

Biomimicry

Guess which element in nature inspired the following products.

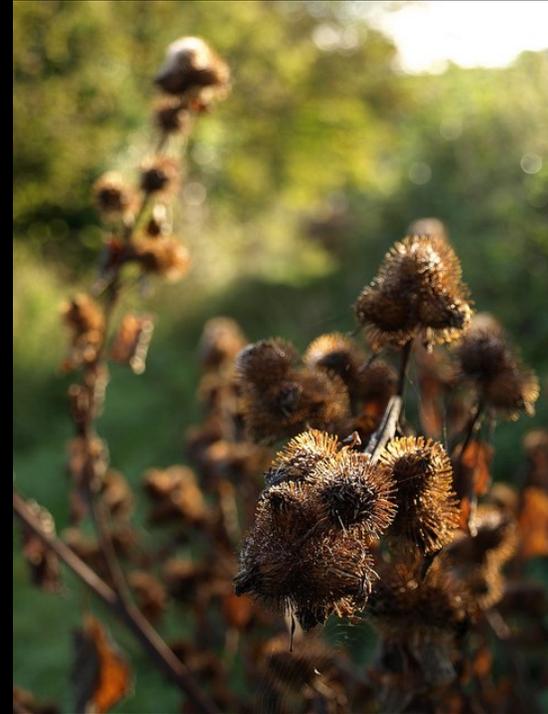


Velcro and Burdock Burs

A Swiss engineer modeled Velcro on the burs from the burdock plant, after noticing them stuck to his dog's fur.



By Alexander Klink (Own work) [CC BY 3.0 via Wikimedia Commons]



Derek Harper [CC BY-SA 2.0 via Wikimedia Commons]

Turbine Blades and Whale Fins

By adding small bumps to the front of turbine blades, mimicking those on a whale fin, engineers found that the bumps facilitated the movement of the blade through the air. This increased the windmill's efficiency.



Chris English [CC BY-SA 3.0] via Wikimedia Commons



By Rob and Stephanie Levy [CC BY 2.0], via Wikimedia Commons

Bullet Train and Kingfisher

When first designed, the Japanese bullet train made an ear-splitting sound as it emerged from a tunnel. Engineers found the solution to this problem in nature. The redesigned bullet train's nose was modeled on the shape of a kingfisher's beak. When kingfishers dive into water to catch fish, they are very stealthy so as to sneak up on their prey! Modeling the nose of the train in this way decreased noise issues while increasing efficiency.



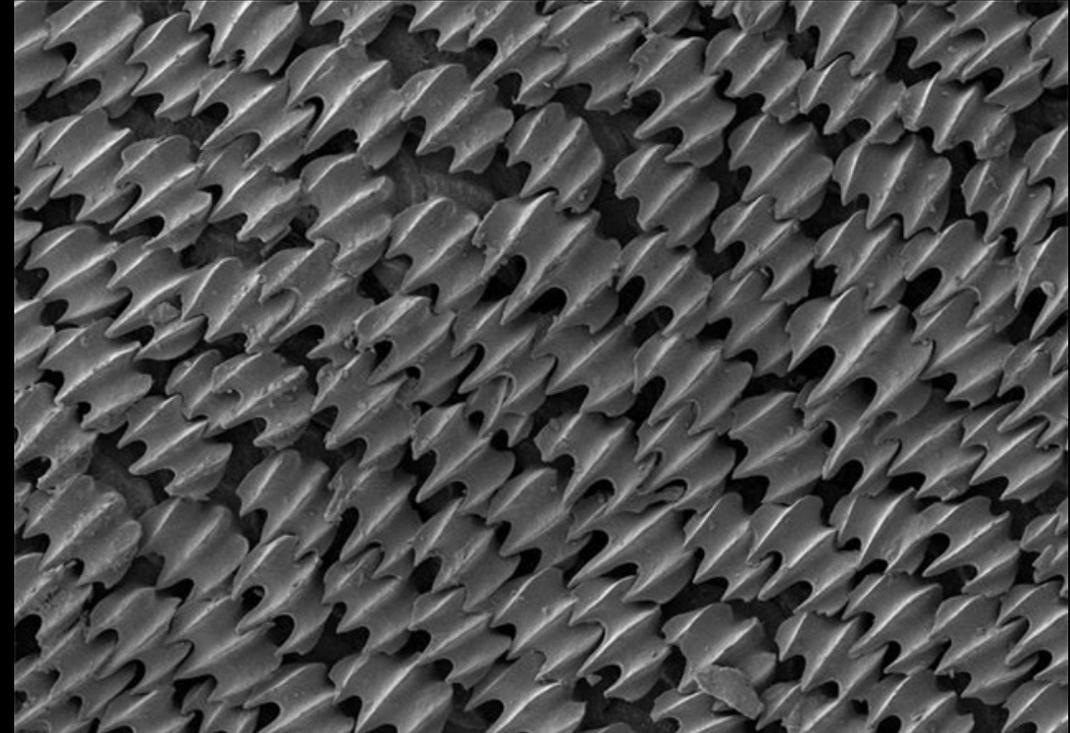
By Alok Mishra [Public domain], via Wikimedia Commons



By Andreas Trepte (Own work) [CC BY-SA 2.5] via Wikimedia Commons

Ship Coating and Shark Skin

NASA scientists drew inspiration from nature when designing a new material to cover ships in order to reduce drag. Their inspiration came from the denticles on shark skin that work to reduce drag and prevent bacteria from attaching. This coating can be used to help the U.S. Navy increase ship speeds while saving fuel.



Eastgate Building and Termite Mounds

Architects took a cue from nature when they designed the climate-control systems in this building in Zimbabwe. The building is modeled after a termite mound whose structure helps control the temperature and facilitate air flow.



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Jets and Geese

Scientists have proposed that jets might save gas by mimicking a familiar pattern in nature. Geese conserve energy by flying in this iconic V formation, which reduces wind resistance.



By kees torn (Jumbo Jet) [CC BY-SA 2.0] via Wikimedia Commons



By Gilles Gonthier from Canada (Volée d'oies -- Flight of geese
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