

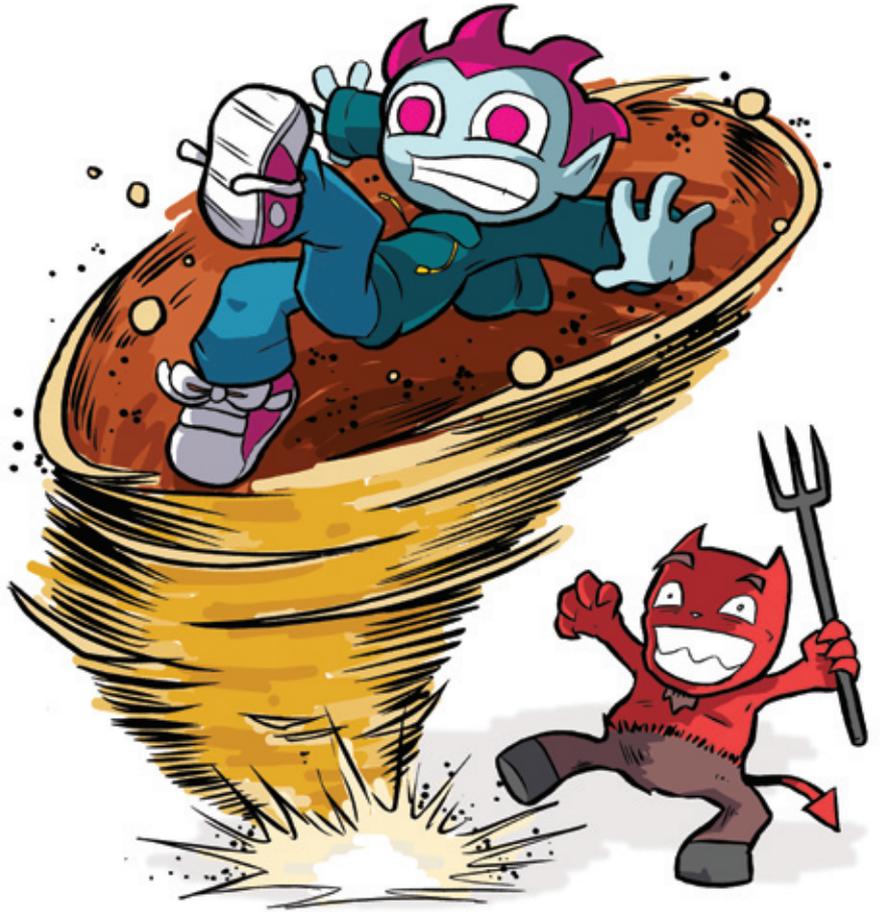
# KNOW it ALLS



We don't really know it all. But we sure like to find it all out!  
Like scientists, we watch the world and wonder. Then we try to find  
the answers to our what, where, why, and how questions.

## WHAT ARE DUST DEVILS?

Dust devils are like mini tornadoes. They are caused when very hot air near the ground rises quickly through cooler air. The funnel of air begins to spin and whips up dust, leaves, and other objects in its path. Dust devils are usually small and might be no wider than your outstretched arms. These whirlwinds usually occur during hot, dry weather or in hot, dry places such as deserts. Dust devils occur on Mars, too. Other names for dust devils include dancing devils, whirlies, and willy willys.



Sam Logan (4)

## WHY IS THE SOIL ON PRINCE EDWARD ISLAND RED?

Canada's smallest province is famous for that red-headed gal, Anne of Green Gables, but it's also well-known for something else that is red: soil. The soil, as well as the red sand on PEI's long beaches, comes from a soft, red sandstone. Wind and water wear away at the sandstone and break it into smaller and smaller pieces until it becomes sand or soil. Iron gives the sand its rusty red colour. The red sand looks pretty, but it also grows great food. The light, sandy soil is perfect for potatoes as well as grain, fruits, and other vegetables.



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## WHY DO ONIONS MAKE YOU CRY?

Onions are made of thousands of tiny cells. When you slice open an onion, the cells break open. This releases a gas that contains the chemical sulphur. The gas mixes with the moisture in your eyes and makes them sting. The nerves in your eyes are irritated by the gas and make tears to protect your eyes. To prevent tears, use sweeter onions or wear goggles!



## WHY DO PEOPLE FROM HOT COUNTRIES EAT HOT, SPICY FOOD?

Hot curries from India, chili-filled enchiladas from Mexico, spicy noodles from Thailand. People who live in hot countries often eat hot food. There are a few reasons for this. Food spoils quickly in hot places, and spices and chilies can help it last longer. As well, when people eat hot food, they sweat. As the sweat evaporates from their skin, they cool off. So, while ice cream on a hot day is sweet and yummy, a bowl of spicy chili will help keep you cool, too!



