



Heidelberg
Materials

Rocks N' More!

Color & Learn
Activity Book





Heidelberg Materials

Heidelberg Materials is a very big company with locations throughout the United States and Canada. We even have businesses around the globe in places like the United Kingdom, Germany, Italy, the Netherlands, Egypt and many other countries.

We produce materials that build the world around us, including aggregates, cement, concrete and asphalt. Look around you ... chances are you can see something built with our materials. From sidewalks, parking lots, roads and bridges to schools, houses, skyscrapers and sports stadiums, you can find our products in just about everything that makes the modern world possible.

We hope you enjoy this activity book. It's a great way to have some fun, be creative and learn a little more about Heidelberg Materials and what we do.

This activity book belongs to:

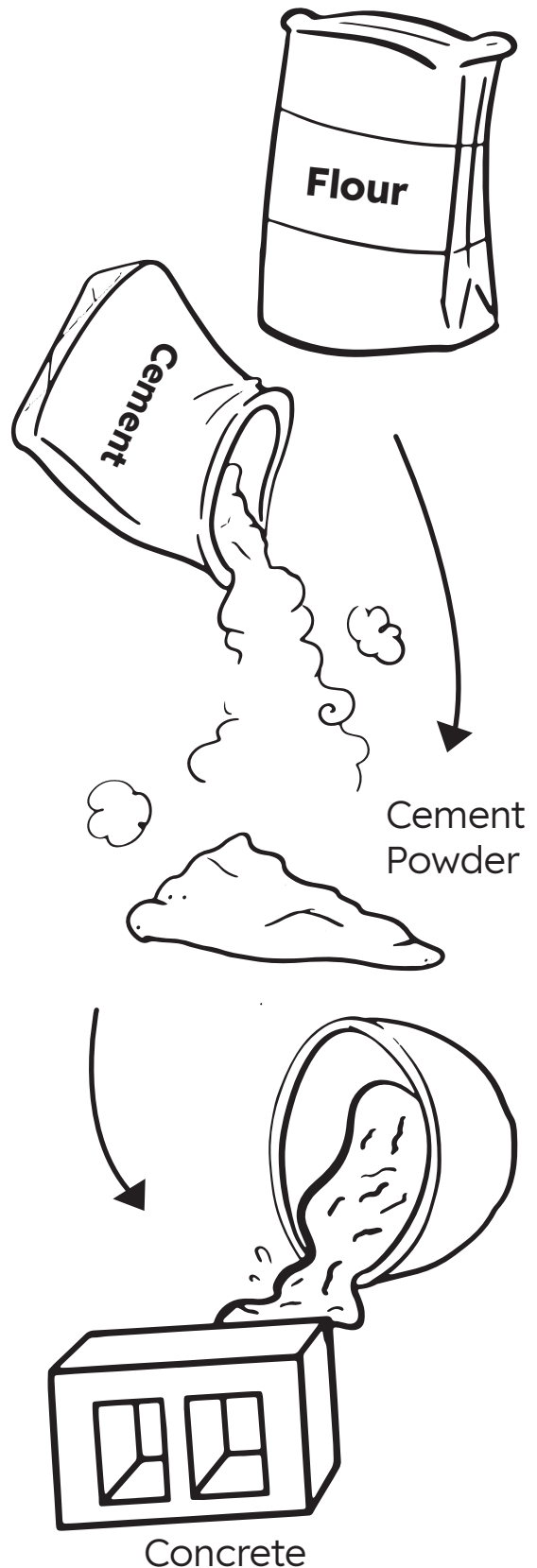
Cement Vs Concrete

Is there a **difference** between cement & concrete?

Yes!!!

Cement is an important ingredient for making concrete!

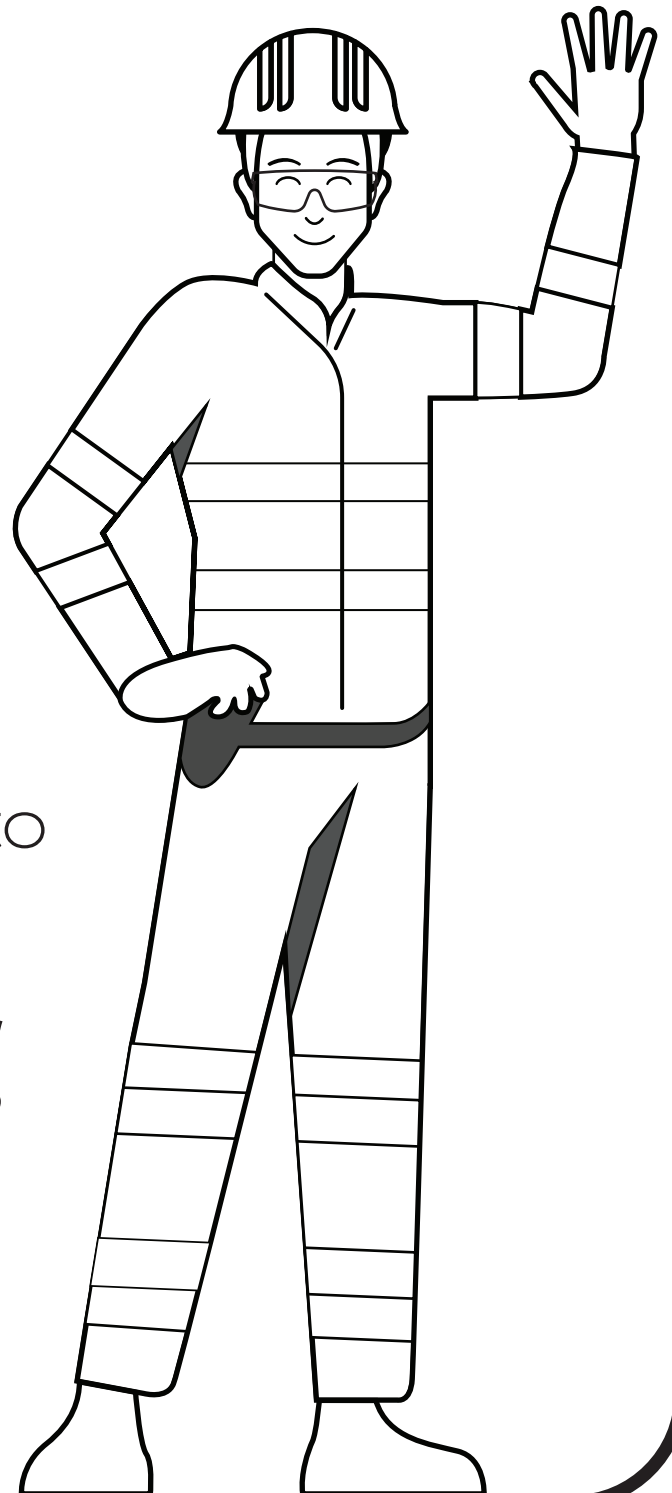
That is to say, it's like the **flour in a cake!**



Work Safely- TAKE 5!

Safety is a priority at Heidelberg Materials! To make sure we operate safely & achieve our goal of **zero harm**, we make sure to **T.A.K.E 5!**

- 1** Stop & Think
- 2** Assess Hazards
- 3** Know The Risks
- 4** Make Changes to Eliminate risk
- 5** Proceed!!!



Dress For Success!

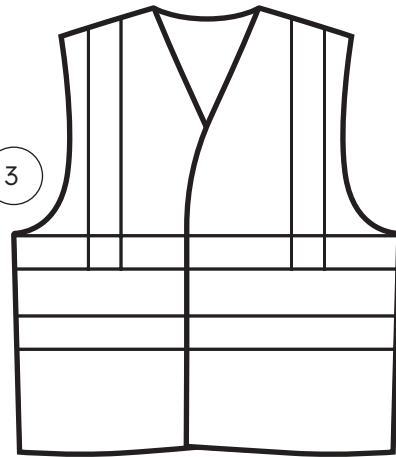
From construction sites & quarries, to testing labs & manufacturing plants, safety requires the right gear for the job!

