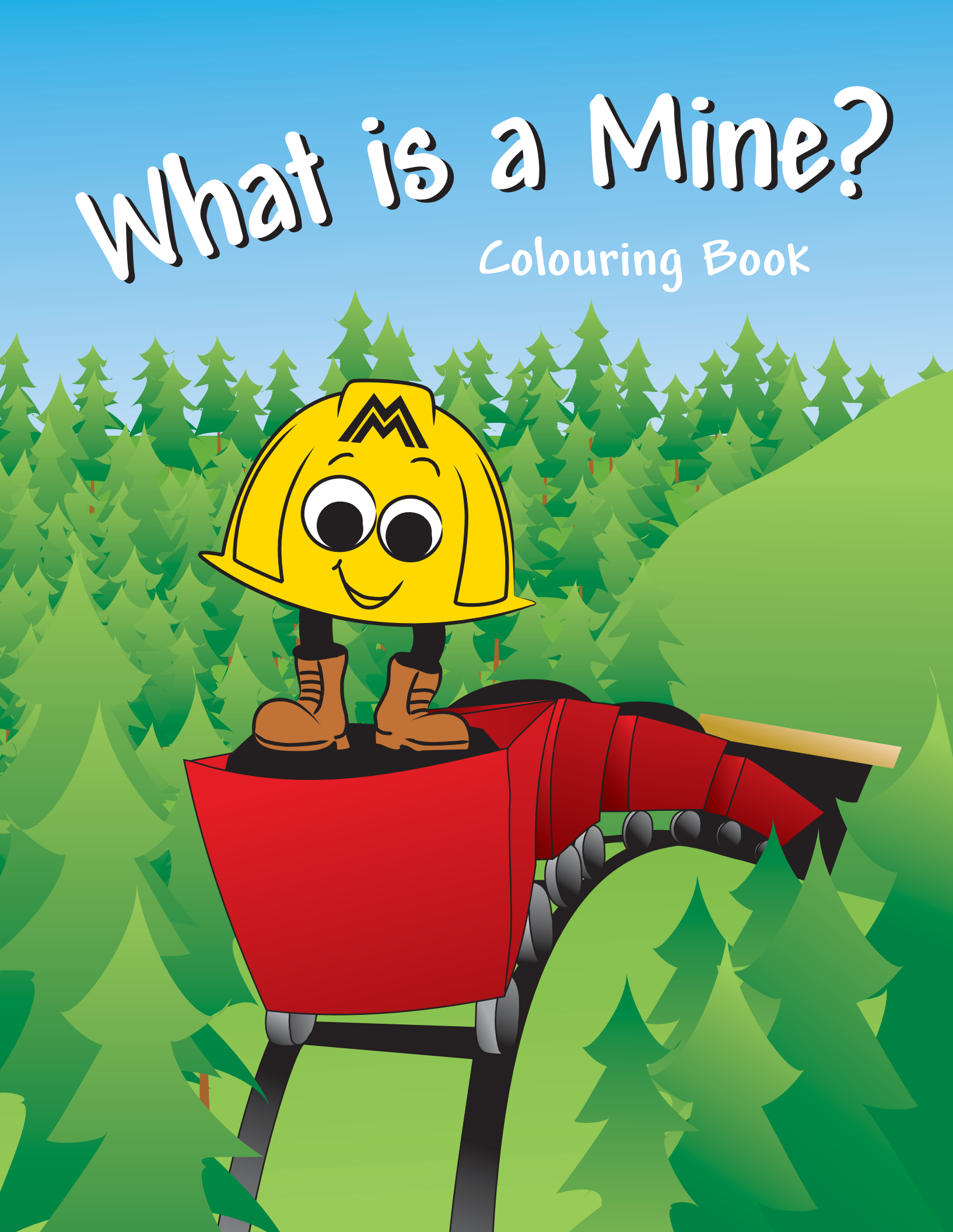
What is a Mine?

Colouring Book



Mining Matters is a charitable organization dedicated to educating young people to develop knowledge and awareness of Earth sciences, the minerals industry, and their roles in society.

The organization provides current information about rocks, minerals, metals, mining and the diverse career opportunities available in the minerals industry.

MiningMatters.ca

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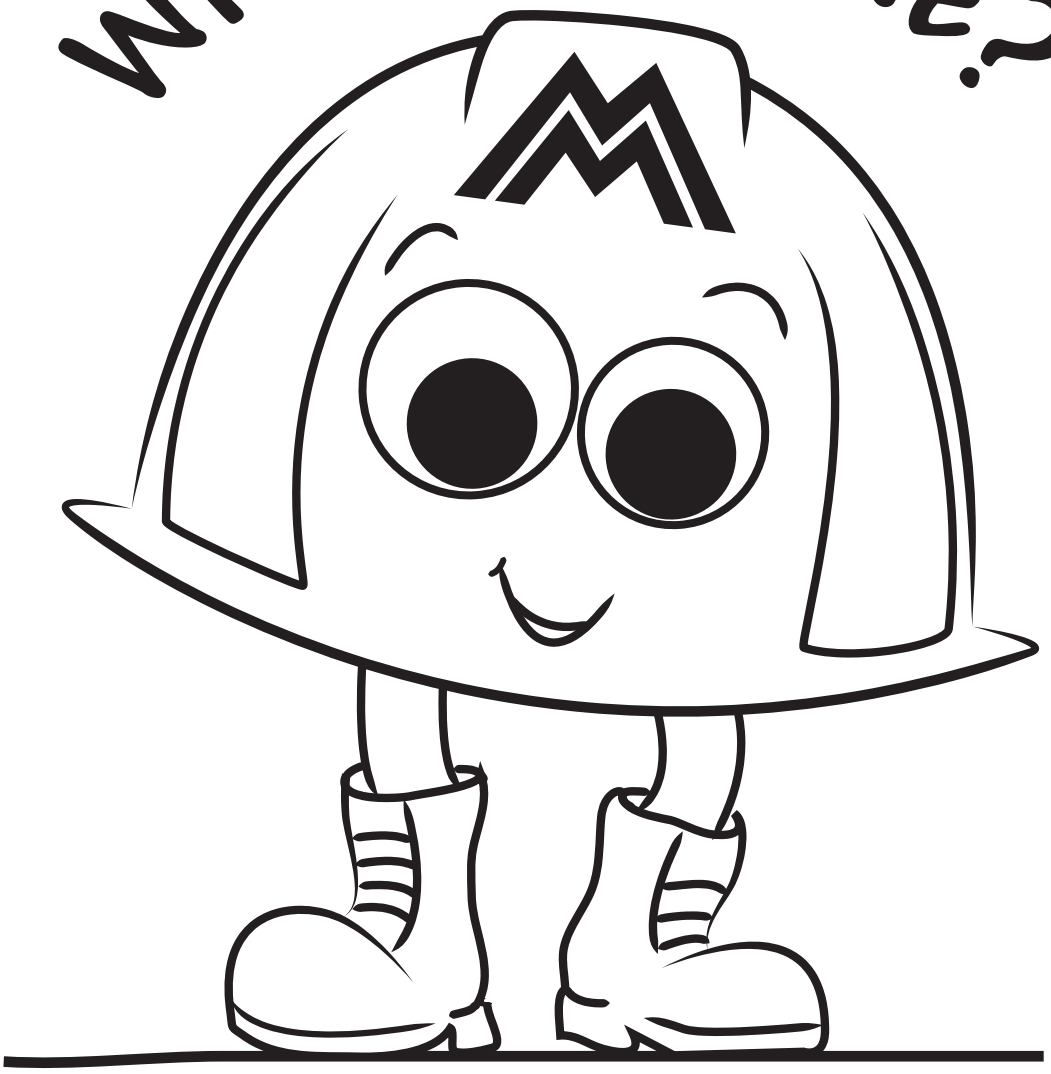
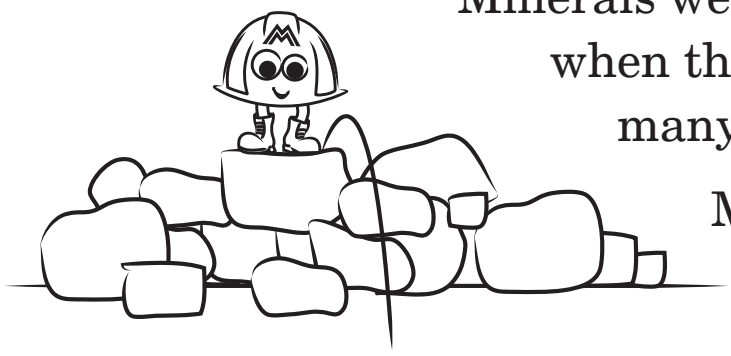
What is a Mine?

