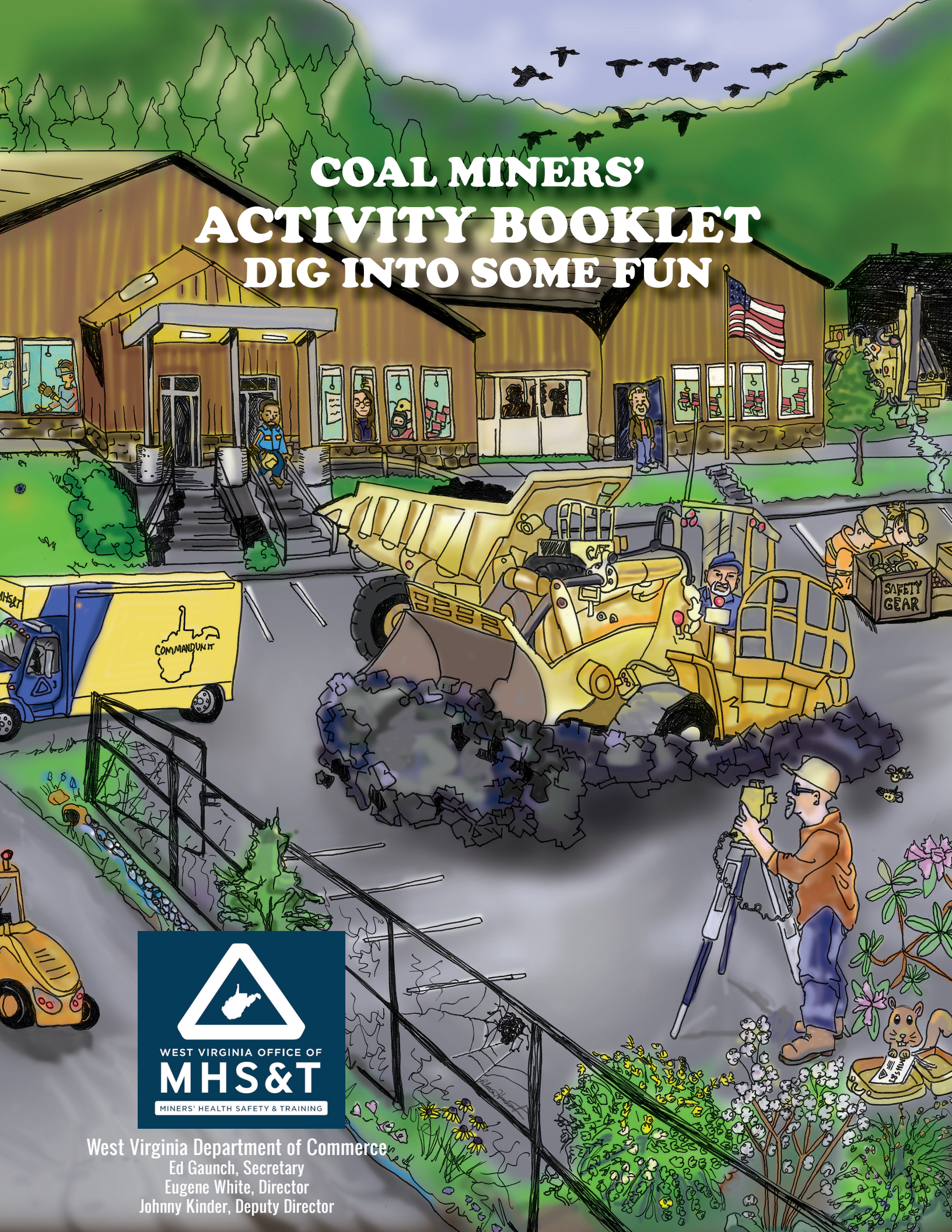


COAL MINERS' ACTIVITY BOOKLET DIG INTO SOME FUN



West Virginia Department of Commerce
Ed Gaunch, Secretary
Eugene White, Director
Johnny Kinder, Deputy Director