Circle the Personal Protective Equipment our workers wear on site.

1

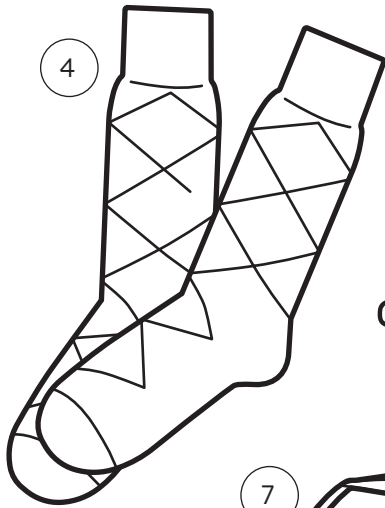


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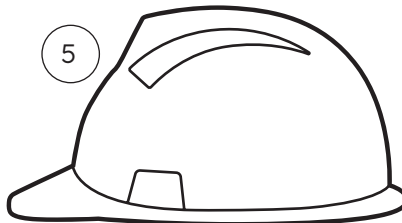


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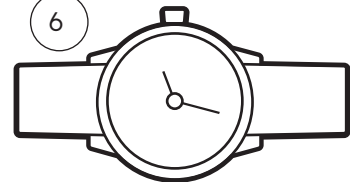
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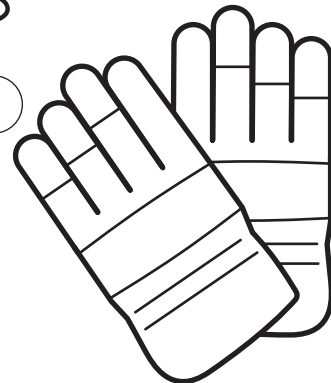
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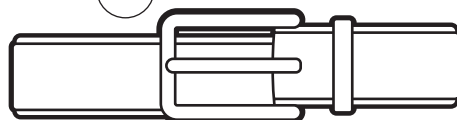
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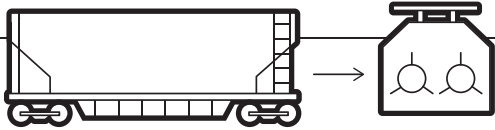


10



How Cement Gets Made

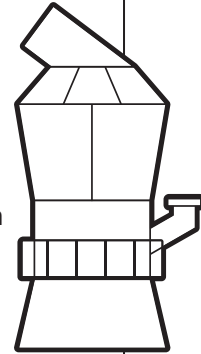
Raw limestone from a quarry goes through many changes to become cement.



1. Limestone arrives and is mixed with clay and shale. These ingredients go through a Crusher to make a material called preblend.

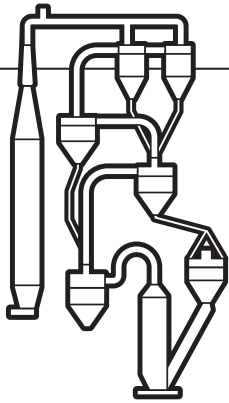
2.

The preblend is mixed with iron slag, sand, bottom ash and more limestone and sent through a **Roller Mill** to make a fine powder called kiln feed.



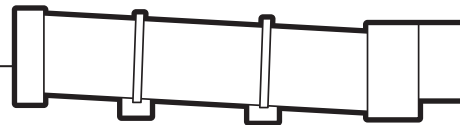
3.

The kiln feed goes to the **Preheater Tower**, where it flows through four stages before reaching the Kiln.

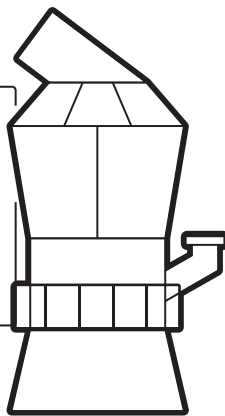


4.

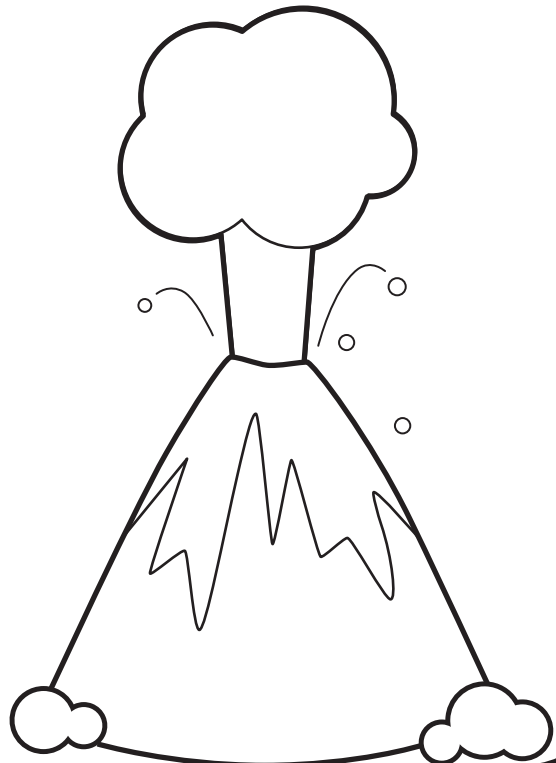
In the **Kiln**, the hot temperatures (about 2600 Fahrenheit/ 1400 degrees Celsius) turn the kiln feed into clinker.



5. The clinker is mixed with gypsum & limestone then sent through the **Finishing Mill**. Here they are ground into the final product, cement powder.



Fun Fact:
The Kiln is **HOT** like a volcano, but instead of lava it makes **Clinker**.