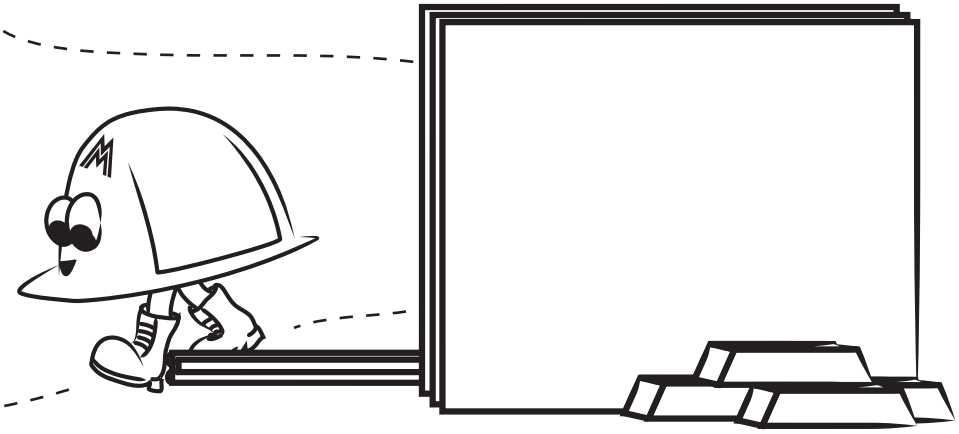


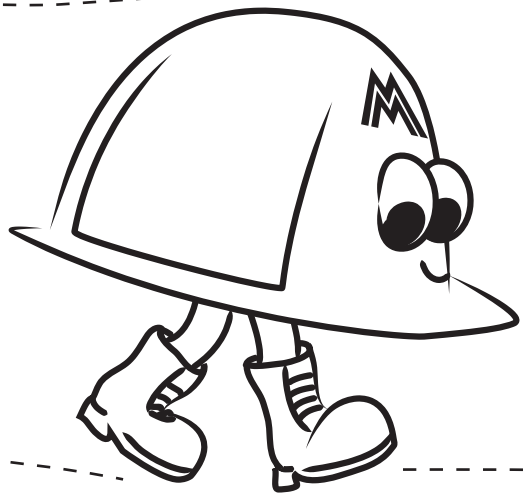
Hello, my name is Mighty Miner, that's MM for short and I am going to take you on an adventure that will help you answer the question, "What is a Mine?" LET'S GO!

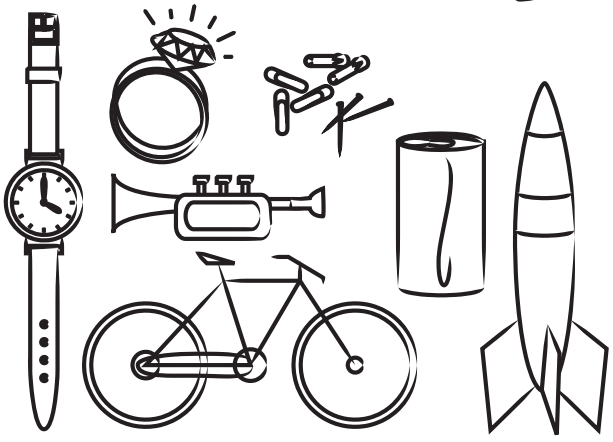
Minerals were formed millions of years ago when the Earth's crust went through many changes.

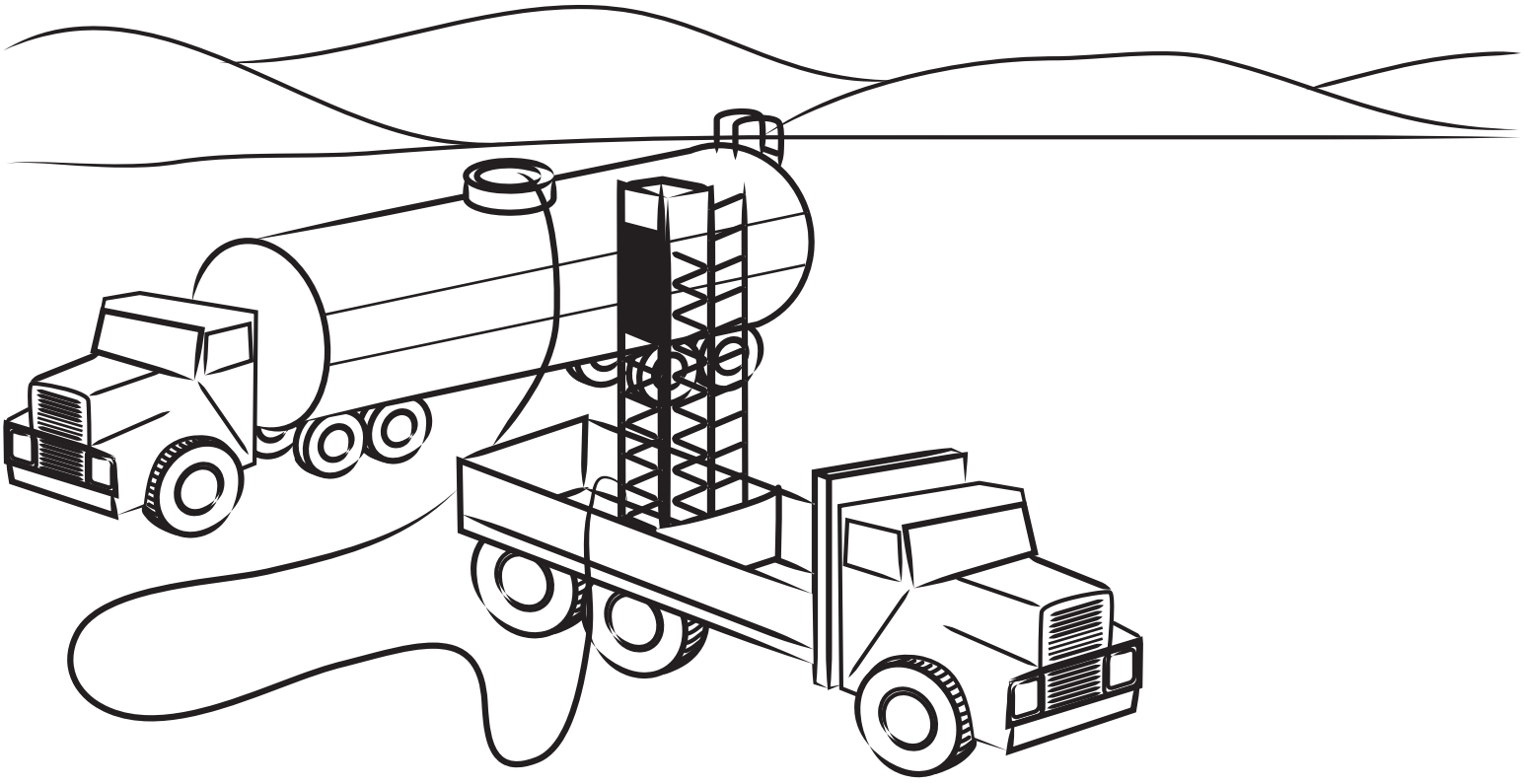


Minerals are used to make many things including jewellery, cars, electronics and much more.



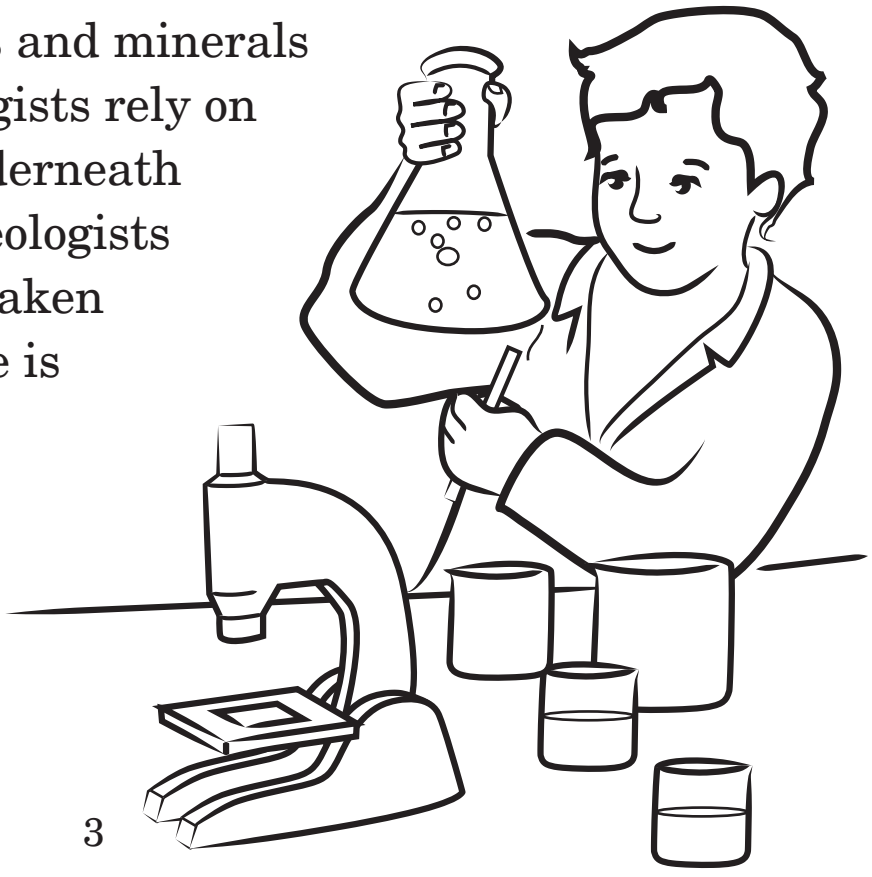




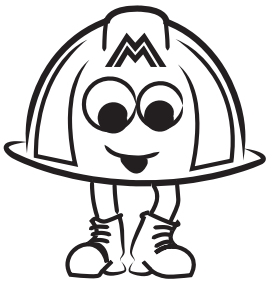


Before mining can begin, we need to know where the minerals are located underneath the earth's surface.

