Glaciers and the Earth

by Kenni Alden

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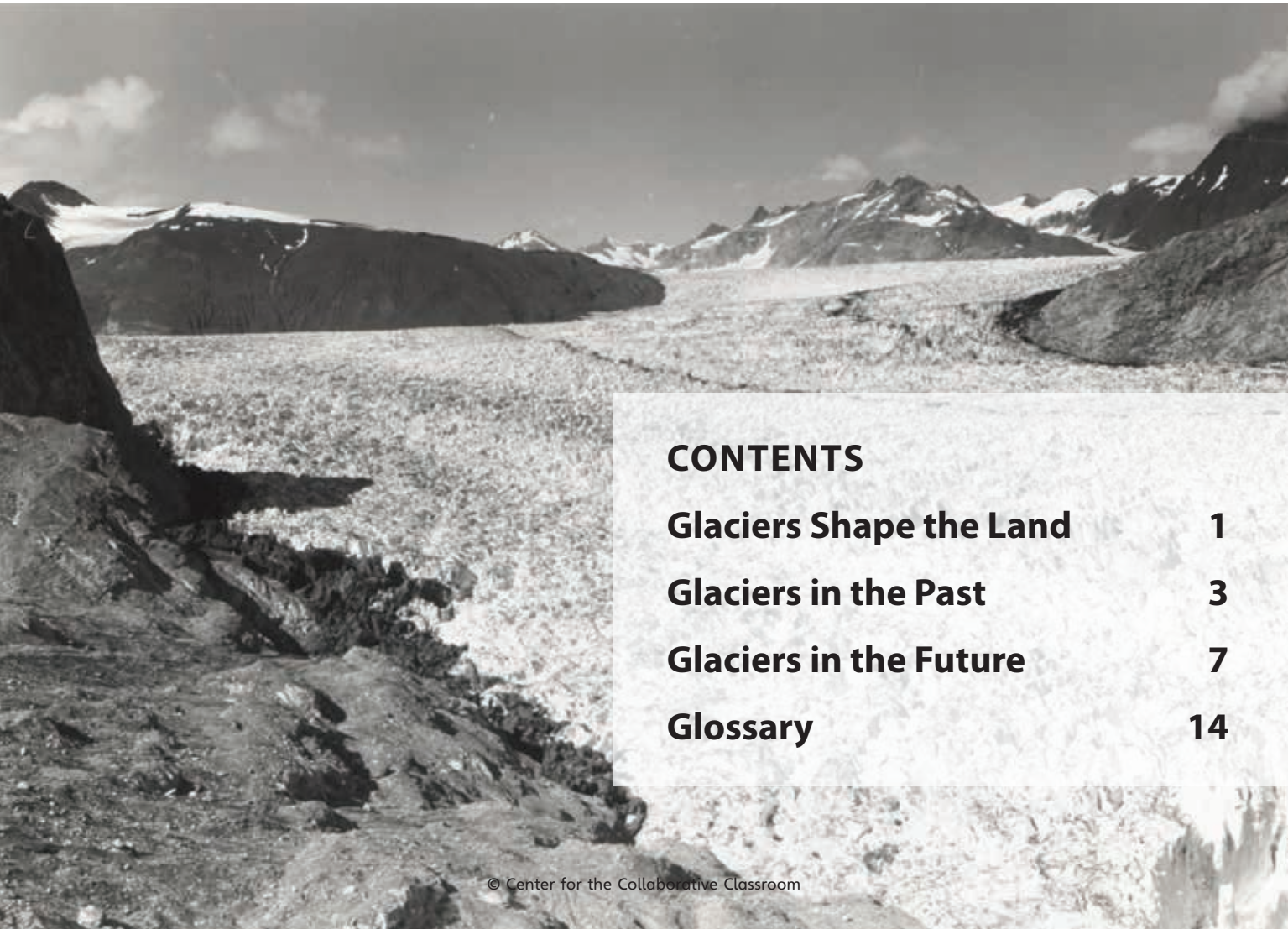