WEST VIRGINIA OFFICE OF

MHS&T

MINERS' HEALTH SAFETY & TRAINING

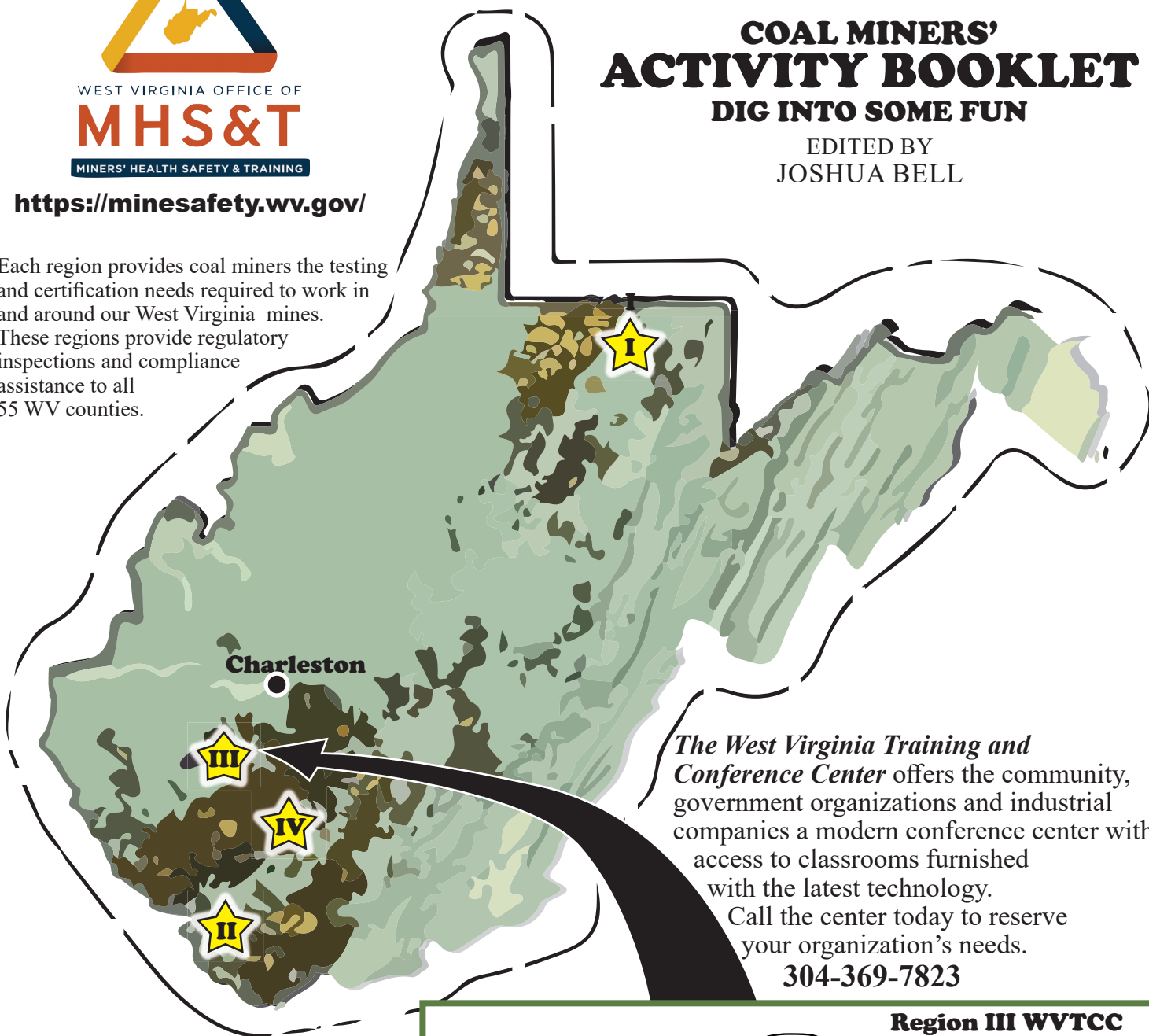
<https://minesafety.wv.gov/>

Each region provides coal miners the testing and certification needs required to work in and around our West Virginia mines. These regions provide regulatory inspections and compliance assistance to all 55 WV counties.

COAL MINERS' ACTIVITY BOOKLET

DIG INTO SOME FUN

EDITED BY
JOSHUA BELL



The West Virginia Training and Conference Center offers the community, government organizations and industrial companies a modern conference center with access to classrooms furnished with the latest technology. Call the center today to reserve your organization's needs.
304-369-7823

Region I – Westover

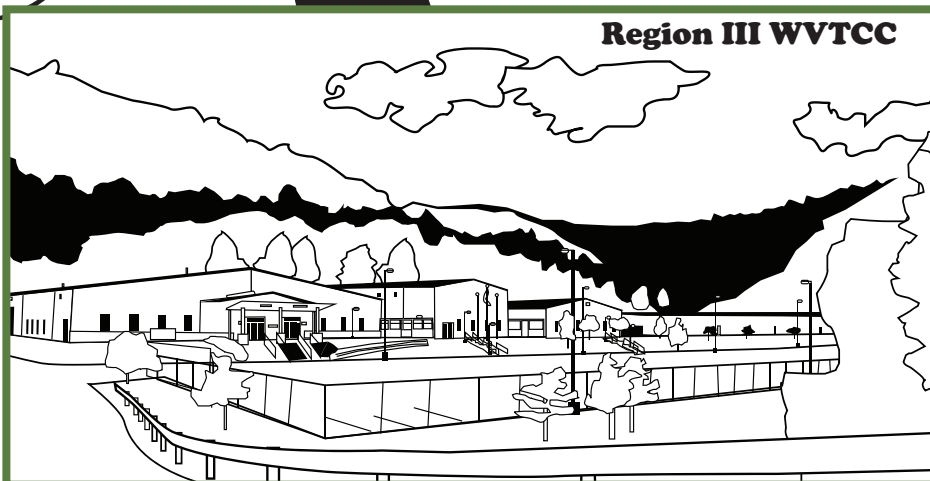
Barbour – Berkeley – Brooke – Calhoun – Doddridge – Gilmer – Grant – Hampshire – Hancock – Hardy – Harrison – Jefferson – Lewis – Marion – Marshall – Mineral – Monongalia – Morgan – Ohio – Pendleton – Pleasants – Preston – Randolph – Ritchie – Taylor – Tucker – Tyler – Upshur – Wetzel – Wirt – Wood

Region II – Welch

Cabell – Lincoln – Logan – Mason – Mingo – McDowell – Mercer – Monroe – Summers – Wayne – Wyoming

Region IV – Oak Hill

Boone – Braxton – Clay – Fayette – Greenbrier – Jackson – Kanawha – Nicholas – Pocahontas – Putnam – Raleigh – Roane – Webster



Mission Statement

The West Virginia Office of Miners' Health Safety & Training is responsible for the supervision of the execution and enforcement of the provisions of the state's mining laws and rules. Prime consideration is given to the protection of the safety and health of persons employed within or at the mines of the state. In addition, the agency protects and preserves mining property and property used in connection with mining activities.

The agency pursues this mandate by impartially executing and enforcing the state's mining laws and administrative rules in a co-operative spirit through a comprehensive approach that includes not only inspection, enforcement, and investigative activities, but also, and perhaps more importantly, by aggressively conducting timely and functional training activities focused on all segments of the mining industry.

These duties include regular inspections of all mining related sites and the certification/training of mine employees. All serious mining accidents are investigated and statistics are maintained with regard to health and safety related concerns. Currently the office has 140 employees.