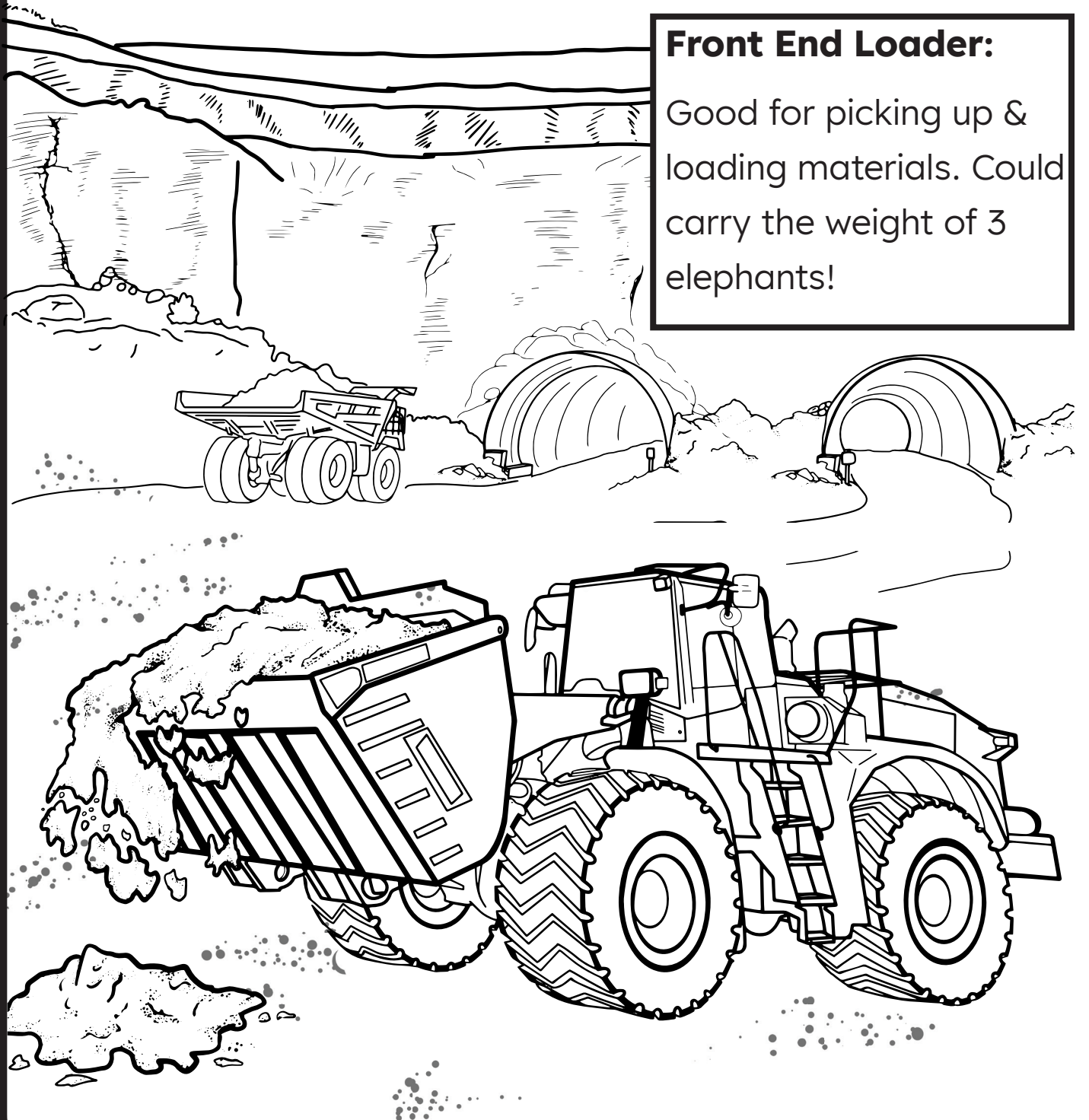
A Day At The Quarry ✓



Meet Our Big Trucks

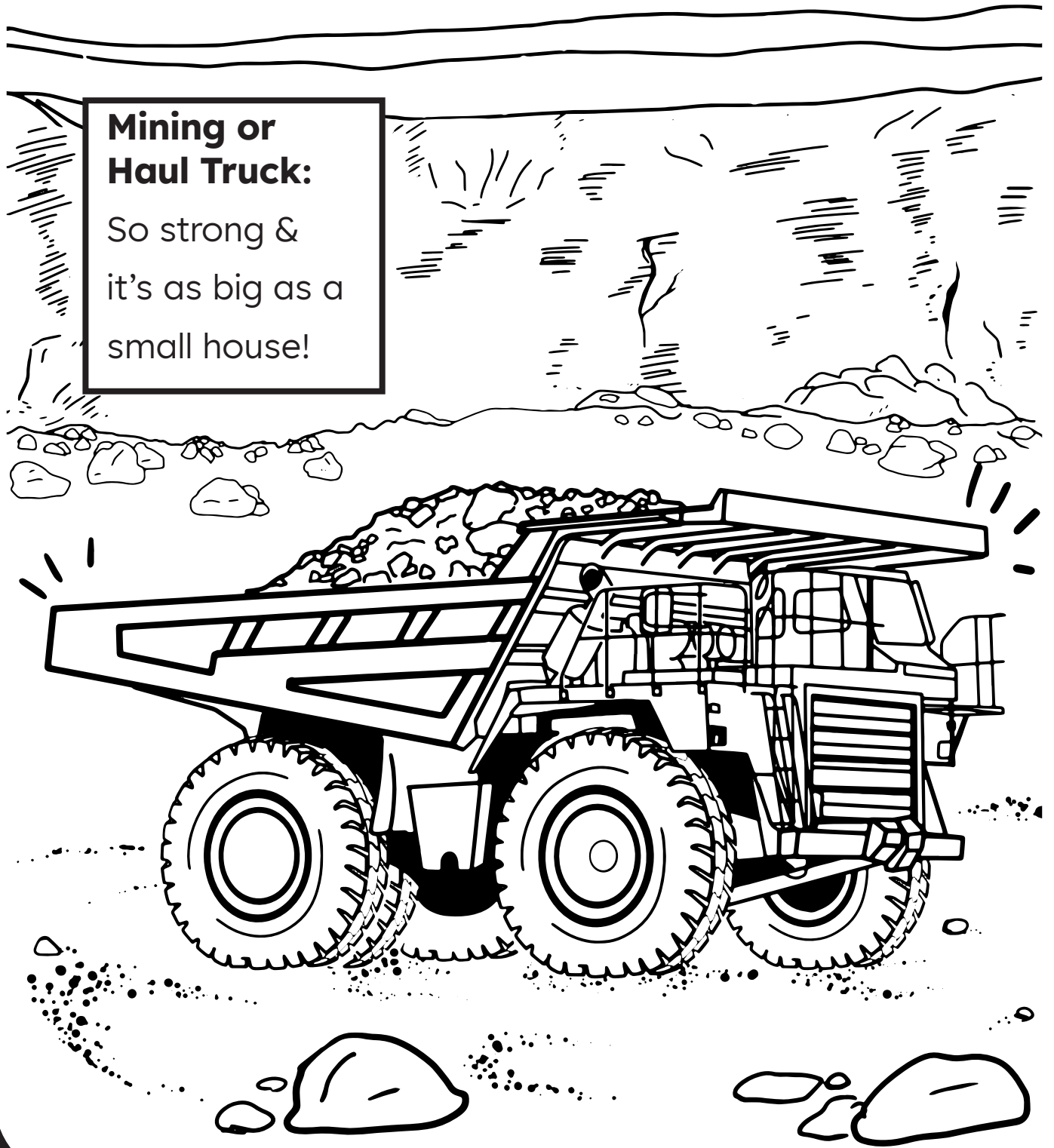
Front End Loader:

Good for picking up & loading materials. Could carry the weight of 3 elephants!



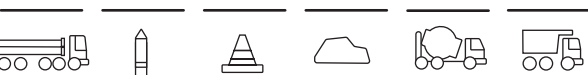
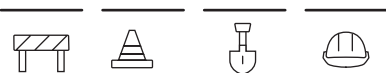
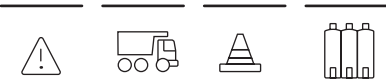
**Mining or
Haul Truck:**

So strong &
it's as big as a
small house!



Aggregates are the raw materials needed to make cement & concrete. Aggregates can be sand & gravel or crushed stone. Sometimes the aggregate is more than 100 feet underground.

Use the key code to figure out what layers of material the loader needs to get through before it reaches the gravel.