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GLACIERS SHAPE THE LAND

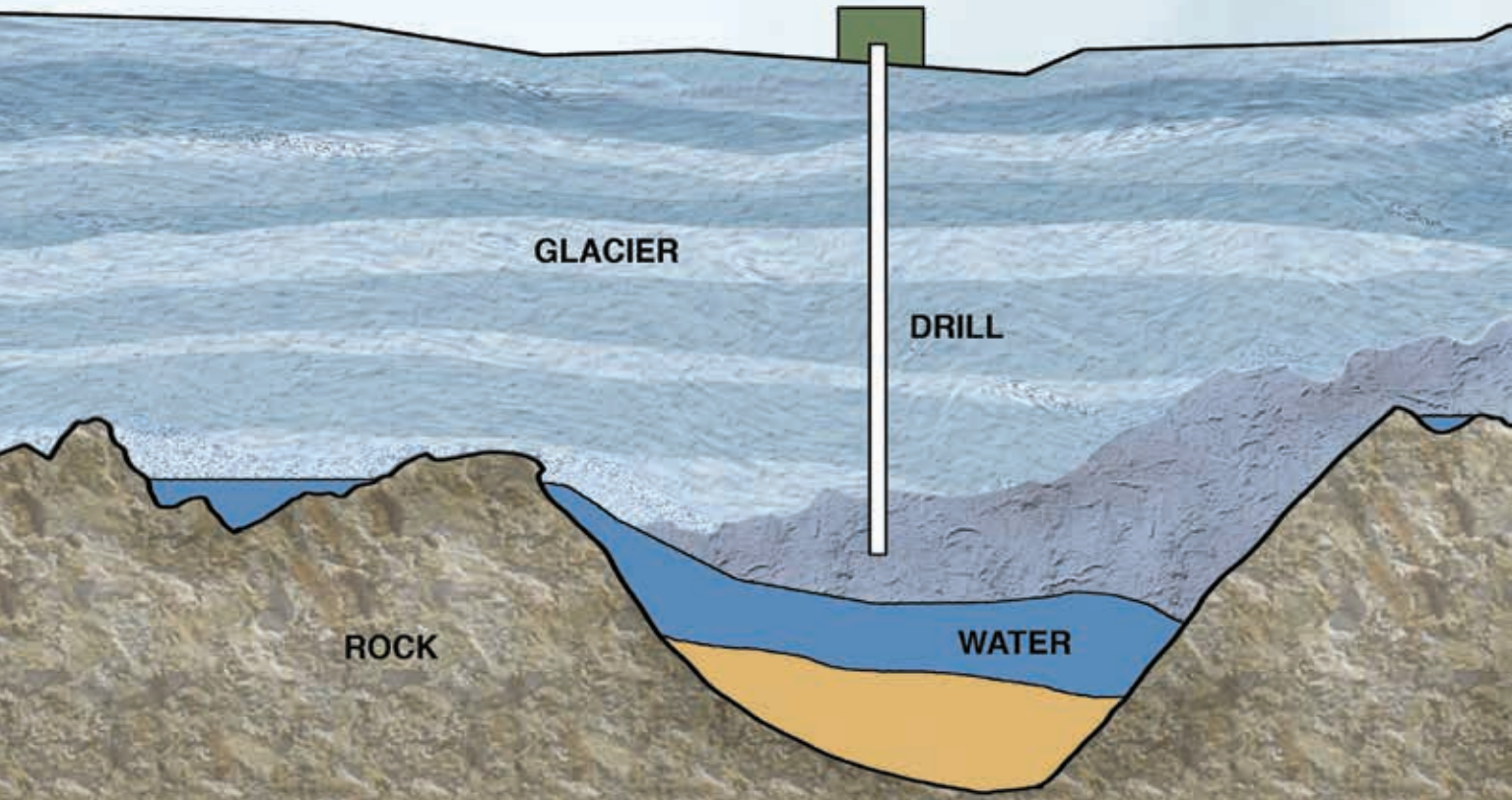
Glaciers are important because they shape Earth. As they advance over the land, glaciers crack rocks and move them.

Glaciers change the shape of the land. They pile up soil and rock in new places to make hills. They scoop up soil and **haul** it away. Water fills holes to make lakes.

GLACIERS IN THE PAST

Glaciers are also important because they help us learn about the past. If we see a lake or hill that was shaped by glaciers, we know that this part of Earth was once much colder and icier.