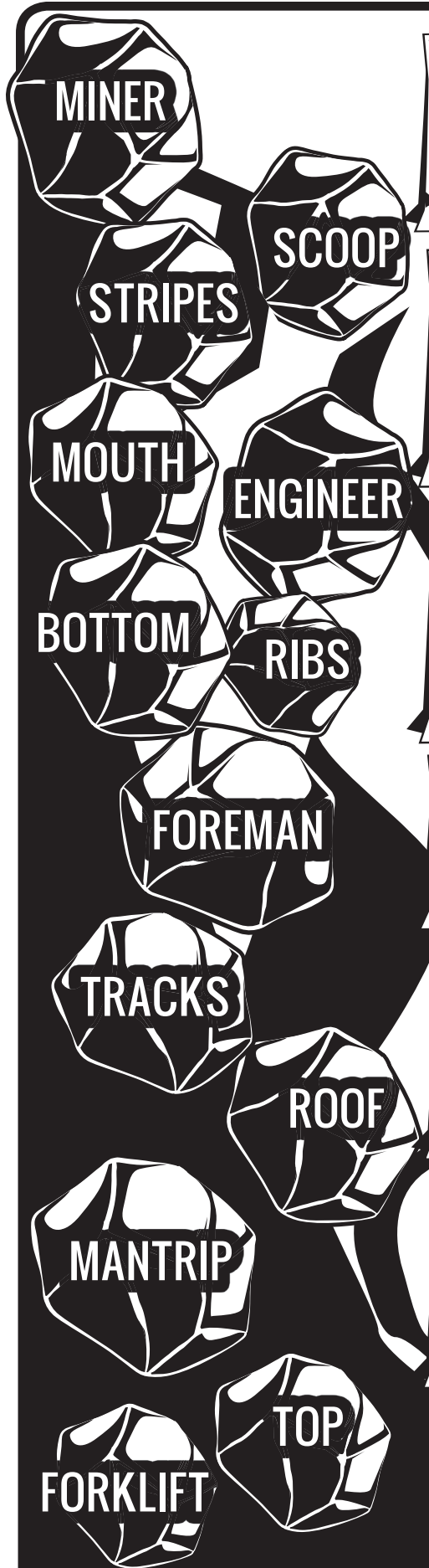
Our History

The West Virginia Office of Miners' Health, Safety and Training is one of the oldest WV state agencies, tracing its roots to February 22, 1883 when the first West Virginia mine safety act was passed by the legislature. The first code section called for the appointment of a mine inspector to make certain the mines in the state were "properly drained and ventilated". Not until 1887 would any major revisions of the mining laws occur. In the decades since, many additional mining laws and regulations have been enacted as the industry has evolved. Our agency has gone through an evolution as well.

Prior to 1905, the state was divided into several inspection districts with a Chief Mine Inspector as head of the agency. From 1905 to 1985 our agency was known as the West Virginia Department of Mines, and the number of inspection districts grew from five to more than 50. In 1985 the Department of Mines merged with several other agencies to form the West Virginia Department (later Division) of Energy. In 1991 our agency became the West Virginia Office of Miners' Health Safety and Training.

Currently, our agency consists of approximately 130 employees assigned to four regional offices and the Charleston Headquarters. We employ Inspectors, Safety Instructors, and Administrative support personnel in each regional office. Our inspectors today are responsible for inspecting over 616 mines, quarries and coal handling facilities as well as approximately 1,734 independent contracting companies. Our inspection staff conducts regular inspections and investigates all serious mining accidents as outlined in our mission statement. Our safety instructors provide industry training, review safety programs for all facilities, and conduct certification examinations. We also maintain highly trained and well equipped Mine Rescue Teams. In addition to these activities, our agency issues permits and approvals, maintains industry statistics, and develops and publishes industry training materials.





2 PT

□ □ T T □ □

Floor or underlying surface of an underground mine.

2 PT

□ □ □ □ □ □ R

Designs safe and efficient mines

2 PT

□ □ R □ □ □ T

A truck used to lift and move materials over short distances.

2 PT

□ □ R □ □ □ □

Supervising mining operations on the surface and underground.

2 PT

□ □ □ T R □ P

A carrier of miners, by rail or rubber tire, to and from the mine.

2 PT

□ □ □ □ R

One who extracts coal, and other natural materials from the earth's crust.

2 PT

□ □ □ T □

Opening of a mine.

2 PT

R □ □ □

The side of a pillar or the wall of an entry.

2 PT

R □ □ □

The overhead surface of a coal mine work place

2 PT

□ □ □ □ P

Equipment designed for cleaning roadways & hauling supplies.

2 PT

□ T R □ P □ □

The reflective strips of tape that a put on miners clothing to be seen in the mines easily

2 PT

T R □ □ □ □

A continuous metal band around the wheels of a heavy vehicle such as a tank to make possible to drive in rough or soft ground.

2 PT

T □ P

A mine roof

MATCH COAL TERMS WITH THEIR DEFINITIONS
POSSIBLE 26 POINTS



Fact? or Fiction?



1. Coal is a sedimentary rock.
2. Coal is made from dinosaurs.
3. It takes roughly 1 million years to form coal.
4. WV named bituminous coal as its official state rock.
5. These are the types of coal: anthracite, bituminous, subbituminous & lignite.
6. Pepperoni rolls were probably first created by coal miners' wives
7. Jefferson & Hardy Counties of 55 WV counties produce no coal.
8. Metallurgical coal is used to make steel.
9. Coal began production in Kanawha to support the salt industry.
10. John Henry was a coal mining man.

Wow!