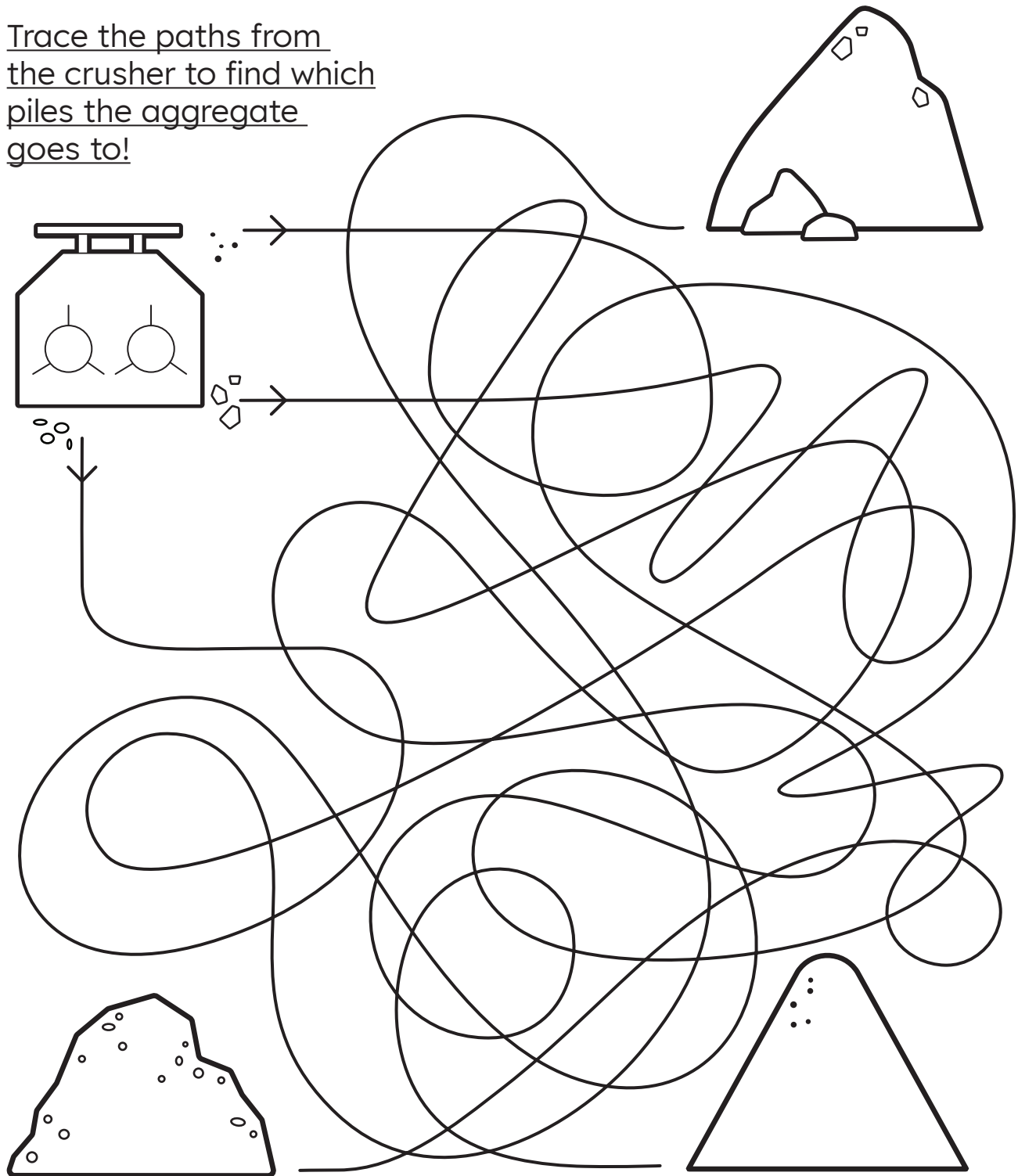


Code :

| | | | |
|----|----|----|----|
| =A | =C | =D | |
| =E | =G | =I | =L |
| =N | =O | =R | |
| =S | =V | =Y | |

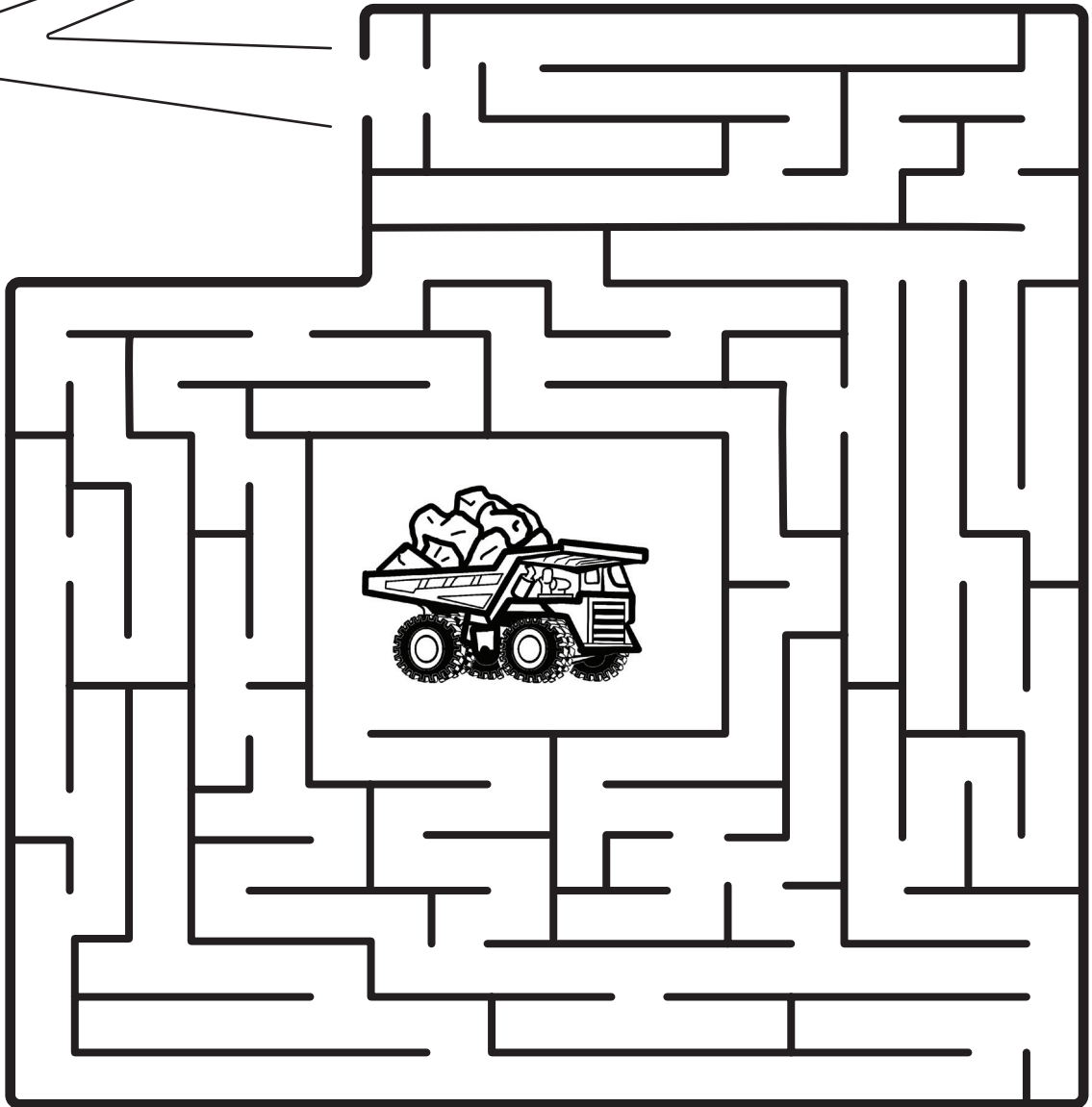
Loaders scoop out the aggregates and put them into dump trucks. The dump trucks move the aggregate to a crusher or a screen where they are made into certain sizes used by concrete & asphalt projects.

Trace the paths from the crusher to find which piles the aggregate goes to!



Drive Through The Quarry

Help the haul truck
navigate the quarry.



Quarry Restoration

Lake Tye in Monroe, Washington is a busy outdoor community park. This site was once mined for half a million metric tonnes of gravel and sand a year for five years! How many wakeboarders, swimmers, soccer players and joggers can you spot?