We can learn about the past from glaciers that are still here, too. Glaciers grow each year with a new **layer** of ice. Gases (say "gasses"), **pollen**, ash, and dust get trapped in the layers of ice.



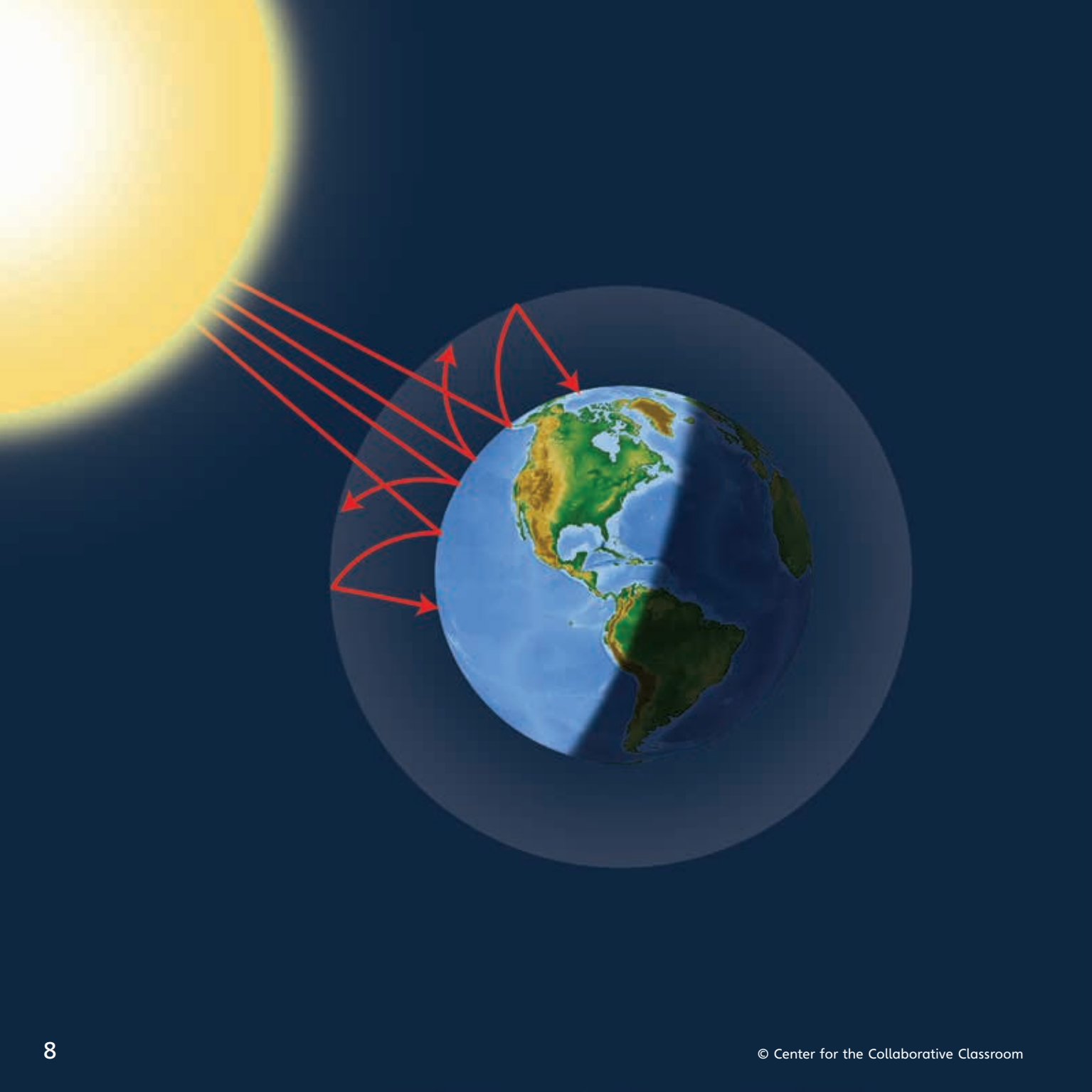
Scientists are excited by what they learn from the icy layers of old glaciers. They drill into the glaciers and take out long cores, or tubes, of ice.

The ice cores show layers going back many, many years. Each layer tells about what Earth was like when the layer was made.