The people who study rocks and minerals are called geologists. Geologists rely on drills to reach minerals underneath the earth's surface. Once geologists find minerals, a sample is taken from the earth. This sample is brought to the laboratory where it is tested.

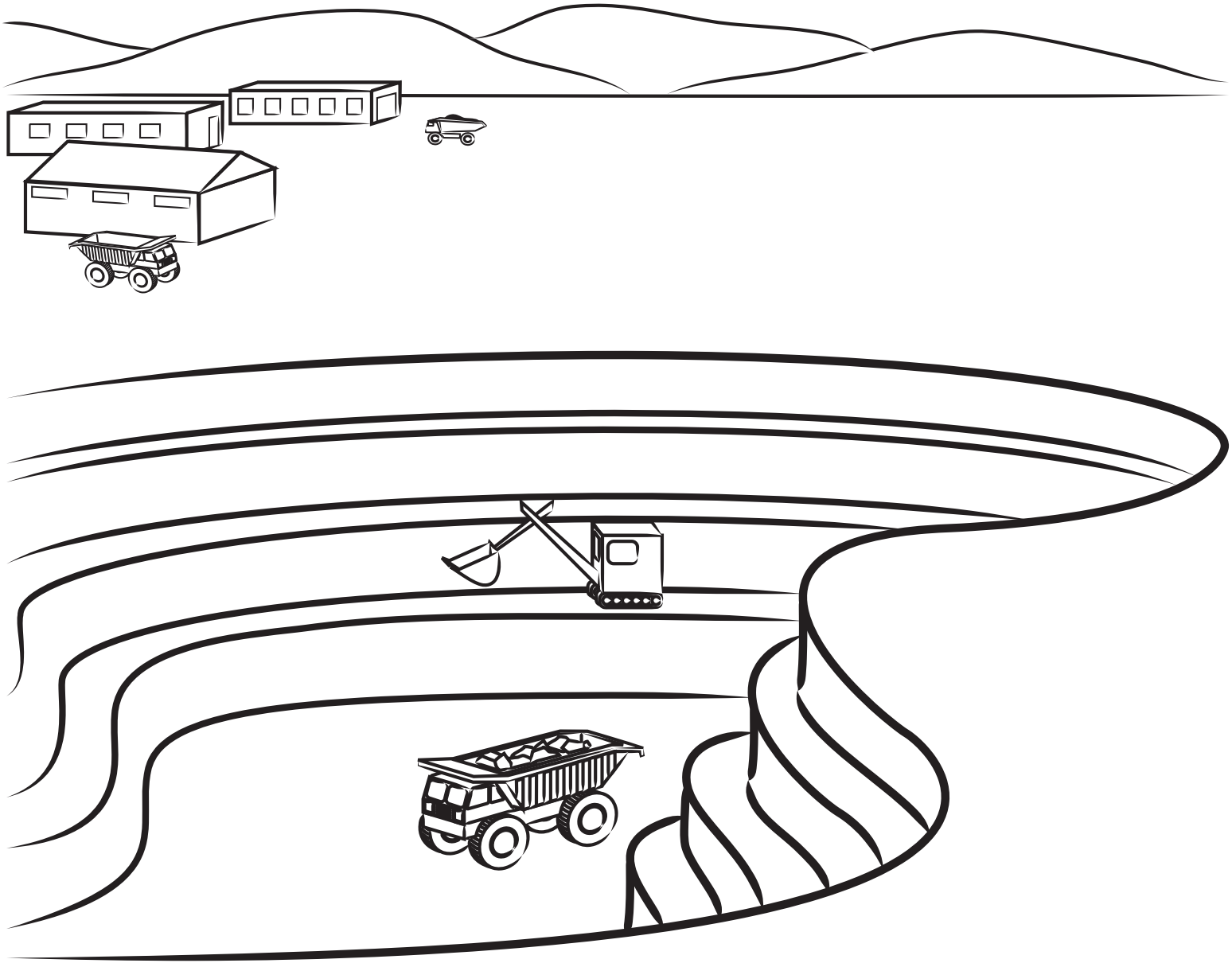


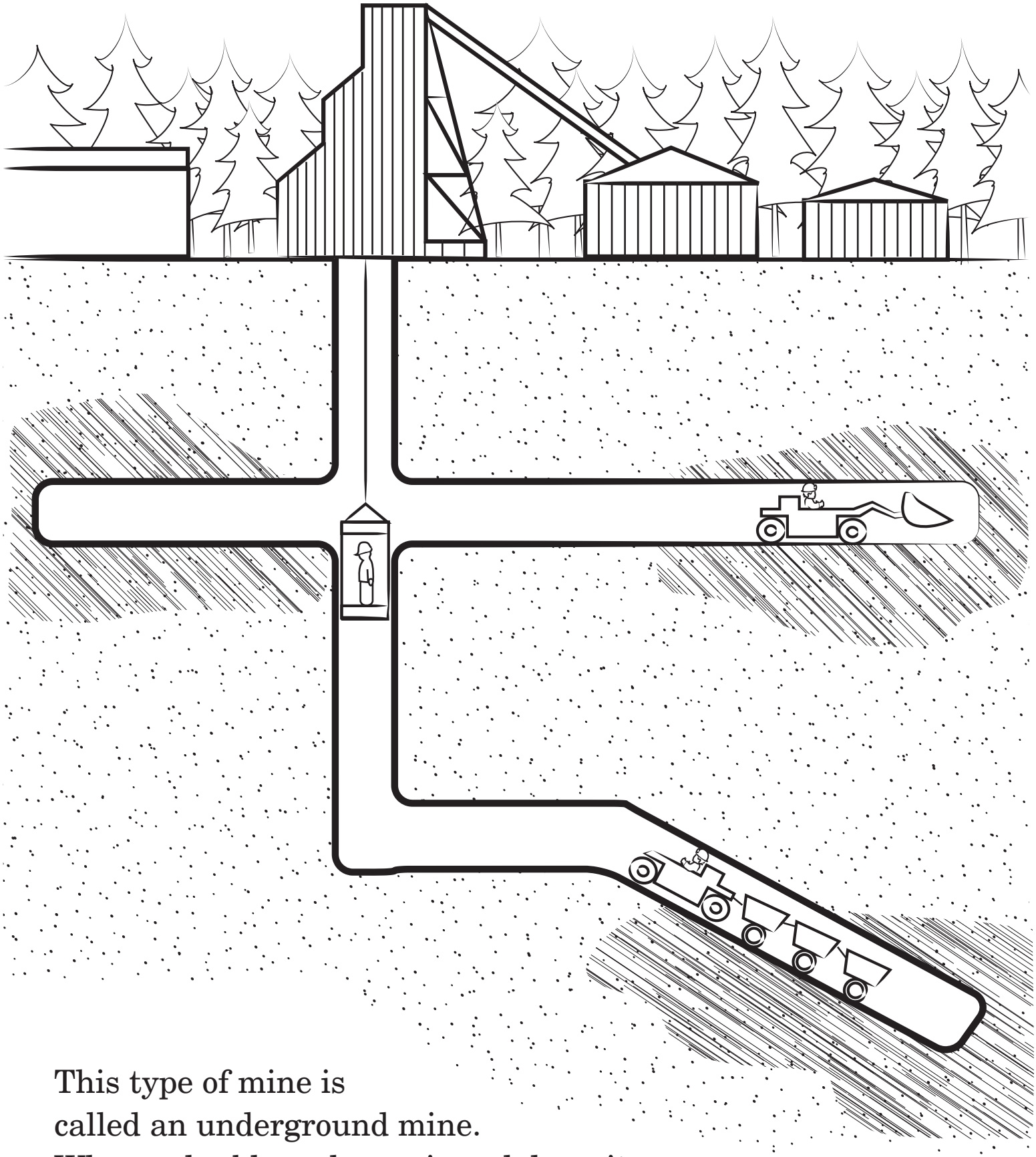
Once a company decides to build a mine, many things need to be decided and organized. Geologists, engineers, many other specialists and the people in nearby communities are all involved in this stage of the mining process.



Hundreds of people are needed to build a mine. The construction of a mine includes building office buildings and repair shops, as well as the areas where the ore is dug out of the ground.