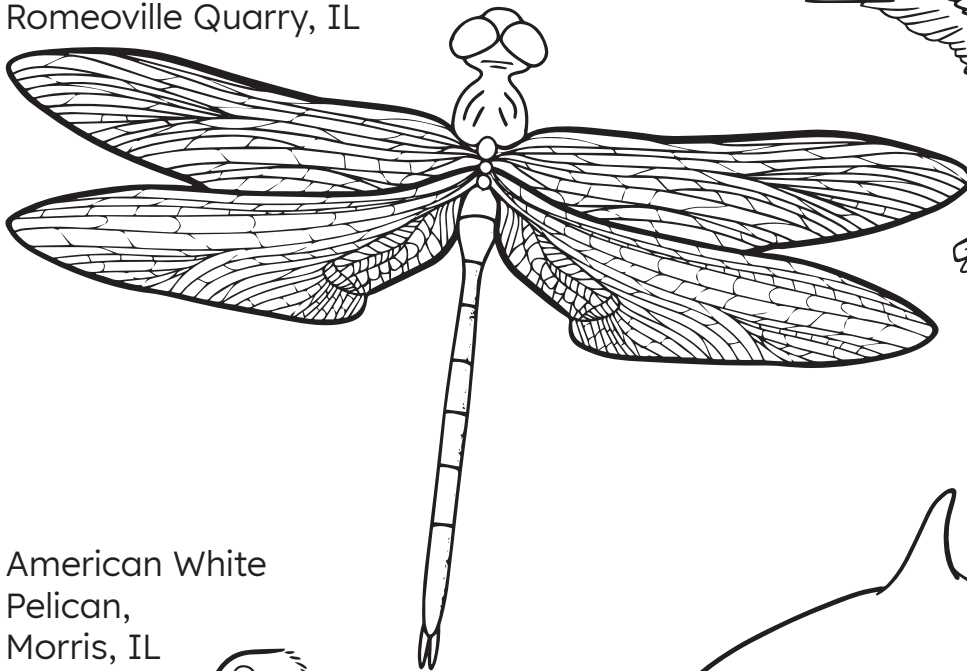


Believe In Biodiversity

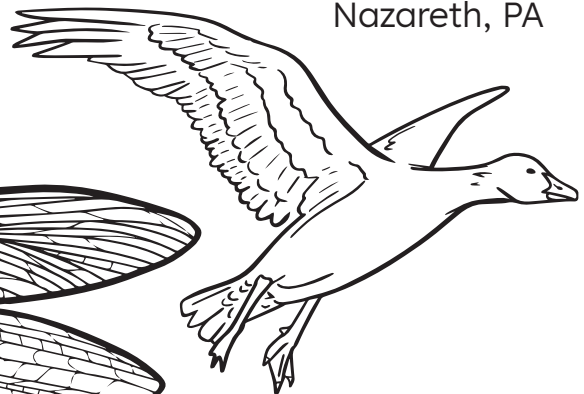
Our cement plants and quarries are home to many different diverse species! Protecting local wildlife and ecosystems is a big part of Heidelberg Materials' commitment to sustainability and community involvement!

These are some of the animals you may spot at our many locations:

Hines Emerald Dragonfly,
Romeoville Quarry, IL



Snow Goose,
Nazareth, PA



American White
Pelican,
Morris, IL

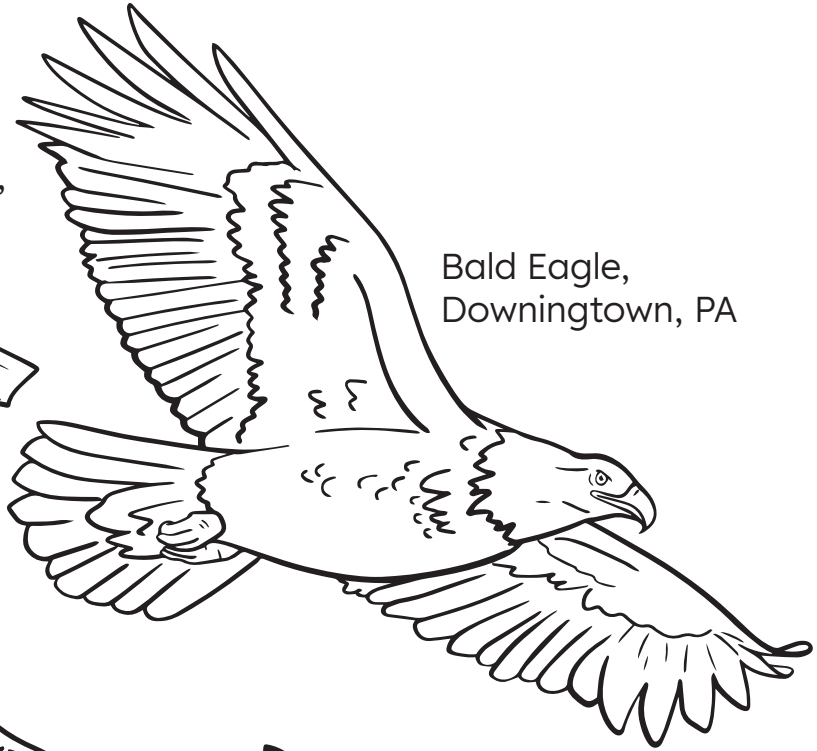


Orca,
Vancouver, BC





Little Brown Bats,
Edmonton, AB



Bald Eagle,
Downingtown, PA



Peregrine,
Edmonton, AB



Red Fox,
Wagner Quarry,
OH

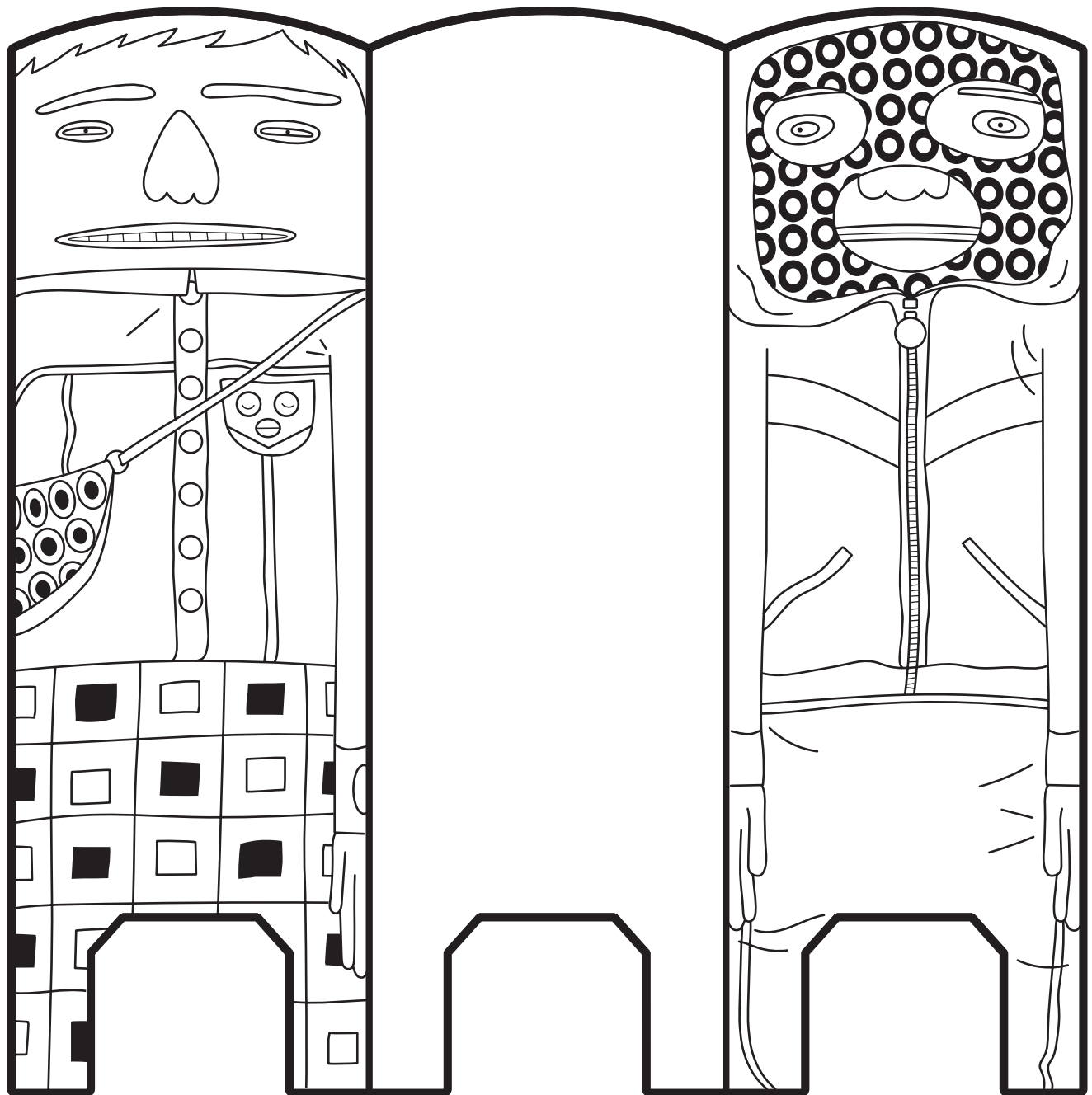


Trumpeter Swans,
Mason City, IA



Cement and aggregates are the key ingredients in making concrete. Our ready-mix plants store these in silos until they're needed to make concrete. At our concrete plant on Granville Island in Vancouver, British Columbia, the 70-foot high painted silos are called "The Giants."

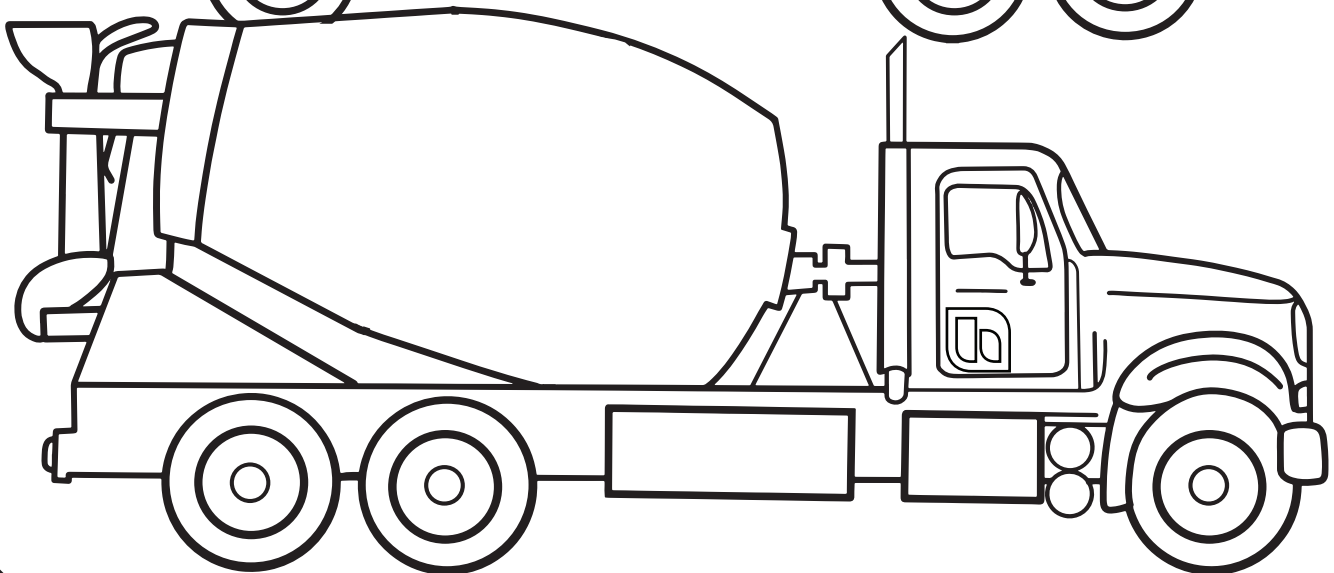
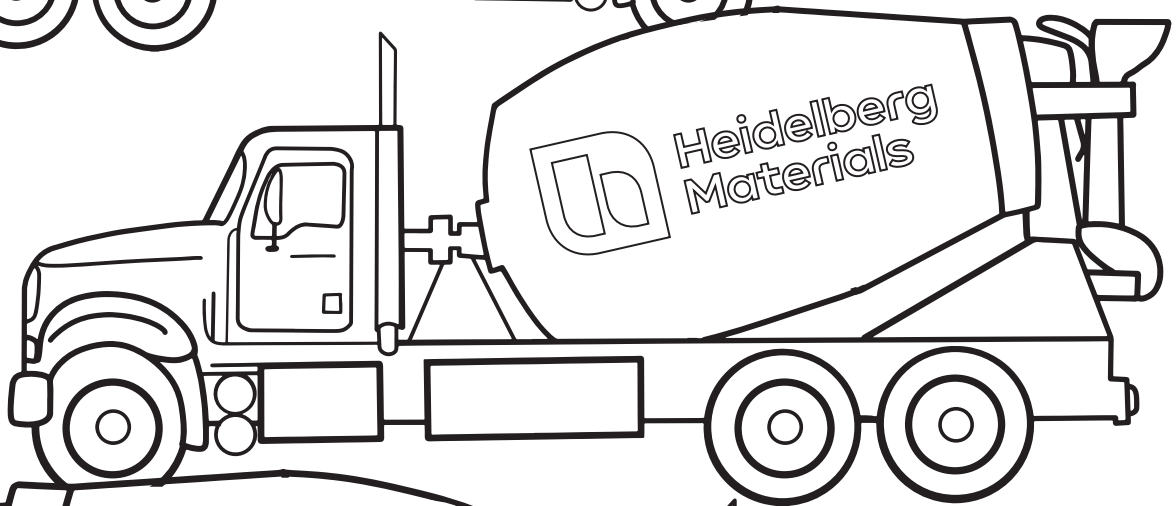
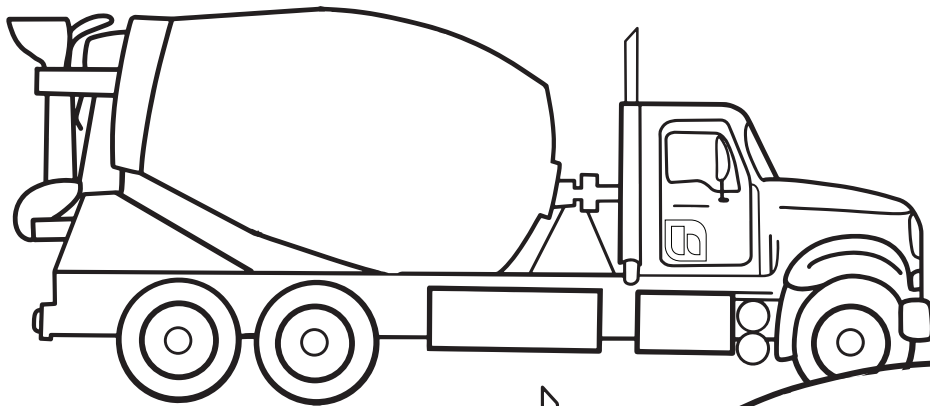
Doodle your own face onto the silo!



