Super English

Level 7 - Unit 6
Lesson 1
Biomimicry

Nature: The Original Inventor

Read the text and explain the words in bold.

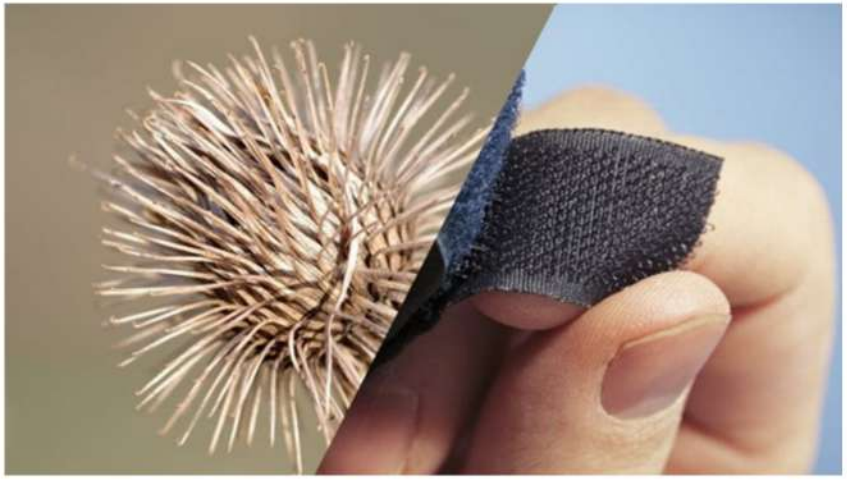
Have you ever looked at a bug or a leaf and thought, “Whoa, that’s genius”? Welcome to the world of **biomimicry**—where scientists, engineers, and even fashion designers steal ideas (nicely!) from nature. It’s not about copying exactly; it’s about learning from what already works. Nature’s had millions of years to test its inventions. Humans? We’re still figuring things out. So instead of **starting from scratch**, we’re looking at geckos, whales, and weeds to make better stuff. The next big invention might come from your backyard. Weird? Definitely. But also kind of awesome.

1. What’s something in nature that you think is designed perfectly?
2. Why do you think humans ignored nature’s ideas for so long?
3. How is biomimicry different from simply copying something?

Velcro: Dog Walk to Genius

Read the text and explain the words in bold.

1. How would you react if burrs got stuck to your clothes—would you get curious or annoyed?
2. If you could invent something based on a small everyday problem, what would it be?

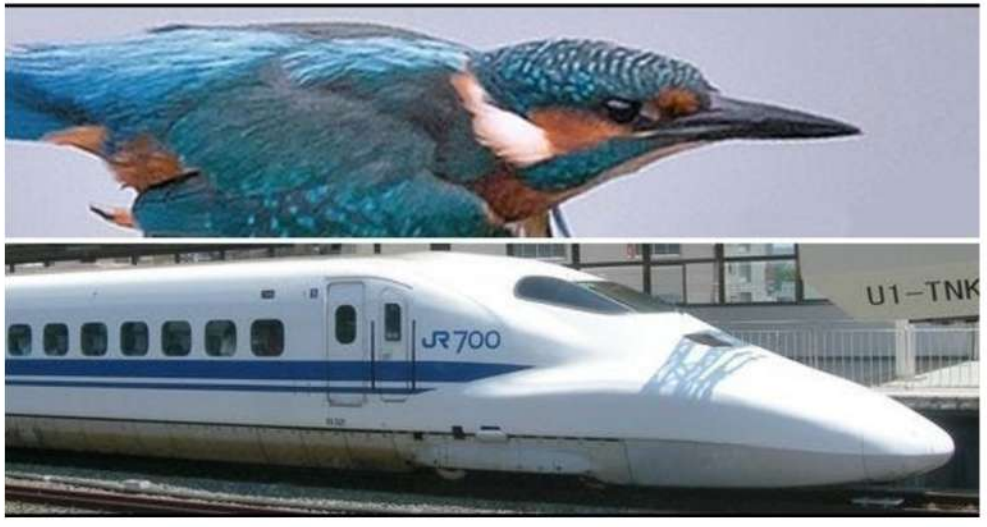


Invention idea: walk your dog. No, seriously. In the 1940s, a guy named George de Mestral took his pup for **a stroll** and noticed tiny burrs stuck in the dog's fur. Instead of just **yanking them off** and moving on, he grabbed a microscope. Turns out, those burrs had hook-shaped ends that grabbed onto anything fuzzy. Boom—Velcro was born. Hook-and-loop fasteners inspired by annoying weeds. Today, Velcro is on shoes, jackets, even space suits. So yeah, if something sticks to your pants, don't be mad—it might be your next million-dollar idea **hiding in plain sight**.

Bird Beak Saves the Train

Read the text and explain the words in bold.

Japan's bullet trains used to make a ridiculous **sonic boom** when zooming out of tunnels. People were like, "Cool train, but could it maybe not sound like thunder?" Enter the kingfisher bird. It dives into water with barely a splash thanks to its sharp beak. Engineers copied that shape for the train's front—and suddenly it was faster, quieter, and more **energy-efficient**. Who knew birdwatching could lead to better public transport? Sometimes the smartest solution isn't on a screen—it's flapping around in a tree.



1. What's something in your life that causes noise or frustration—could nature fix it?
2. What does this story teach us about looking at problems from different angles?