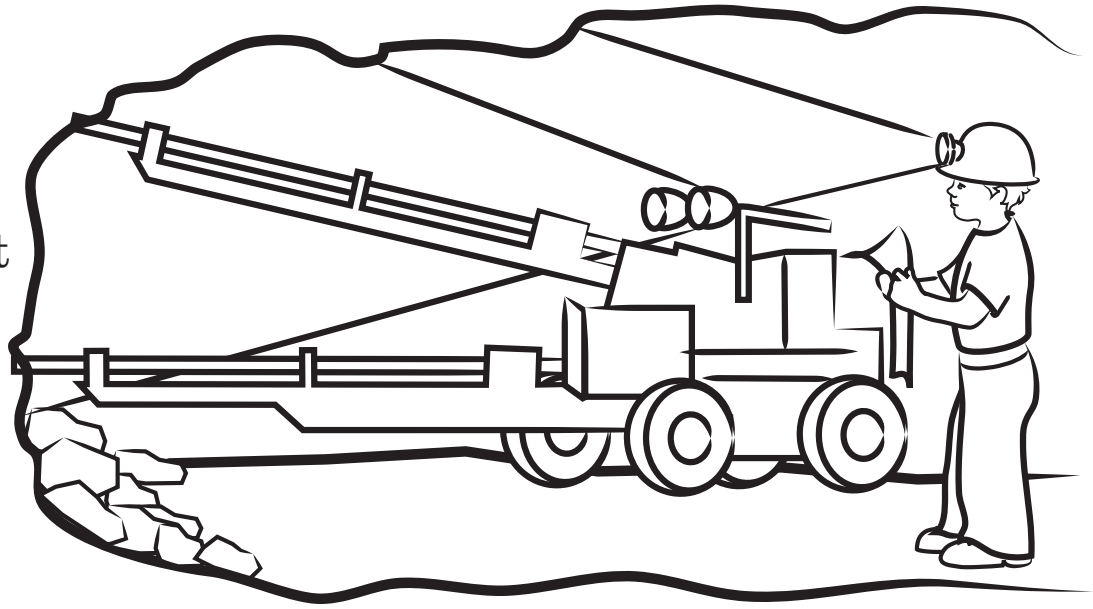
Mines that look like the one here are called open pit or surface mines. Rocks and minerals are dug out from the surface at these mines.



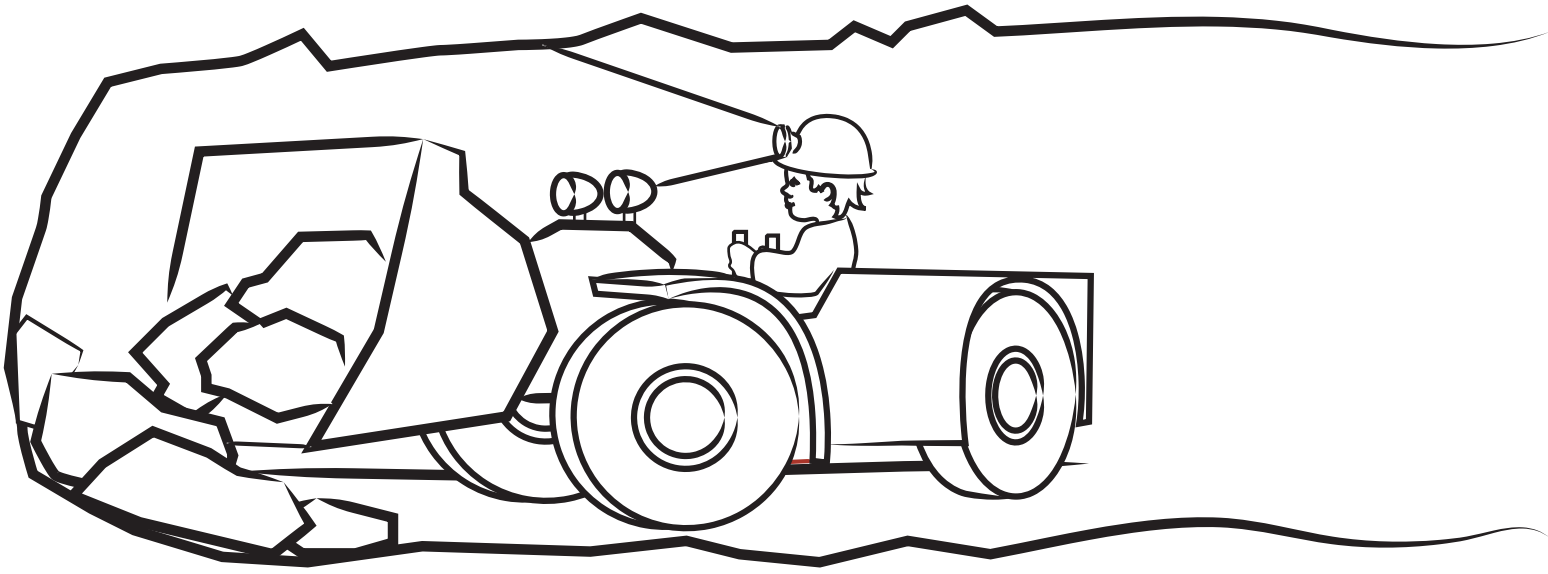


This type of mine is
called an underground mine.
When valuable rock or mineral deposits
are located far beneath the earth's surface, underground mines
are necessary.

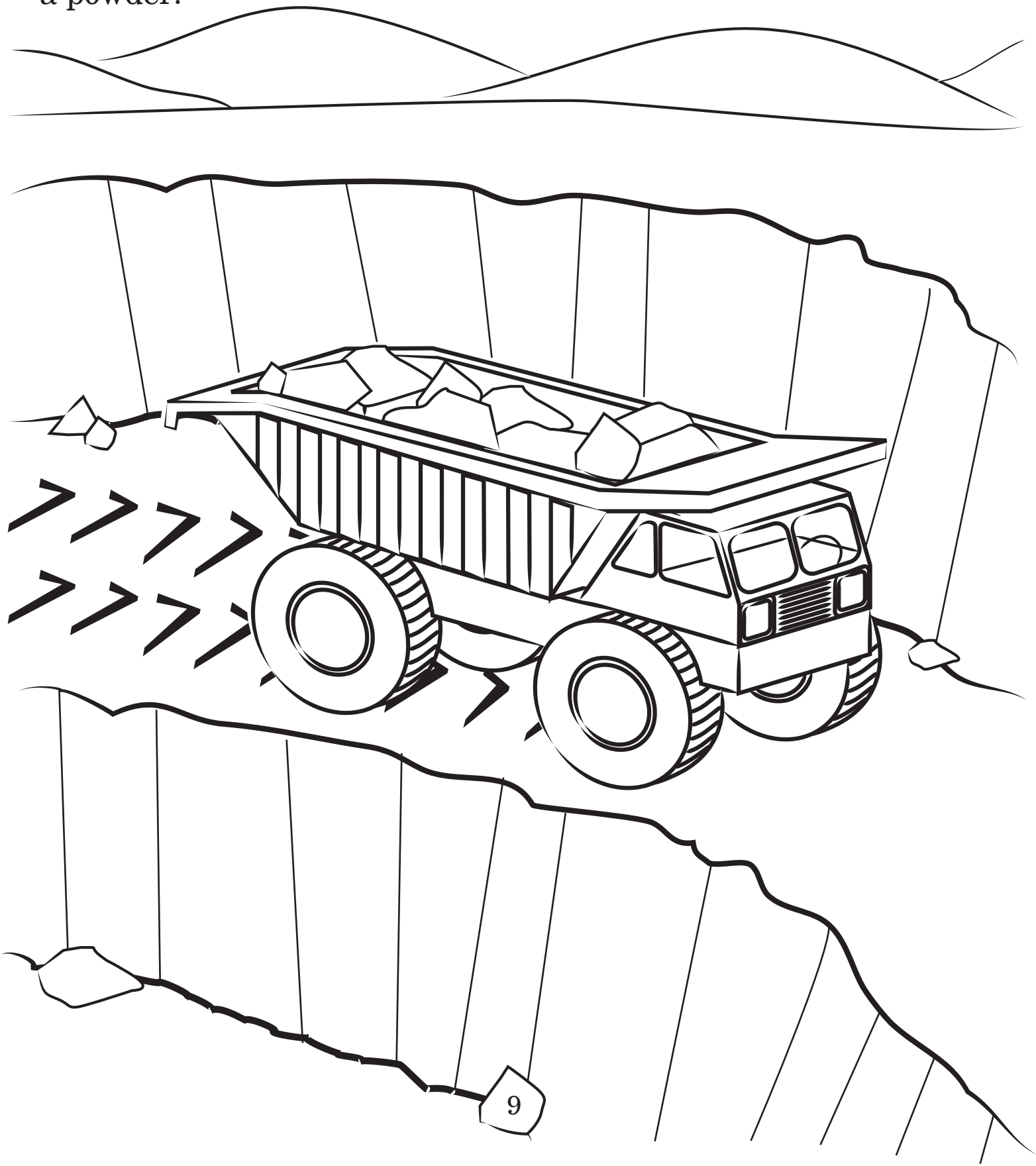
Once the mine is built, we can start to take minerals out of the earth. At an underground mine, the first step is to blast tunnels. These tunnels are called stopes.