Paint - A - Truck!

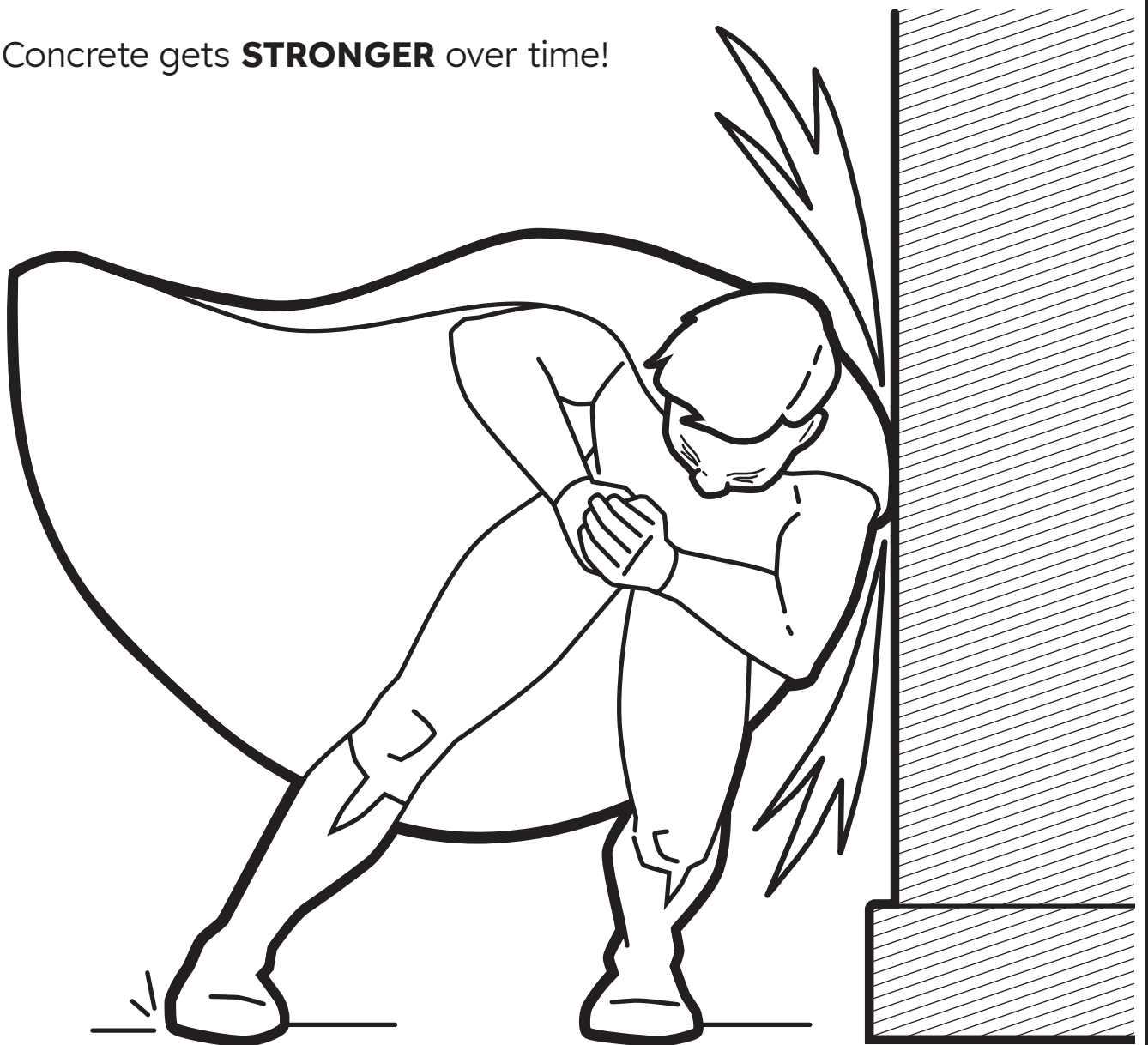
At Heidelberg Materials, we're proud of what we do! Our ready-mixed concrete trucks show off our company's style!

Design your own concrete trucks to show off yours!



Concrete Is Stronger Than A Superhero

1. Concrete can take over one million pounds of force to break.
2. Concrete can't catch on fire.
3. Concrete will not rot.
4. Concrete gets **STRONGER** over time!



Where Is My Truck?!

On a construction site, it's all about timing! If people or materials arrive early or late, this can throw off the budget & timeline a site manager has for their project.

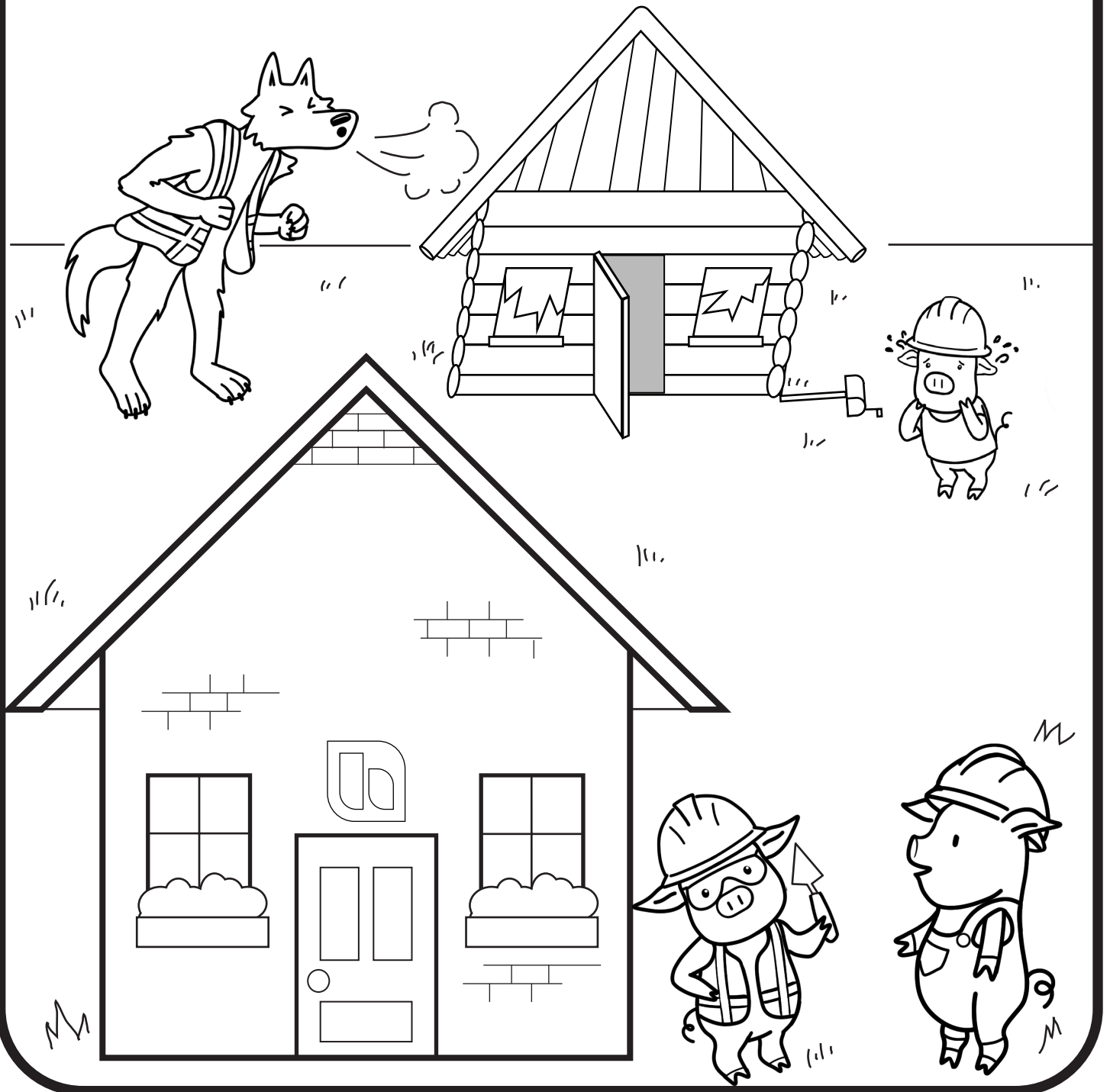
To help manage this, Heidelberg Materials uses digital tools like Onsite so customers can see exactly where their concrete truck is.