Idioms

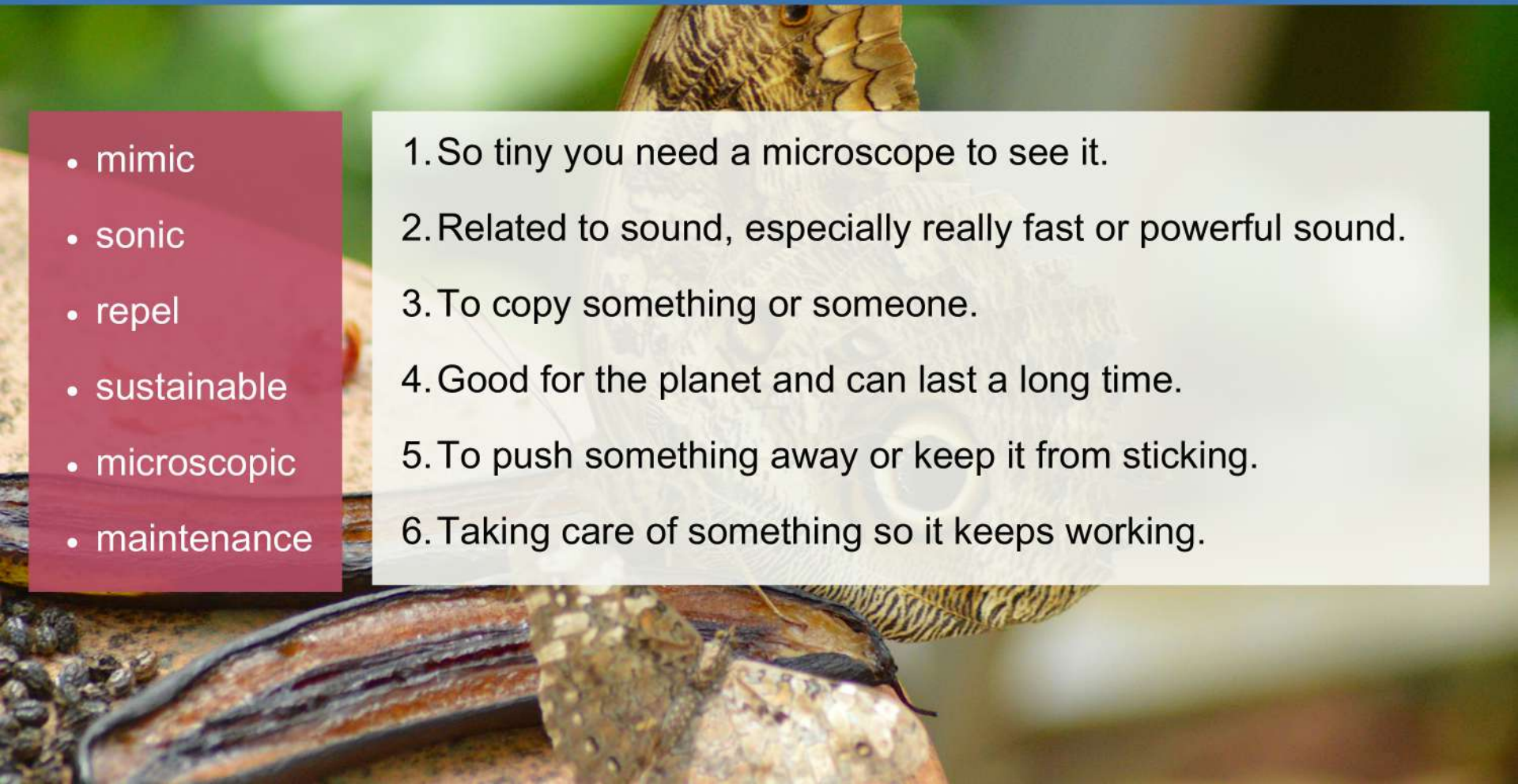
Match the idioms to their meanings.

- Nailed it
- Start from scratch
- Break the mold
- By the book
- A game changer
- Ahead of the curve

1. To do something in a new, original, or different way.
2. Did something perfectly or very successfully.
3. To do something exactly as it's normally done or expected.
4. Something that completely changes how things are done.
5. More advanced or innovative than others.
6. To begin with nothing; to start completely over.

Vocabulary

Match the vocabulary words to their definitions.



- mimic
- sonic
- repel
- sustainable
- microscopic
- maintenance

1. So tiny you need a microscope to see it.
2. Related to sound, especially really fast or powerful sound.
3. To copy something or someone.
4. Good for the planet and can last a long time.
5. To push something away or keep it from sticking.
6. Taking care of something so it keeps working.

Dialogue 1: Nature Knows Best

Read the dialogue and answer the question.

Ava: So engineers are out here copying geckos now.

Noah: Honestly, I'd copy a gecko too if it helped me stick to walls.

Ava: I'd just use it to avoid people in the hallway.

Noah: You'd be like, climbing up the lockers—"Nope, not today."

Ava: Anti-social but make it science.

Noah: I'd pay to see that.

Question: If you could copy one thing from nature, what would it be?

Nature Doesn't Waste

Read the text and answer the question.

Nature doesn't create extra parts or flashy designs—everything has a purpose. Leaves absorb light, feathers shed water, and even a spider's web is stronger than steel (for its size). When engineers mimic these designs, they often discover that simple is smarter. Instead of adding more, nature shows us how to do more with less.

Big Idea: Less can be more—smart design uses only what's needed.

Famous Quote: "Perfection is achieved not when there is nothing more to add, but when there is nothing left to take away." – Antoine de Saint-Exupéry

Discussion Challenge: Can you think of simple design that works better than a complex one?

See you next time!