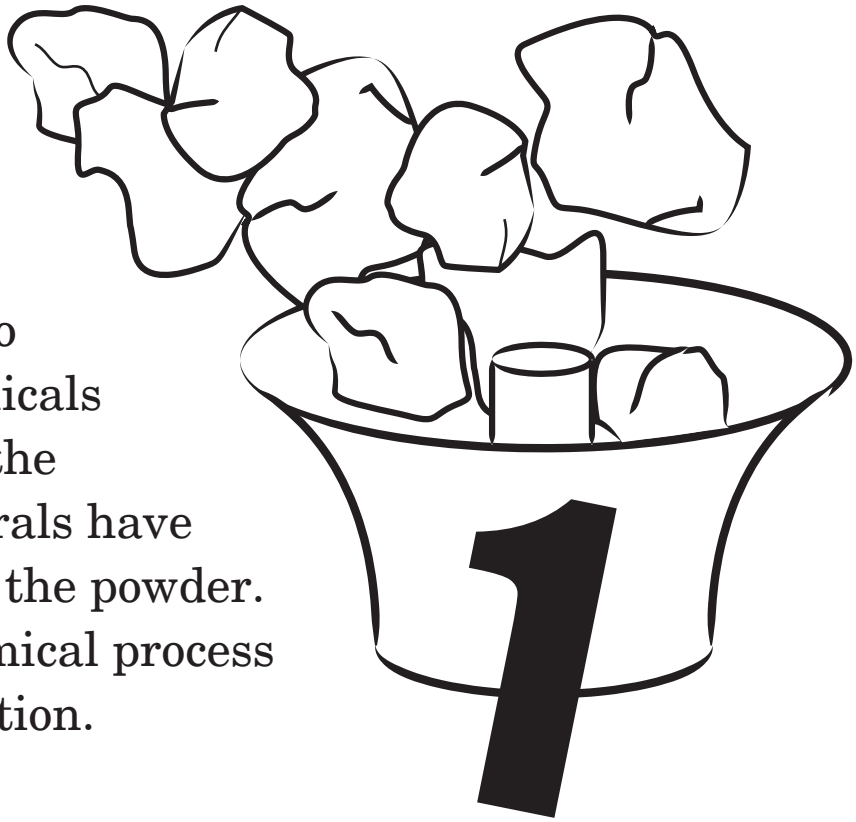
After blasting, loose rocks are scooped up by machines and brought to the surface in an elevator called a skip.

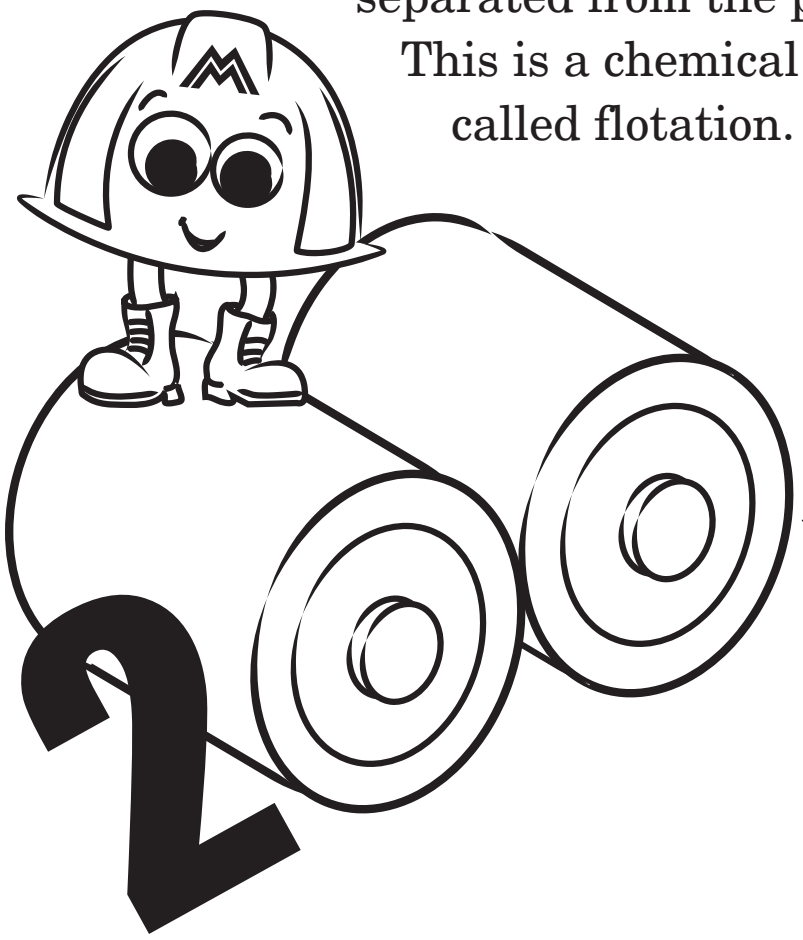


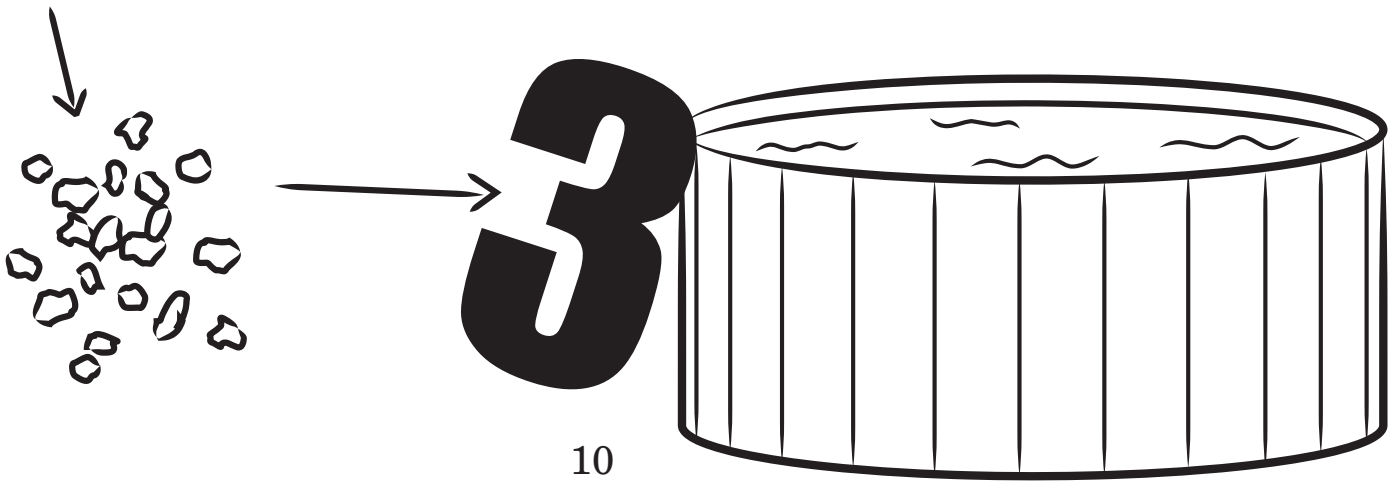
Once the rocks are removed from the earth, they are transported by truck, or sometimes by conveyor belt, to a crushing machine where the rocks are made smaller and smaller until they become a powder.