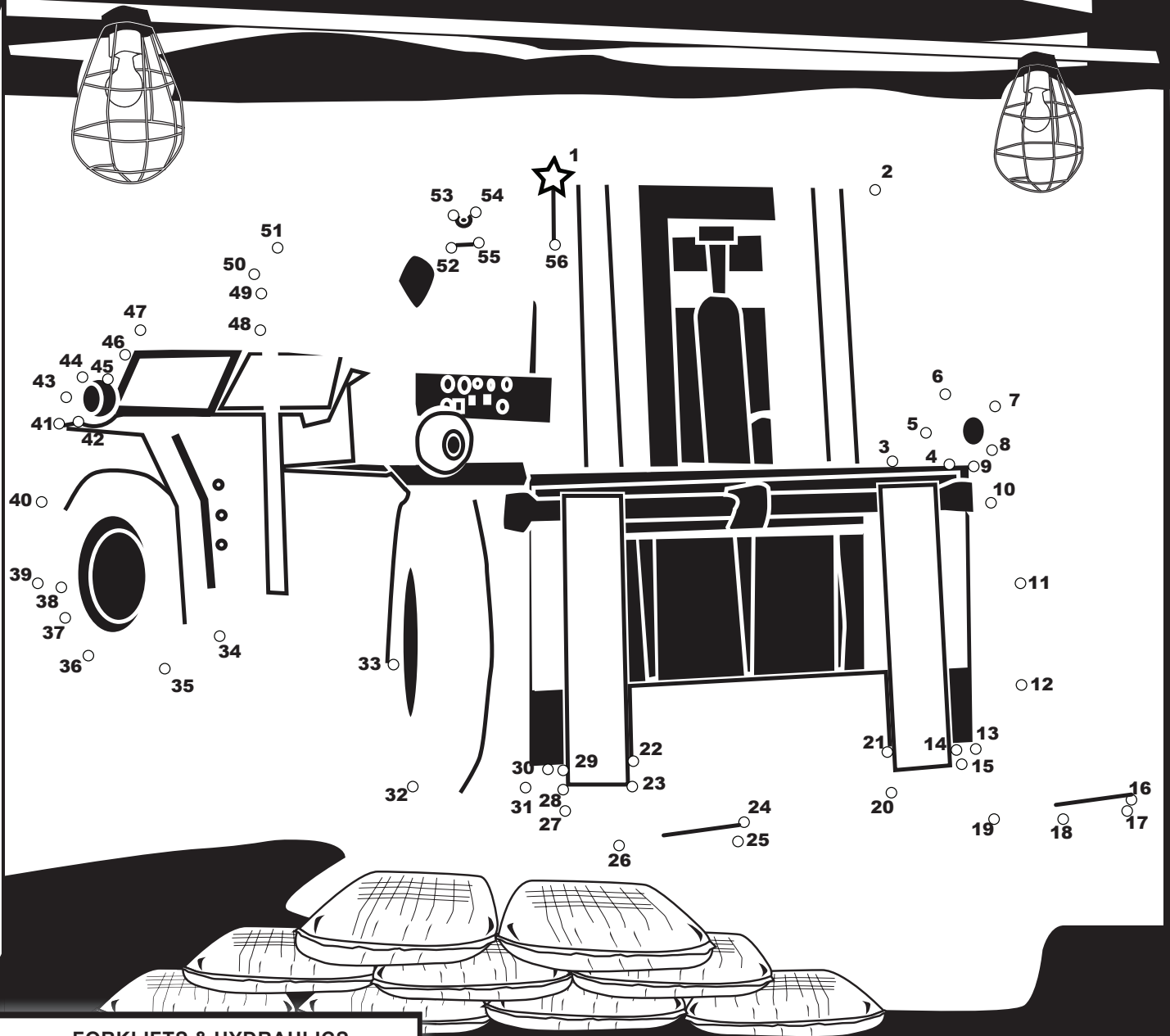
IS IT FACT OR FICTION?
1 POINT FOR EACH
CORRECT ANSWER
POSSIBLE 10-POINTS

1 PT



VIRTUAL reality

WHY DO YOU THINK MINES NEED ROCK DUST?



FORKLIFTS & HYDRAULICS

Hydraulic pressure is a very efficient way to move heavy objects, just by changing the fluid pressure in the cylinders it allows fork lifts to lift 25 ton longwall shields with ease.