Reliable & Resilient

At Heidelberg Materials, we work to build things that last!

With our concrete and masonry products designed to be strong & long-lasting, **resilient** building is **sustainable** building!



Concrete Builds Our Communities

Color the items that are made out of concrete!

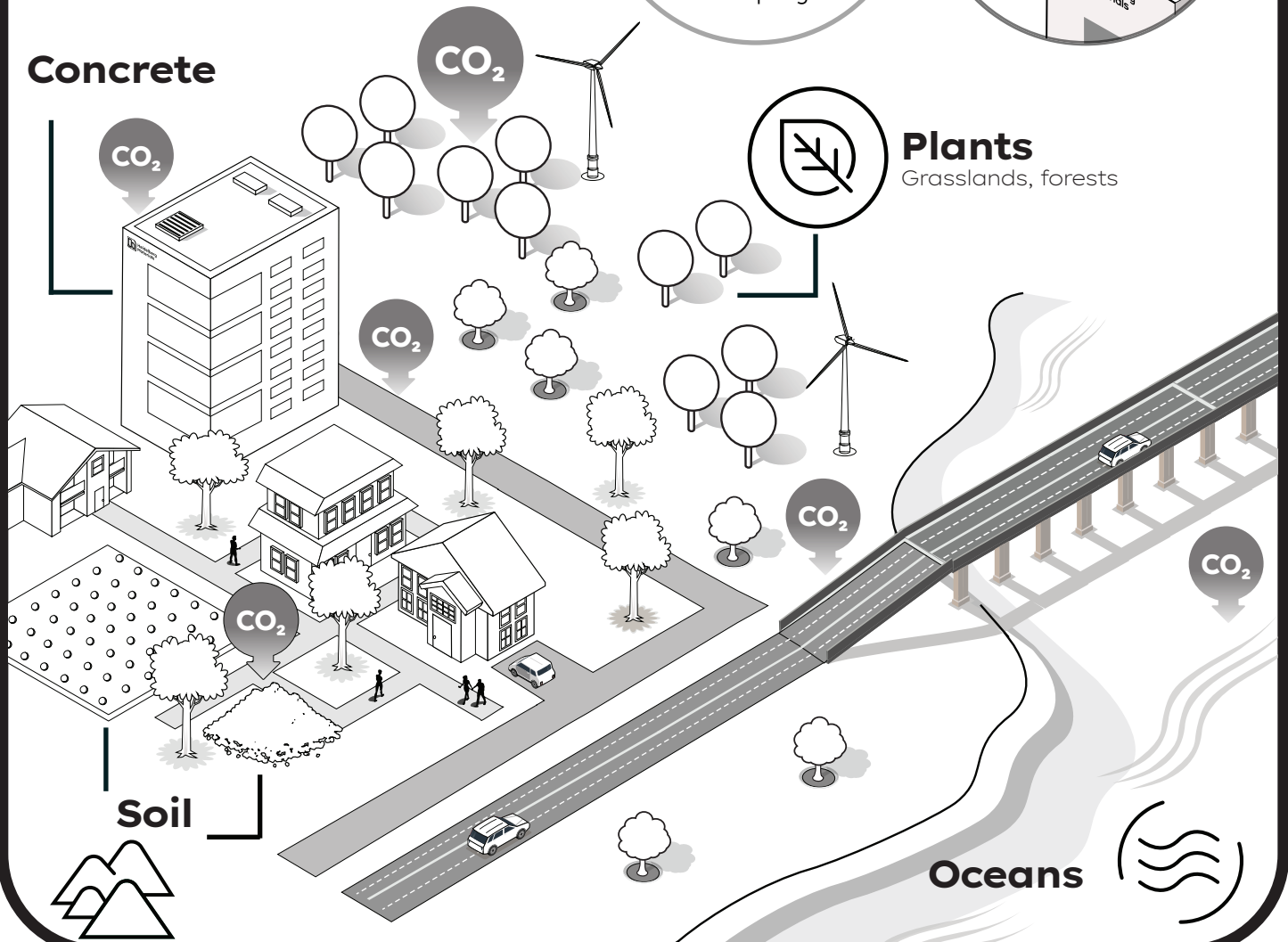
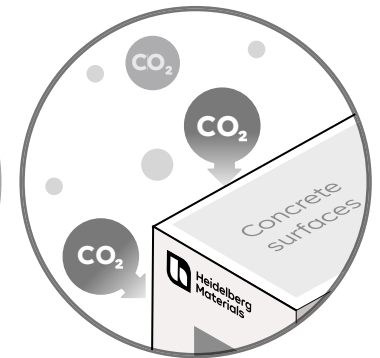
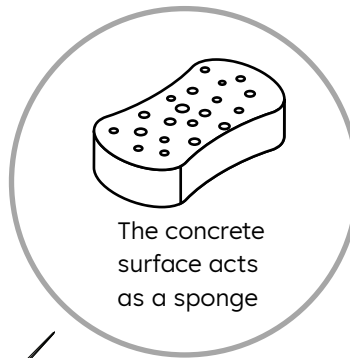


Capturing Carbon!

There are many ways excess CO₂ is naturally absorbed in the environment: through **soil**, through **plants**, & in the **ocean**.

Concrete does this, by soaking up Co₂ like a sponge!

Color the things that can absorb carbon:



Puzzle Answers!

Loaders scoop out the aggregates and put it into dump trucks. The dump trucks move the sand to a pile, and take the gravel to conveyor belts. The gravel goes to the crusher and is sorted by size.

Which pile does the conveyor belt take the gravel to?

Drive Through The Quarry

Help the haul truck navigate the quarry.

Dress For Success!

From construction sites & quarries, to testing labs & manufacturing plants, safety requires the right gear for the job! Circle the Personal Protective Equipment our workers wear on site.

- 1: steel toe boots
- 2: reflective safety vest
- 3: hard hat
- 4: safety glasses
- 5: gloves
- 6: safety glasses
- 7: safety glasses
- 8: gloves
- 9: reflective safety vest
- 10: reflective safety vest

Concrete Builds Our Communities

Circle the items that are made out of concrete!

Aggregates are the next raw materials needed to make concrete. Aggregates can be sand or crushed stone, which we call gravel. Sometimes the gravel is more than 100 feet underground.

Use the key code to figure out what layers of material the loader needs to get through before it reaches the gravel.

soil
clay
sand
gravel

Code :
 △ = A △ = C ⊙ = D
 ⊞ = E ⊞ = G ⊞ = I ⊞ = L
 ⊞ = N ⊞ = O ⊞ = R
 ⊞ = S ⊞ = V ⊞ = Y

Quarry Restoration

Lake Tye in Monroe, Washington is a busy outdoor community park. This site was once mined for half a million tonnes of gravel and sand a year for five years! How many wakeboarders, swimmers, soccer players and joggers can you spot?

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Heidelberg Materials

Unleash your creativity
while learning a little more
about Heidelberg Materials
& what we do!

