



BURDOCK THISTLE



VELCRO®



GOD THOUGHT OF it 1ST

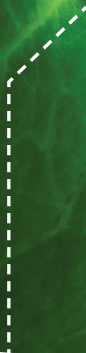
Pulling the burrs of the burdock thistles off his clothes and his dog following a hike, George de Mestral wanted to understand how these burrs clung to his dog's hair and his clothing. He looked at the burrs under the microscope and saw the tiny hooks on the end of the burr's spines that caught anything with a loop. God had designed the tiny hooks to help the thistle spread its seed.

For ten years, de Mestral worked on inventing new fabrics—one would have a hook and the other a loop, so that they stuck together and could be easily pulled apart. He began making his fabrics in 1952 and called his invention Velcro® (from the French words for “velvet” and “hook”). You probably have de Mestral's invention on your shoes, your backpack, or some of your clothes!

Find out more about God's amazing creation at [KidsAnswers.org](https://www.KidsAnswers.org)



LOTUS Leaves



CLEANSERS





GOD THOUGHT OF IT 1ST

Lotus plants grow in ponds and rivers, which can be very muddy, but their leaves always look clean and shiny. Why is this? God designed the leaves of the lotus plant so that they are covered with tiny hair-like structures that prevent water from reaching the surface of the leaves. When water falls on lotus leaves, droplets quickly form on the surface. Suspended on the tiny structures, the water drops roll off the leaves carrying away any dirt and debris.

Researchers have studied this self-cleaning ability and are mimicking the lotus leaf's tiny bumps to produce self-cleaning surfaces. Scientists have begun using lasers and other tools to create similar surface structures on windows, buildings, solar panels, and other devices to keep them clean without using chemicals. NASA is studying the lotus leaf to find ways to keep space gear from collecting dust while on the moon or in outer space.

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KINGFISHERS



TRAINS



GOD THOUGHT OF it 1ST

God designed the kingfisher—a type of bird—with a long, pointy beak. When it dives into the water to catch a fish, its remarkably designed beak and head allow it to enter the water with virtually no splash.

A researcher in Japan observed the kingfisher diving after fish and wondered if he could apply what he'd seen to a problem he was having. You see, some trains in Japan travel very fast, and they created a lot of noise when coming out of tunnels due to the air pressure waves pushed ahead of the train. People who lived near the tunnels complained of the loud BOOM that was produced every time a train exited a tunnel.

The researcher suggested redesigning the front of the train to mimic the beak and head of the kingfisher. This redesign helped reduce the noise and also helped the train to use less energy and travel faster!

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SHARKS



WET SUITS





GOD THOUGHT OF IT 1ST

God designed sharks to slice through the water with minimal resistance. Their skin is covered with tiny rectangular scales that have small spines poking from the top. This makes their skin feel rough. In addition to helping the shark move easily in the water, this design also keeps barnacles and other organisms from attaching and growing on their skin.

Researchers have been studying the properties of the shark's well-designed skin in order to help boaters keep their boats clean. Boats usually have smooth surfaces but redesigning the surface to match the shark's skin may help boats move better through the water and keep their hulls free of barnacles. Shark skin has even inspired the design of swimsuits and wet suits. Copying the Master Designer leads to superior designs!

Find out more about God's amazing creation at KidsAnswers.org



BATS



SONAR



The header features a white cloud-like shape containing the title. It is decorated with several grey gears of different sizes, a green dotted arrow pointing towards the title, and a green arrow pointing downwards. The background of the entire page is orange with faint gear patterns.

GOD THOUGHT OF it 1ST

God designed bats with an incredible way to find and catch their food in the dark. Instead of using their eyes to see what they're going after, they use their mouths to send out signals that their ears pick up and use to locate the position of an object. With this echolocation system, bats can "see" a fruit fly up to 100 feet away and are able to catch it in one second!

Animals have been using echolocation since God created them to do so. Only a few hundred years ago, man began using the principles of sound to develop SONAR (Sound Navigation And Ranging) to locate underwater objects. Scientists have studied bats, whales, and porpoises to improve the effectiveness of man-made sonar devices—another example of imitating God's amazing works to help mankind!

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