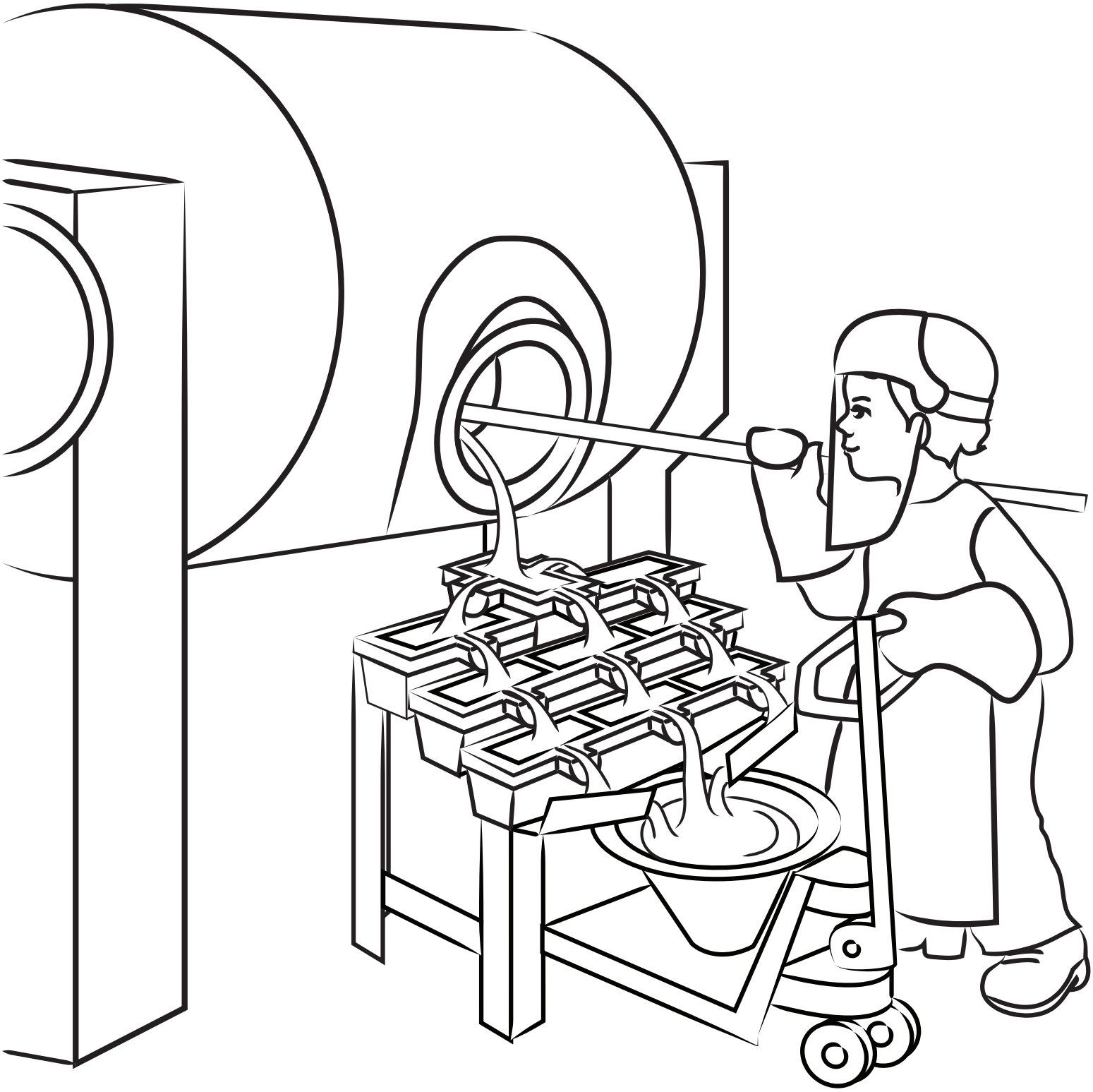
After the rocks have been crushed, the minerals still need to be separated from the powder. The powder is put into large tanks of water and chemicals where air is bubbled through the mixture until the minerals have separated from the powder. This is a chemical process called flotation.

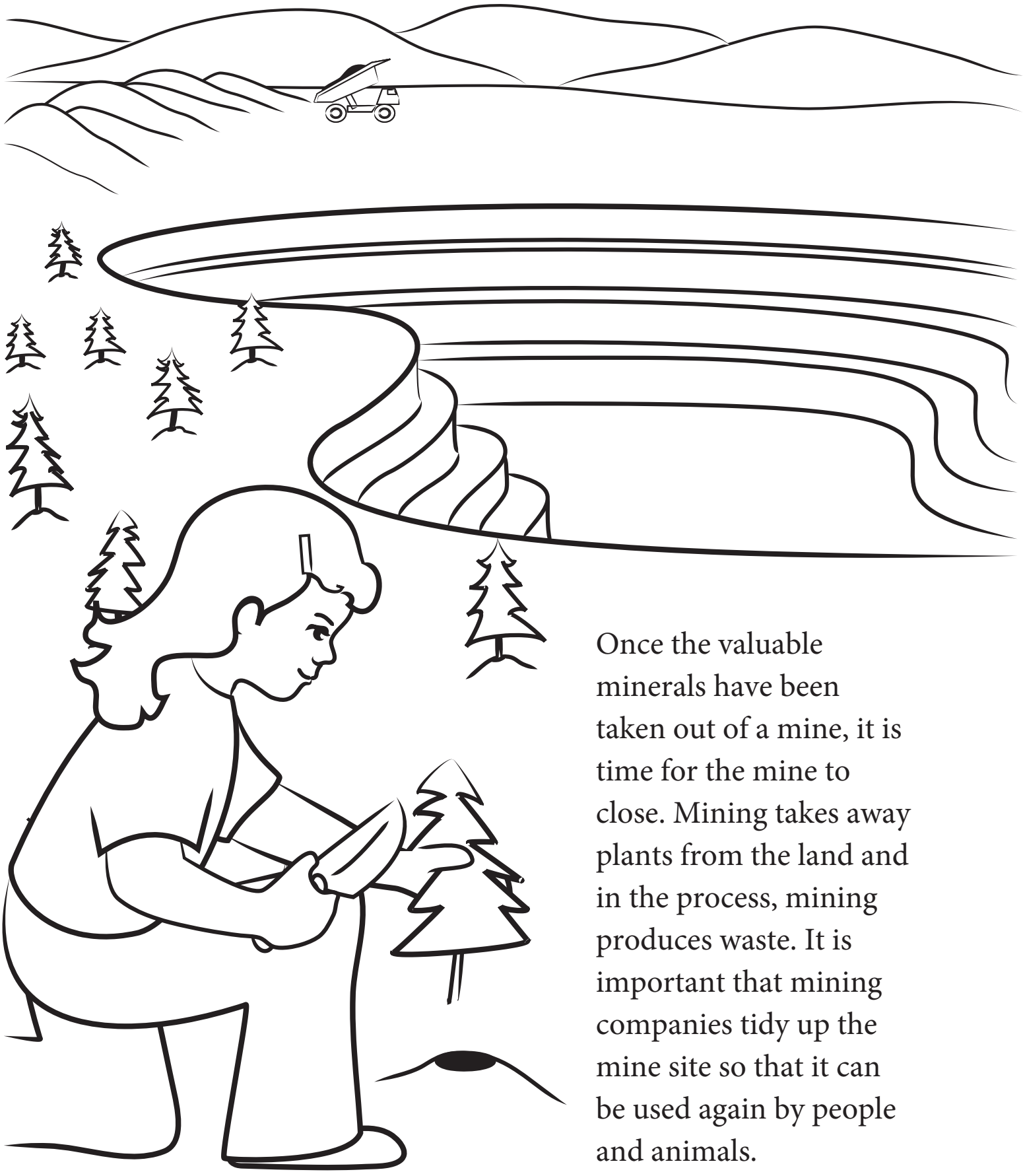




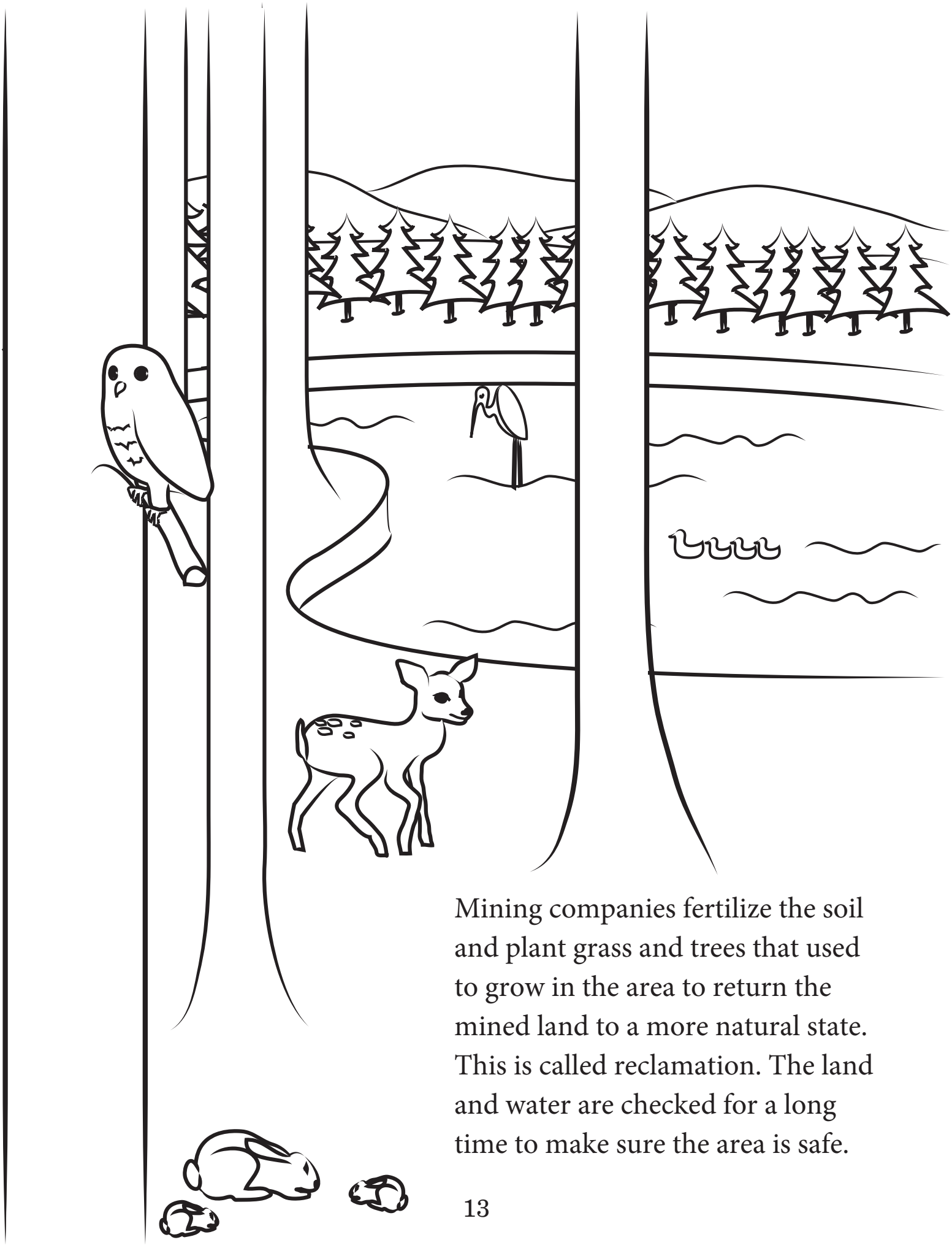


The minerals are then placed into a big furnace where they are melted. Once the minerals are melted, they are poured into moulds where they cool and harden into bars. These bars are worth lots of money, especially if the mineral is gold!



