


# Biomimicry Challenge



wildsight  
EDUCATION

In this activity students will be challenged to come up with their own nature-inspired invention based on the concept of biomimicry.

 Paper, ruler, pencil if sketching your design. Lego, modelling clay or similar building materials if building a 3-D version. Photo of your inspiration from a book or online (to help with the creative process).

 Grades: 3-12  15-60 minutes



Most of us have come home from a walk in the forest with burrs (left) stuck to our clothing. Meet the burdock seed, the inspiration behind velcro (right).

## Introduction

First, refer to the Biomimicry Institute's **Biomimicry Examples page** for some ideas of biomimicry in action.

## Activity

This activity can be approached one of two ways:

Can you think of a challenge in your life or in the modern world that needs a solution? Look to nature to find ways that animals or plants deal with a similar problem and design an invention based on nature's solution to that problem.

For example, scientists are always looking for a less painful needle for injections. For a solution they looked to what we would normally consider a pest, the mosquito, whose specially-designed proboscis can not only inject anticoagulants but remove blood, often without us even noticing it.

Alternately perhaps you are inspired by an animal or a plant that is just super-cool. What parts or behaviours of that plant or animal could you use to solve a problem you see around you?

An example of this is the fin of a humpback whale, which is covered in large bumps that help streamline the huge animal's movement through water. Physicists used this design to create more efficient blades for the huge wind turbines that are now helping provide sustainable electrical energy across the planet.

## Additional Resources

**Family Podcasts:** Use these podcasts from the BBC to continue explore the concept of biomimicry:

- **30 Animals that Made us Smarter** (short, 15-minute podcasts showcasing biomimicry superstars)
- **Biomimicry Inspired by Nature** (30 minute podcast to learn more about biomimicry)

**Books:**

- **Biomimicry**
- **Nature Did it First**