

## 4 QUALITY EDUCATION



### Goal 4: Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

Inclusive and equitable education means that all boys and girls have the opportunity to go to school. They all have the opportunity to learn and grow together, and that nobody is left behind.

World leaders are taking action to ensure that knowledge is shared with everyone, and that we all can understand the world around us.

Nature has indeed taught us many, many lessons. We are now going to explore some interesting ideas that were inspired by nature and create patterns inspired by nature.

#### Biomimicry – learning from nature

Nature has been the source of many important discoveries. Did you know that the medicine aspirin was originally discovered in the bark of the willow tree? This medicine has helped to save millions of lives worldwide.

We can also take inspiration from nature to solve problems or make new inventions. This is called biomimicry. It helps us learn from nature and make our world more efficient and sustainable.

Scientists, engineers, architects and artists explore and examine how plants and animals do things and try to use those ideas in new designs. For example, they might study how a bird's wings work and then create a new kind of aeroplane wing that helps planes fly better. Or they might study how geckos can walk on walls and then make a special tape that sticks without leaving a mess.

1. Mimic means to imitate or copy something. 2. Equitable means fairness.

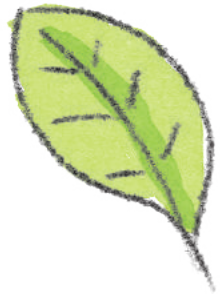
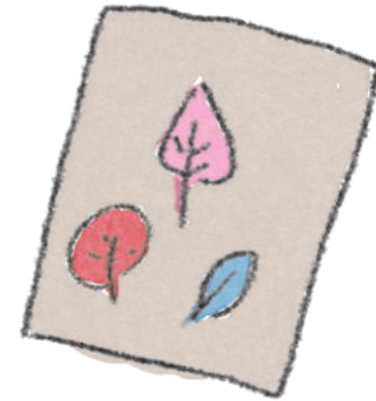


# Experiment - Nature Inspired Patterns

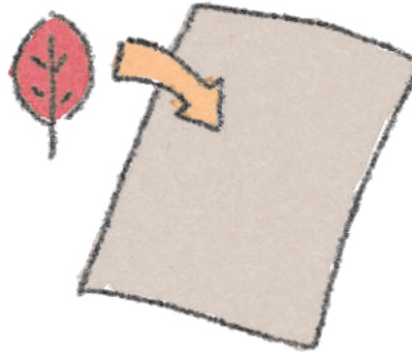


What you need:

- Some leaves
- Poster paint
- A paintbrush
- Some paper



1. Paint the back of your leaf with a thin layer of paint.



2. While the paint is still wet, press the painted side onto the page. Try this with different kinds of leaves.

3. Look at the patterns you've made with the leaves. Can you see a pattern like this anywhere else around you?

4. Try to think of any other examples of things that are inspired by nature. Draw or paint them in a scrapbook.

5. See what your classmates have discovered.

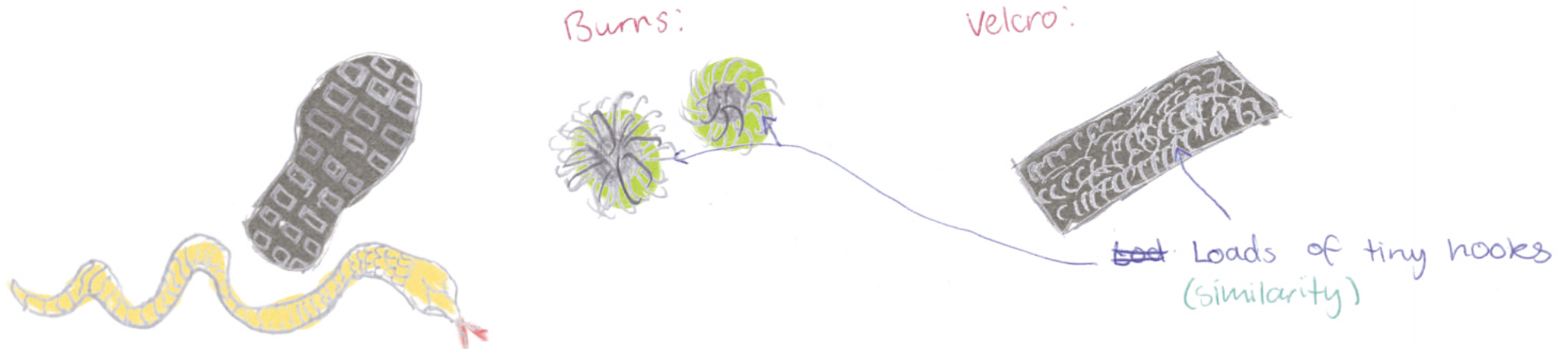
## What are your thoughts?