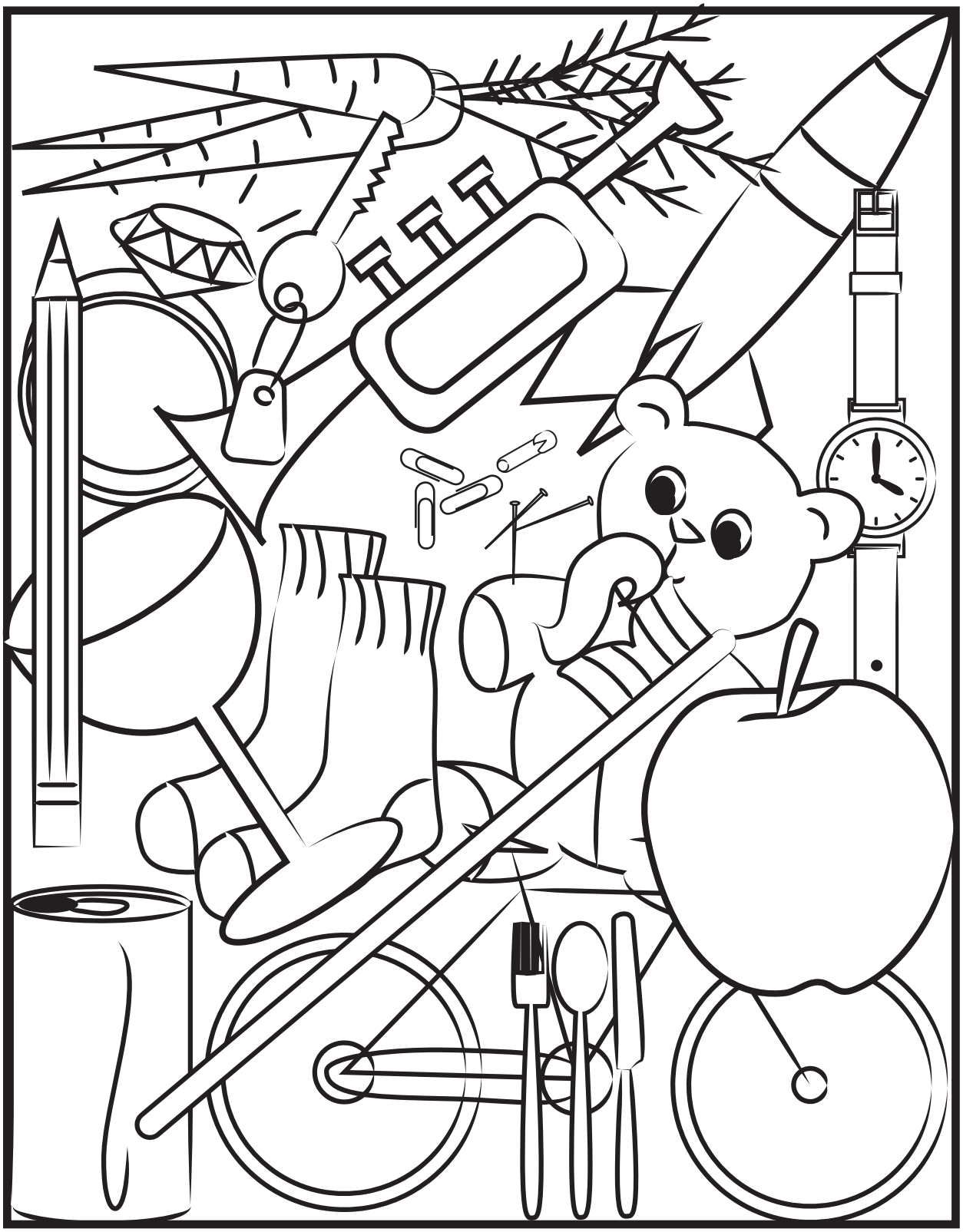


Once the valuable minerals have been taken out of a mine, it is time for the mine to close. Mining takes away plants from the land and in the process, mining produces waste. It is important that mining companies tidy up the mine site so that it can be used again by people and animals.

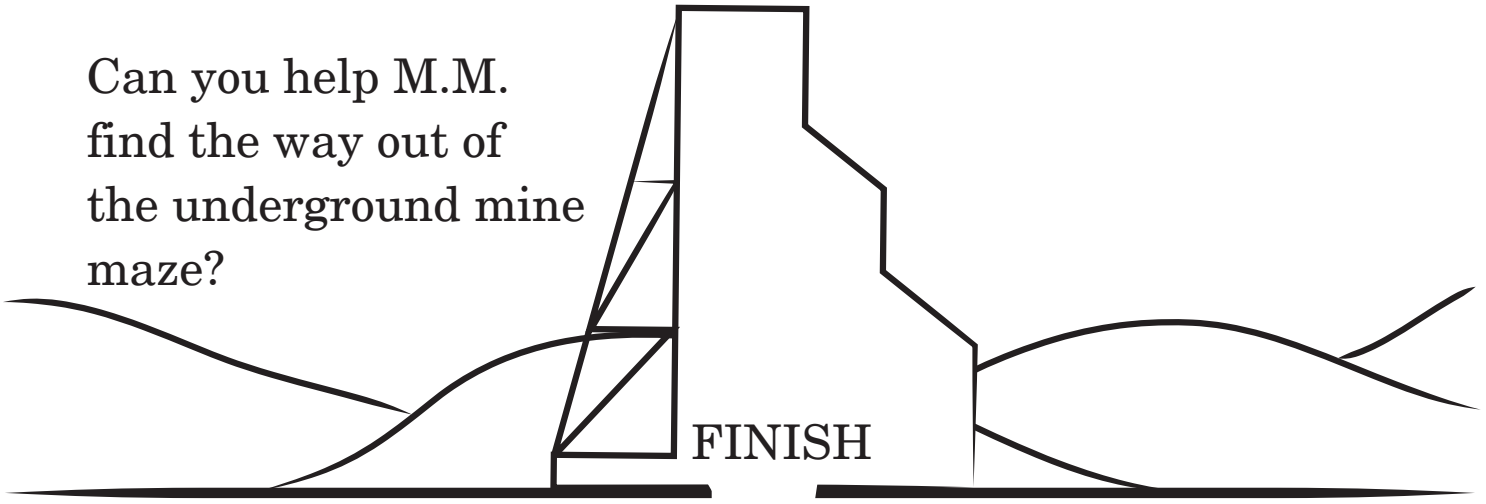


Mining companies fertilize the soil and plant grass and trees that used to grow in the area to return the mined land to a more natural state. This is called reclamation. The land and water are checked for a long time to make sure the area is safe.

Now that you know more about minerals and mining, try to find all the things in this picture that were made using minerals.



Can you help M.M. find the way out of the underground mine maze?



