	Slack
Cart	Methane	Opencast mine	Sulphur
Coal	Mine	Peat	Underground mine
Coal seam	Miner	Pit head	Ventilation fans