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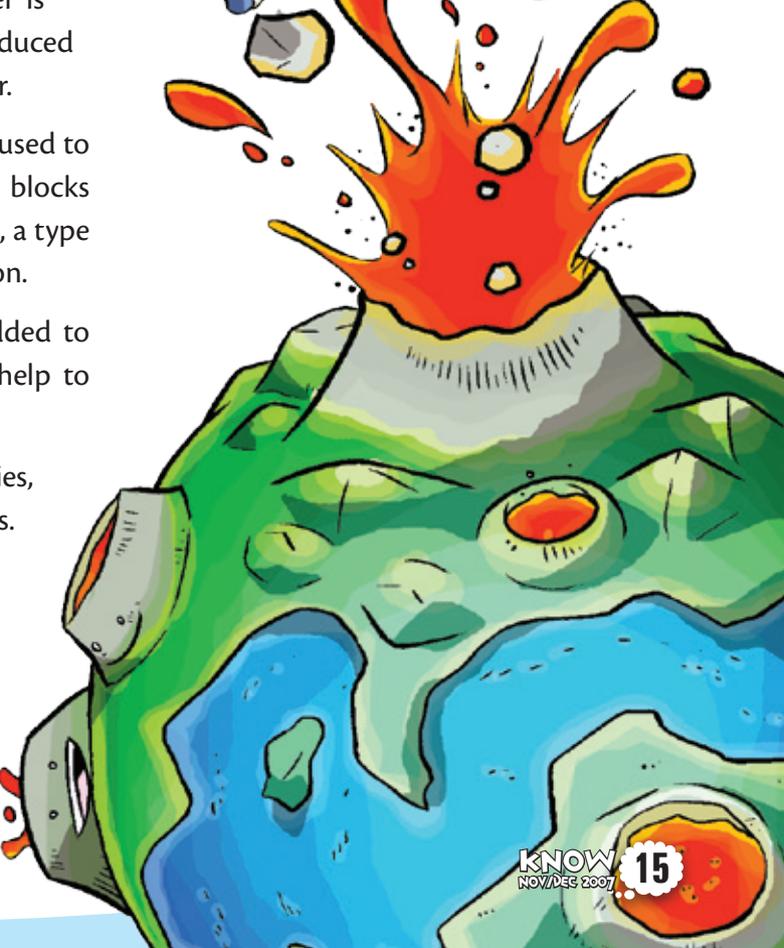
## ARE VOLCANOES GOOD FOR ANYTHING?

Volcanoes can destroy homes and change landscapes forever, but they do a lot of good things, too.

- As volcanoes grow, they make mountains and new islands. Iceland and Hawaii were both formed by volcanoes.
- Lava and volcanic ash contain many minerals that enrich soil. The rich, well-drained soils near volcanoes are great for farming.
- Magma can help heat homes and create electricity. In Iceland, magma heats water underground. The water is used to keep homes warm. In New Zealand, steam produced by magma drives turbines that produce electric power.
- Volcanoes provide materials for building. Ash can be used to make cement. Some building in Italy are made from blocks cut from volcanic rocks, such as hardened lava. Basalt, a type of volcanic rock, is also mined and used in construction.
- Gritty bits of pumice and volcanic ash are often added to soaps, cleaners, and polishes. The tiny hard pieces help to scrub things clean.
- In their own way, volcanoes are beautiful. For centuries, they have inspired writers, artists, and photographers. Volcanoes are also popular tourist attractions.

## WHAT DID ONE VOLCANO SAY TO THE OTHER?

I LAVA YOU!



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## WHAT IS THE RABBIT-PROOF FENCE?

This 100-year-old fence was once the longest in the world. It stretched across southern Australia. It took six years and over 400 people to build this fence of wire and net. And it was all because of rabbits.

A man who settled in Australia during the 1850s missed the rabbits he once hunted back home in England. So, in 1859, he brought 24 rabbits to Australia. By 1894 — just 35 years later — rabbits were found across the entire country. Since rabbits did not naturally live in Australia, they had no predators to keep their population low. Farmers and ranchers saw the rabbits as pests that competed with their livestock for food and land. To keep the rabbits out of farm and ranch land of western Australia, the government built three rabbit-proof fences between 1901 and 1907. Altogether, the fences spanned 3250 kilometres, which is about the distance from Vancouver to Toronto. Parts of the fence are still in use today.



## ARE KOALAS BEARS?

No. Sometimes people call koalas, “koala bears”, but they aren't bears at all. Grizzly, polar, and black bears are placental mammals. (For a reminder, turn to page 10.) Koalas may look like little cuddly bears, but they are really marsupials. Their tiny babies — or joeys — are raised in mom's pouch.

Koalas only live in Australia. Breakfast, lunch, and dinner for these furry, grey animals is one thing — eucalyptus leaves. Koalas live in eucalyptus trees and munch on as much as one kilogram of leaves each day. The leaves from some kinds of eucalyptus trees are poisonous, but koalas are super smellers and can sniff out the best leaves to eat.

Today, the forests koalas live in are being cut down to make room for cities and roads. Eucalyptus wood is also used for building. Many people are trying to help the koalas by making sure they will always have eucalyptus forests to live in.