Have you learned something new about how we can learn from nature?

What would you do to achieve quality education for all?



# What Do We Learn From This Experiment?



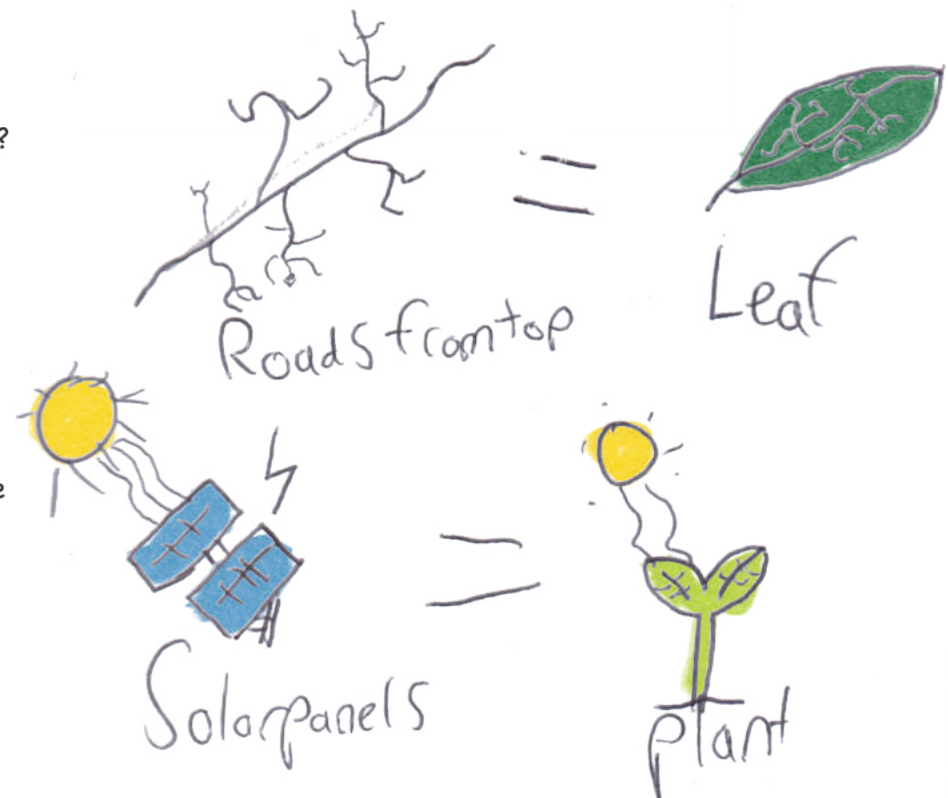
## Nature Inspired Patterns

Nature can teach and inspire us to improve how we build and create things. Did you see any unusual patterns in your leaf prints? Did you see the pattern anywhere around you?

A group of scientists and engineers took inspiration from a leaf when designing solar panels. They discovered that by copying the patterns of a certain leaf when making solar panels they could generate more electricity.

The humpback whale has a very distinctive fin on the side of its body called the pectoral fin. It can measure up to one third of the whale's body length. The fin has a unique pattern that directs the flow of water and helps the whale move through the water. The shape and patterns of these pectoral fins were used by scientists and engineers when designing the shape and patterns on wind turbines.

What do you think inspired the design of the airplane?



# What Can We Do?



Share what you learn with friends and family.

SDG 4 is all about ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

It can be hard to know the things we can do in our lives to make a difference, but by following some of the tips on this page we can start making the world better for everyone. You may not think that little changes will make a difference, but everyone making little changes adds up to big change.



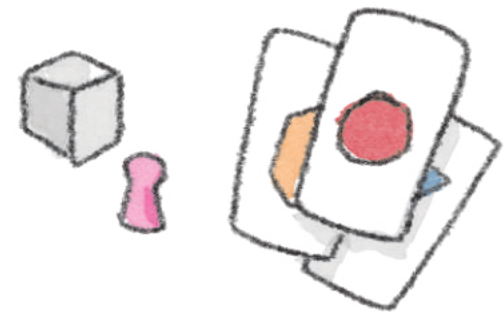
Create posters or presentations about the importance of education for children.



Donate your finished books to a local charity or swap with friends.



Be a role model for younger children in your school.



Use educational games at home to learn with your family and friends.