amazing facts



**CORRECTLY
COMPLETE THE DOT TO DOT
8 POINTS**

8 PT

6 MOVE the rock dust



EDIBLE COAL

FUN COOKIE RECIPE

**1 PACKAGE
OF COOKIES**

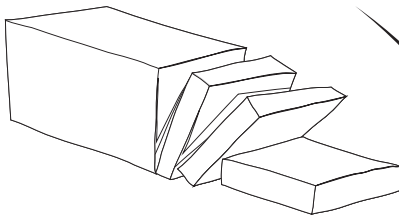


**PUT CHOCOLATE SANDWICH COOKIES
IN A PLASTIC ZIPPER BAG**



**BREAK COOKIES
INTO SMALL CRUMBS**

4 TABLESPOONS BUTTER



**5 CUPS MINI
MARSHMALLOWS**



**MICROWAVE
1 TO 2 MINUTES
UNTIL MARSHMALLOWS ARE
PUFFED.**

CAUTION /MIGHT BE HOT

**i'm a
microwave safe
bowl!**

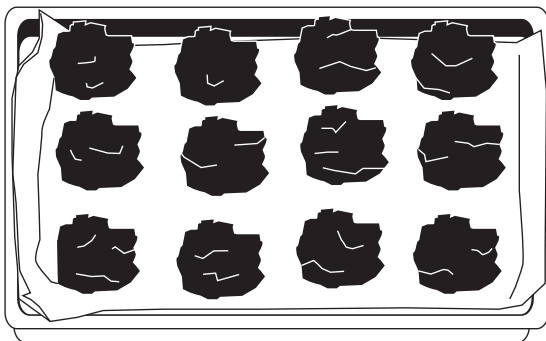
ask for adult help



**MIX BUTTER AND
MARSHMALLOWS**

**THEN ADD COOKIE CRUMBS
AND MIX**

**BREAK UP THE COOKIE MIX INTO
LUMPS OF COAL AND PLACE ON A PIECE
OF WAX PAPER ON A COOKIE SHEET**



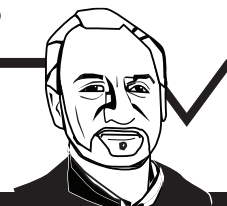
**LET MIXTURE COOL.
THEN EAT!**

Weighty Issues

4 PT

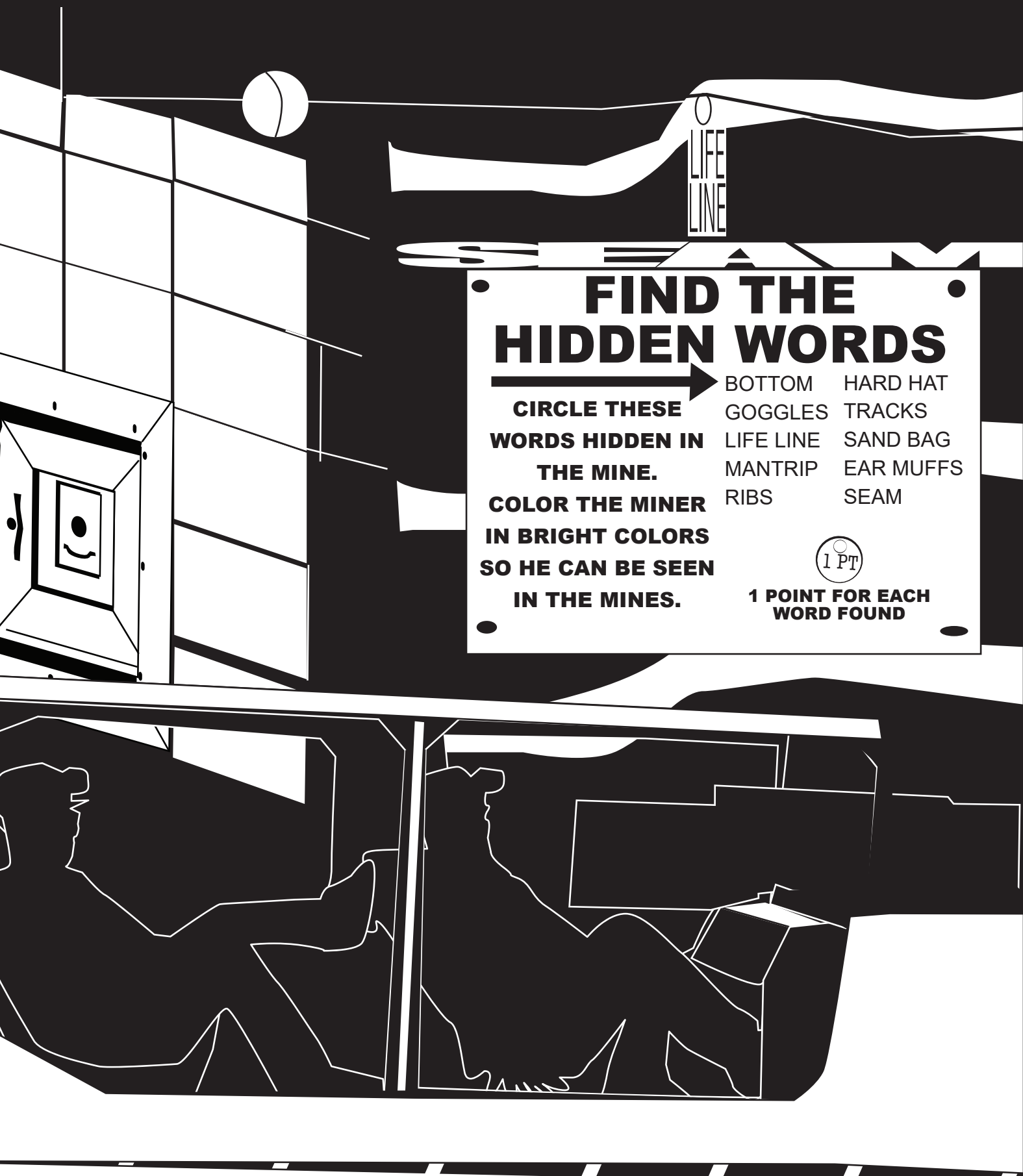
80 pounds is one bushel of coal.
2,000 pounds of coal is one ton.
So how many pounds is
2 tons and 1 bushel?

bonus question



MAKE edible coal





FIND THE HIDDEN WORDS

**CIRCLE THESE
WORDS HIDDEN IN
THE MINE.**

**COLOR THE MINER
IN BRIGHT COLORS
SO HE CAN BE SEEN
IN THE MINES.**

BOTTOM HARD HAT
GOGGLES TRACKS
LIFE LINE SAND BAG
MANTRIP EAR MUFFS
RIBS SEAM



**1 POINT FOR EACH
WORD FOUND**

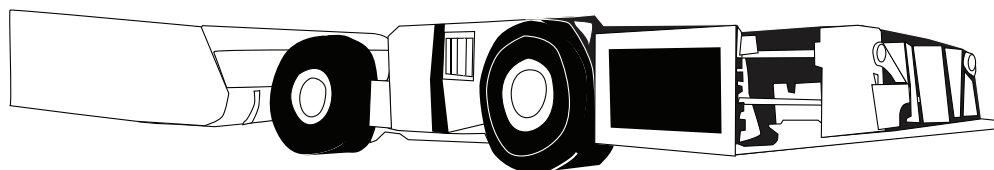
FIND ALL THE HIDDEN WORDS
POSSIBLE 10 POINTS

COMPLETED WORD SEARCH 24 POINTS

24 PT

S	U	O	U	N	I	T	N	O	C	N	I	E	K	S
P	R	O	X	I	M	I	T	Y	T	F	N	C	E	H
T	I	M	B	E	R	V	L	H	O	G	R	N	T	U
A	W	Q	M	S	B	P	T	O	I	R	Z	Q	T	T
F	C	O	X	O	I	F	R	N	T	M	E	P	L	T
O	P	E	T	R	I	S	E	B	A	R	O	N	E	L
Y	Y	T	T	R	N	E	L	K	N	O	A	D	I	E
K	O	N	D	M	R	A	M	O	C	X	Z	C	H	M
M	A	L	O	Z	V	N	M	S	P	P	F	O	K	F
M	E	G	M	O	U	T	H	E	A	E	S	B	I	R
Y	T	E	F	A	S	P	K	E	R	V	W	N	X	L
B	O	L	T	E	R	I	O	J	P	O	C	I	L	N
F	O	R	K	L	I	F	T	T	U	A	F	N	G	A
S	E	P	I	R	T	S	R	A	R	O	T	T	O	V
E	N	A	H	T	E	M	D	E	T	E	C	T	O	R