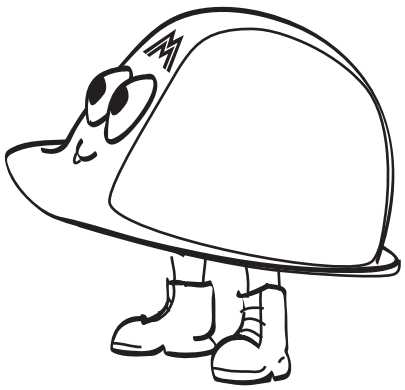
START

WORD SEARCH

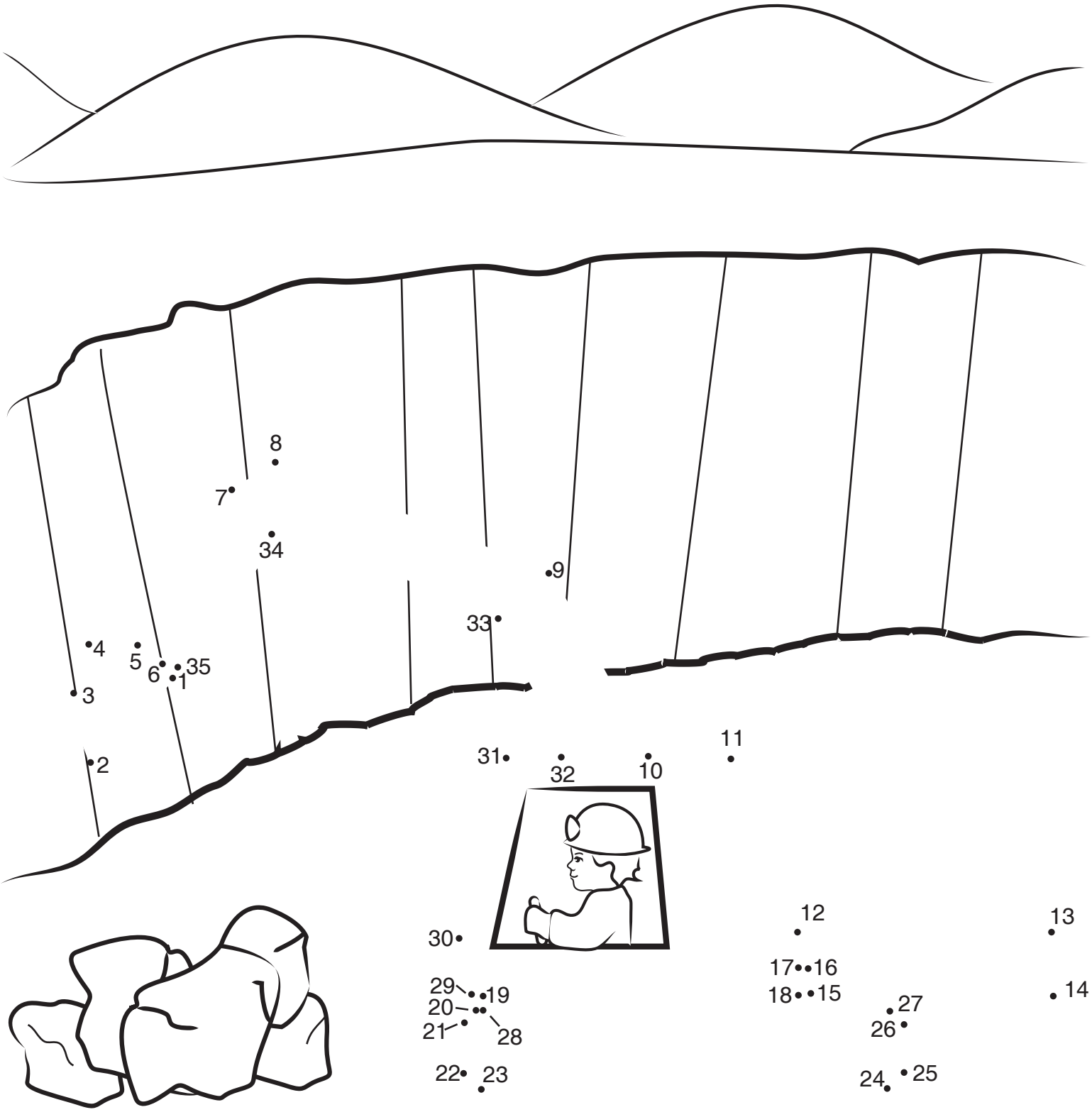
Can you find the hidden words?

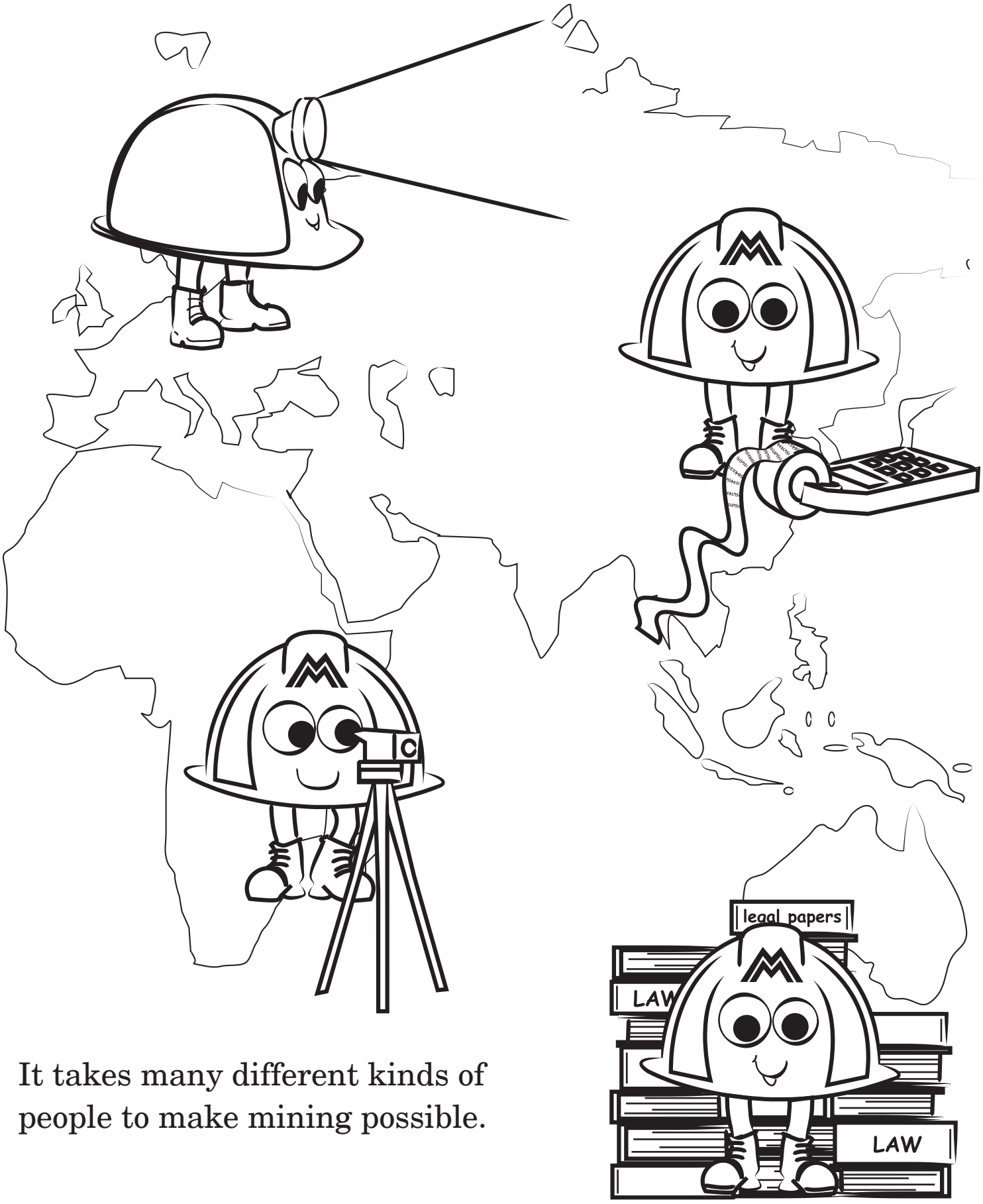
E N I M Q E S F C L D L O G V
D D W N L K S U A B B E C D Y
U V S P C E Z T U L I A F G T
B R O O W L E H Z A Q C R G I
W E R A D M N G E R U H E U N
P C G T I P B Q I E N I E A U
Y L S G S L L T H N G N C S M
F A X D C R U S H I N G A O M
C M G D O Z Q I N M F C F T O
A A I L V E N G I N E E R B C
R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

CAREER
COMMUNITY
COPPER
CRUSHING
DISCOVER
ENGINEER
FLOTATION
GEOLOGIST
GOLD
METAL
MINE
MINERAL
PEOPLE
PIT
RECLAMATION
ROCKS
SURFACE
UNDERGROUND



CONNECT THE DOTS



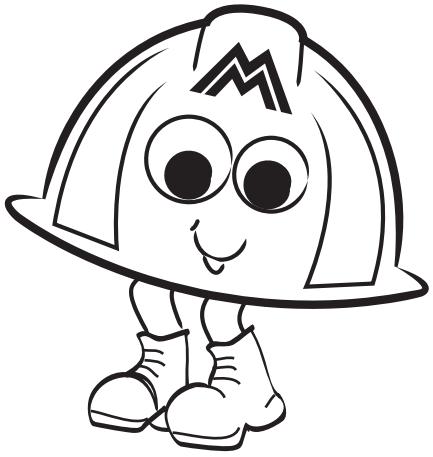


It takes many different kinds of people to make mining possible.

You can have an exciting career in the mining industry.

Our tour of the mining process is over and it's time for me to say goodbye. I hope I have helped you answer the question "What is a Mine?" and that you are now familiar with minerals and the role they play in our everyday lives.

GOODBYE FOR NOW!




Compliments of Barrick Gold