Traces of pollen tell us what kinds of plants were growing. Gases in the ice tell us how cold it was and what was in the air.

GLACIERS IN THE FUTURE

Glaciers may also help us learn about the **future**. We know glaciers change Earth when they grow and move. But now glaciers are melting fast, and that can change Earth too.



What makes glaciers melt? Warmer air. When the sun shines on Earth, most of the sun's rays bounce back into space. But some gases in the air trap the sun's heat and keep it from bouncing back.

The trapped heat can make Earth hotter and hotter. Young glaciers might start to melt and recede. Older glaciers could start to **thaw**, too.

Glaciers called ice sheets are the biggest, deepest glaciers on Earth. Scientists keep watch on the ice sheets. Some very large ice sheets are starting to thaw and crack. Large chunks of ice are falling into the sea and melting.

The melting ice adds a lot of water to the sea. More water could cause the water to rise up higher and cover the land. Young people in the future might live on an Earth with much less land. Scientists think that cities near the **coast** might be under water.

Can we stop glaciers from thawing? To do this, we have to keep Earth from getting warmer. The gases that trap heat can come from driving cars. We can make a choice to drive cars less and walk or bike more. Burning coal to make power creates these gases too. We can turn off lights when we do not need them. Cleaner air can stop Earth from getting hotter and stop glaciers from shrinking. Maybe we can save glaciers!

GLOSSARY

coast: where the sea and the land meet

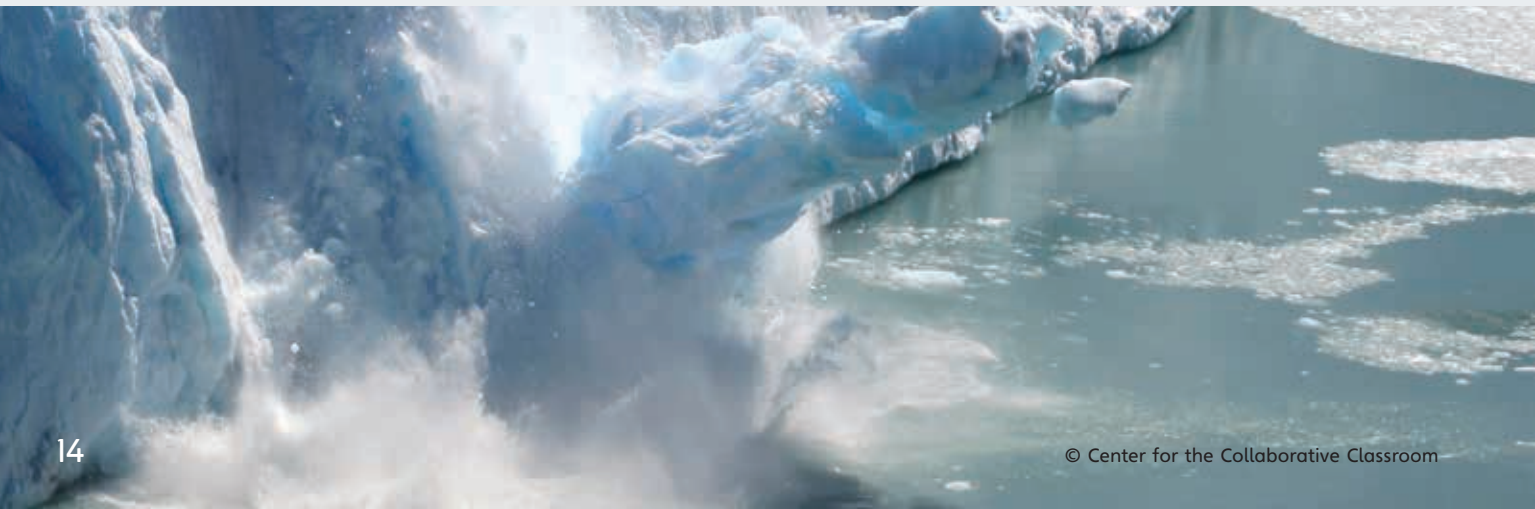
future: time that comes after now

haul: pull or carry

layer: thin slice

pollen: dust from flowers that helps make new seeds

thaw: melt



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