FIND THE WORDS BELOW IN THE PUZZLE ABOVE



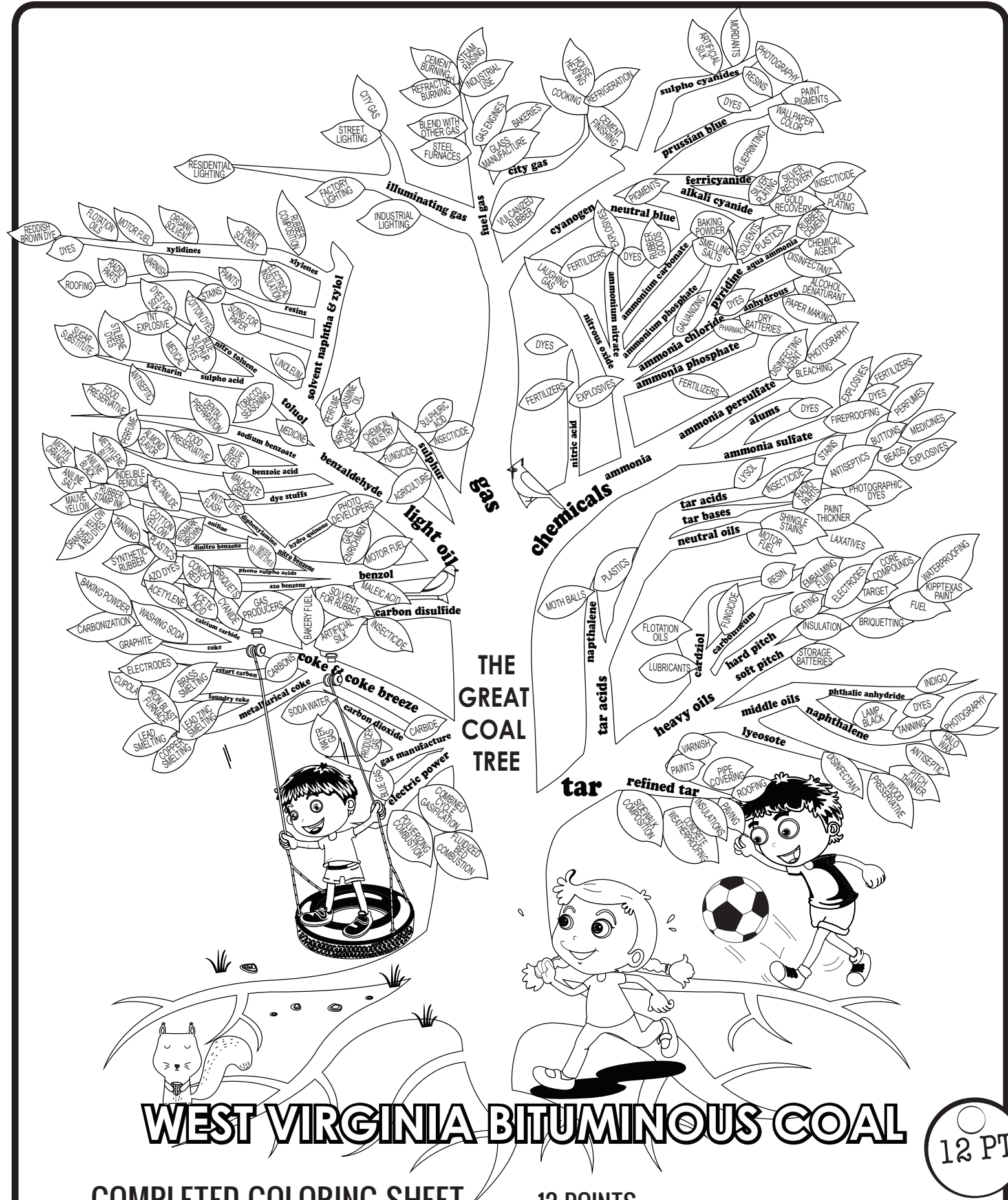
BOLTER
CONTINUOUS
ENGINEER
KETTLE
MINER
RIBS

SCOOP
STRIPES
TRACK
BOTTOM
FOREMAN
MANTRIP

MOUTH
ROOF
SHUTTLE
TIMBER
CAR
DRIFT

FORKLIFT
METHANE
PROXIMITY
SAFETY
SLOPE
TOP



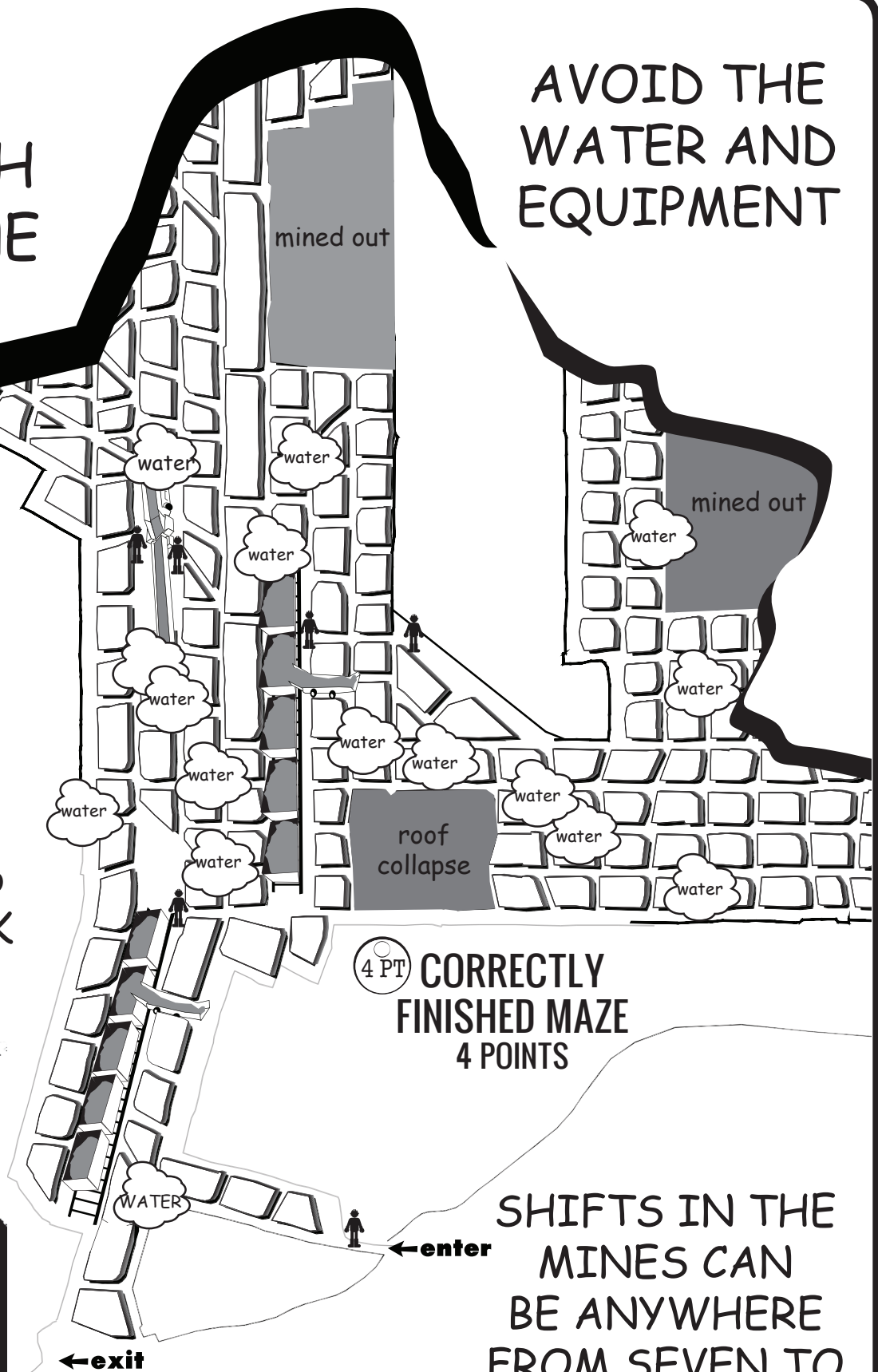


PRODUCTS of coal

GET
THROUGH
THE MINE

AVOID THE
WATER AND
EQUIPMENT

MINERS
GENERALLY
WORK 5 TO 6
DAYS A WEEK



SHIFTS IN THE
MINES CAN
BE ANYWHERE
FROM SEVEN TO
TWELVE HOURS.



Coal on the move!

Can you track where the coal is going?
Circle the vehicles moving coal.
How many are there?

**CORRECT
ANSWER**
4 POINTS

4 PT



WOMEN IN MINING HISTORY

The first woman miner was officially hired in 1973 in a mine in West Virginia

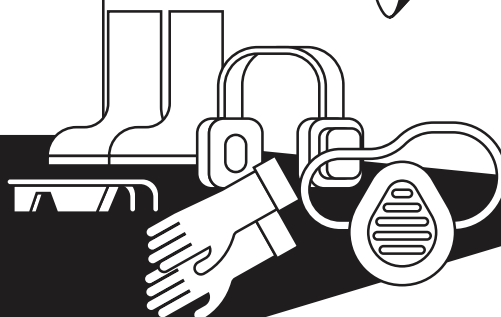
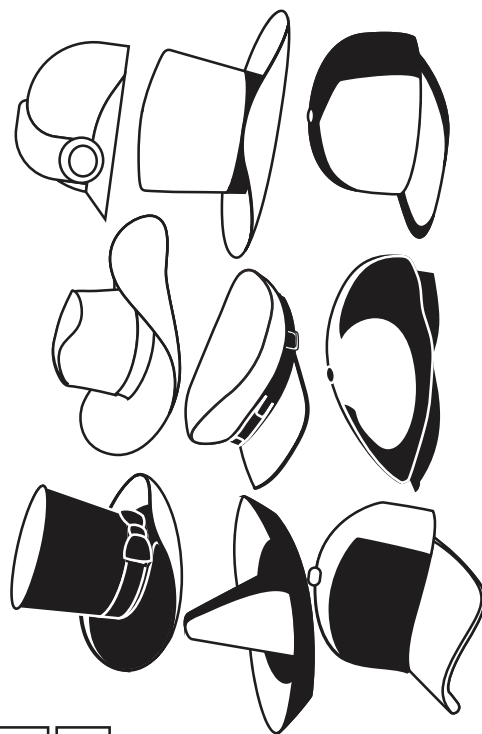
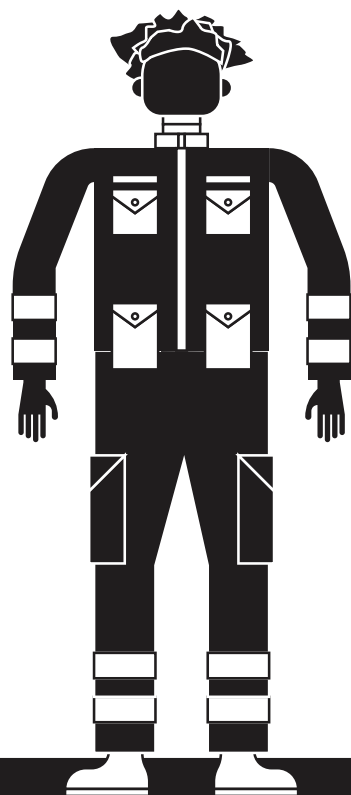
fun fact



COAL on the move

CAN YOU HELP THIS MINER CHOOSE THE RIGHT HAT FOR HIS JOB IN THE MINES?

CIRCLE THE
CORRECT
HAT FOR
A DAY IN
THE MINES



Safety glasses:

Eye protection may sometimes be part of a full respirator, but otherwise glasses or goggles are given to miners. Dust and dirt sometimes can get stirred up around the mine and glasses will keep eyes safe and protected.

Hand & foot

protections: Miners wear metatarsals boots when working in a mine. Sometimes they need to have waterproof boots or extra strong soles to be puncture resistant.

Hand protection is a safety glove in rubber, cotton or leather.

Hearing protection:

Ear muffs or ear plugs are to keep workers ears safe from loud noises or machinery.

Mask/Respiratory

protection: Miners use facial equipment that covers the mouth and nose to prevent dust from reaching the lungs.

Reflective clothing:

Mines are small, noisy spaces and workers must be able to be seen. Workers wear reflective jackets or shirts as well as reflective pants. When workers can be easily seen, they are less likely to get struck by vehicles traveling around the mines.

COLOR ALL
THE PPE
IN BRIGHT
COLORS

Hard hats:

These are worn to protect the miners' heads. Lights can be mounted on hard hats to provide light for the worker. These hats are often bright or reflective colors.



CORRECT
ANSWER
2 POINTS



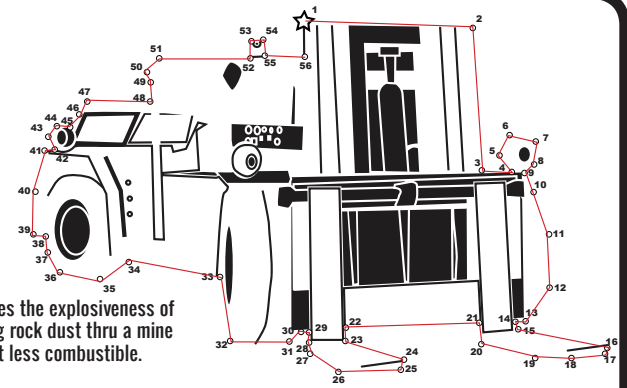
PG 4
26 PT



PG 5
10 PT

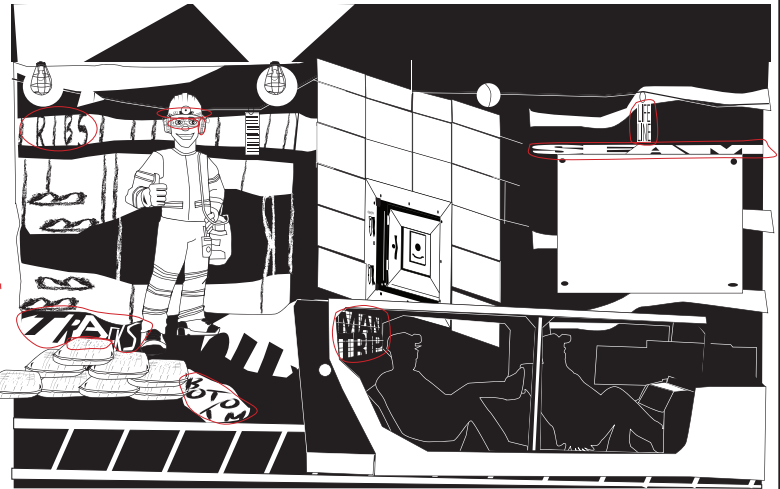
1. **FACT**
2. **FICTION**
3. **FACT**
4. **FACT**
5. **FACT**
6. **FACT**
7. **FACT**
8. **FACT**
9. **FACT**
10. **FICTION**

PG 6
8 PT

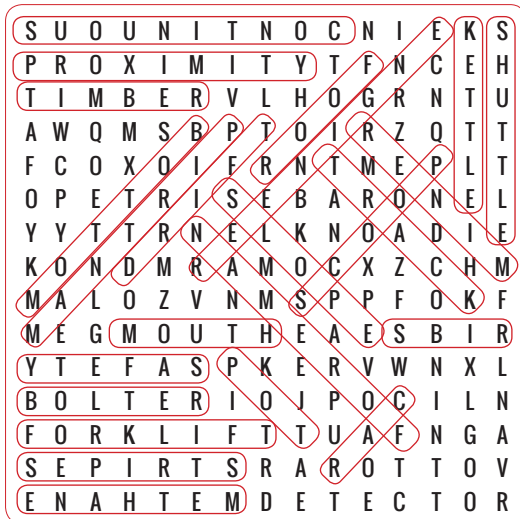


Rock dust suppresses the explosiveness of coal dust. Spreading rock dust thru a mine makes coal dust less combustible.

PG 8-9 10 PT

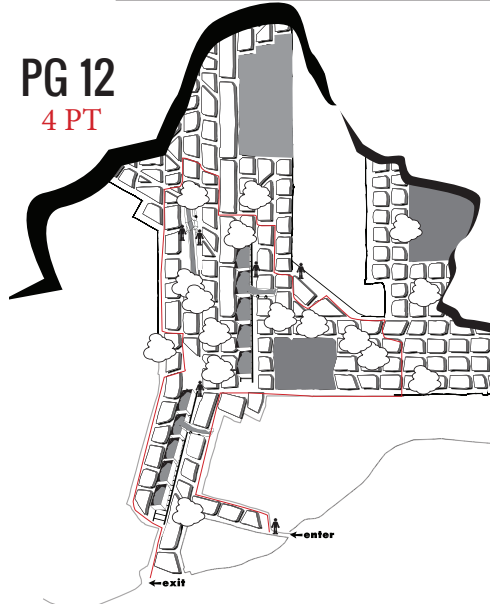


PG 10
24 PT



PG 11
12 PT

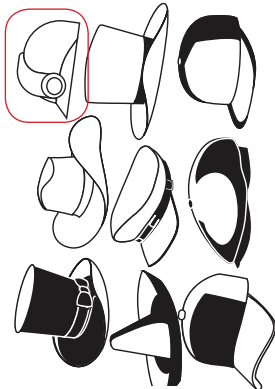
PG 12
4 PT



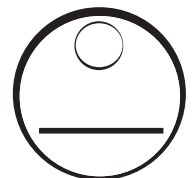
PG 13 4 PT



PG 14
2 PT



COUNT UP
YOUR POINTS



POSSIBLE 101 POINTS

Additional Resources below:
WVOMHS&T
Friend of Coal
West Virginia Coal Association
West Virginia Office of Energy

<https://minesafety.wv.gov/contact-us/>
<https://www.friendsofcoal.org/>
<https://www.wvcoal.com/>
<https://www.energywv.org/wv-energy-profile/coal>



Solutions and Resources



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