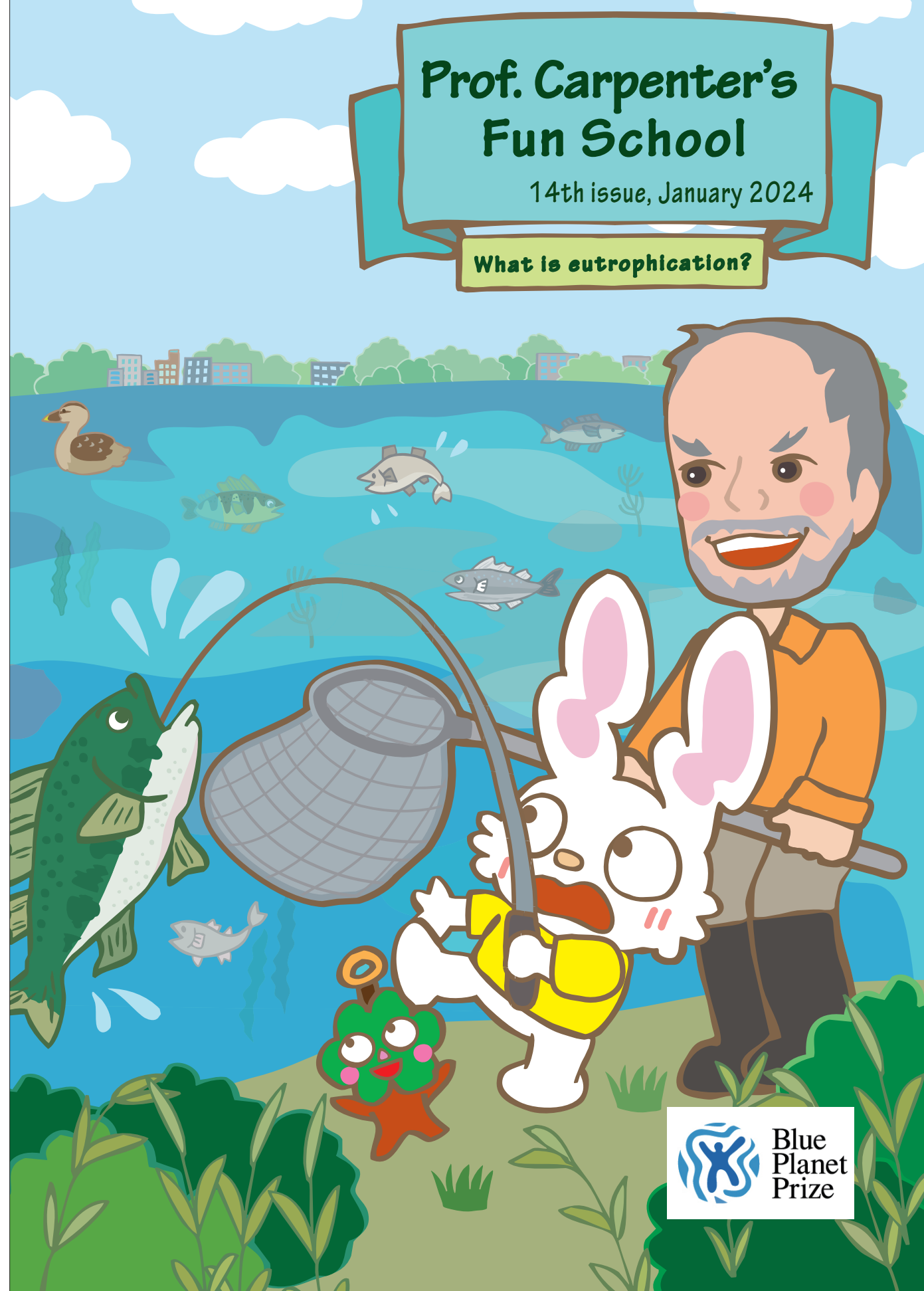
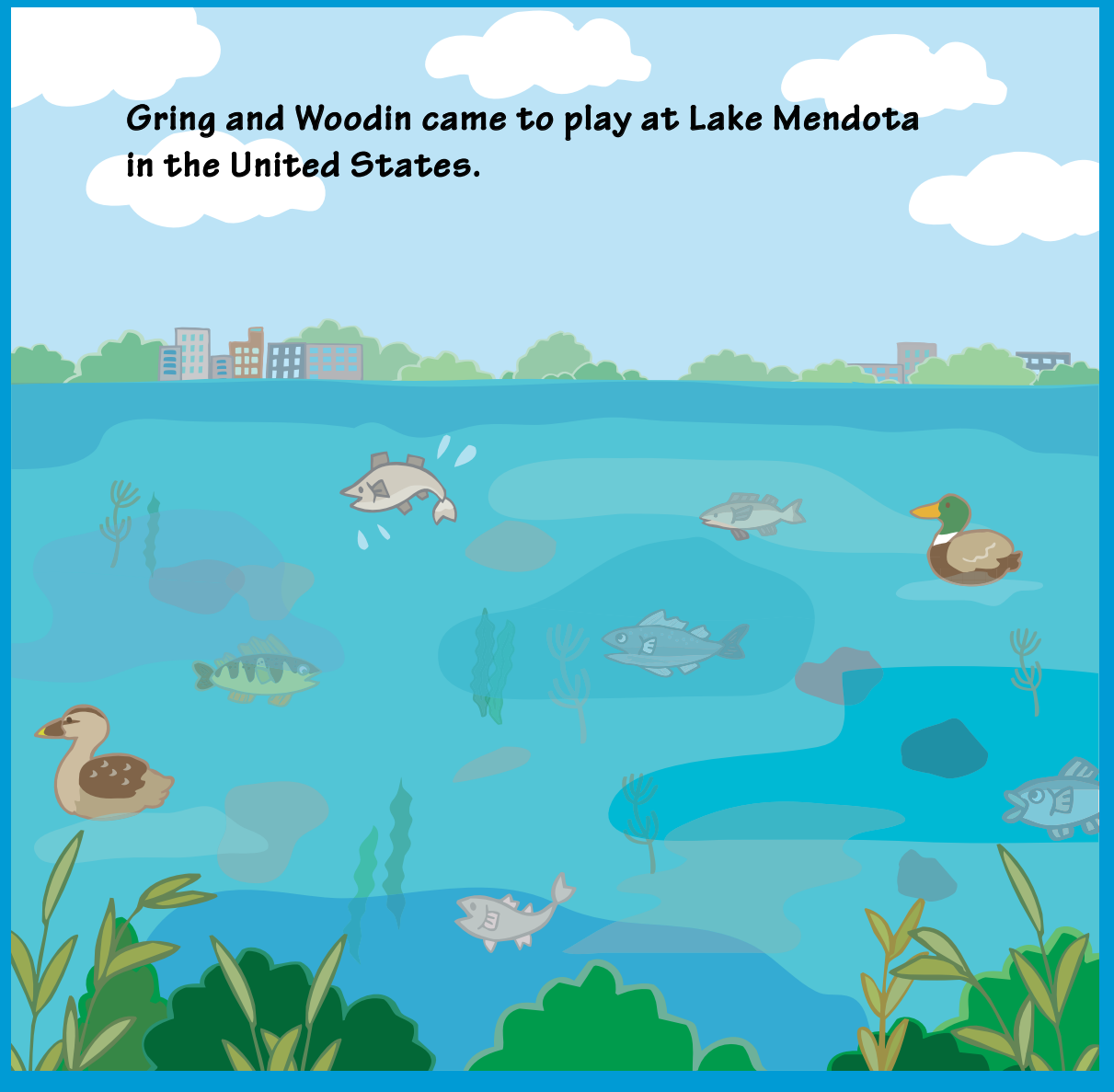


Prof. Carpenter's Fun School

14th issue, January 2024

What is eutrophication?





Gring and Woodin came to play at Lake Mendota in the United States.



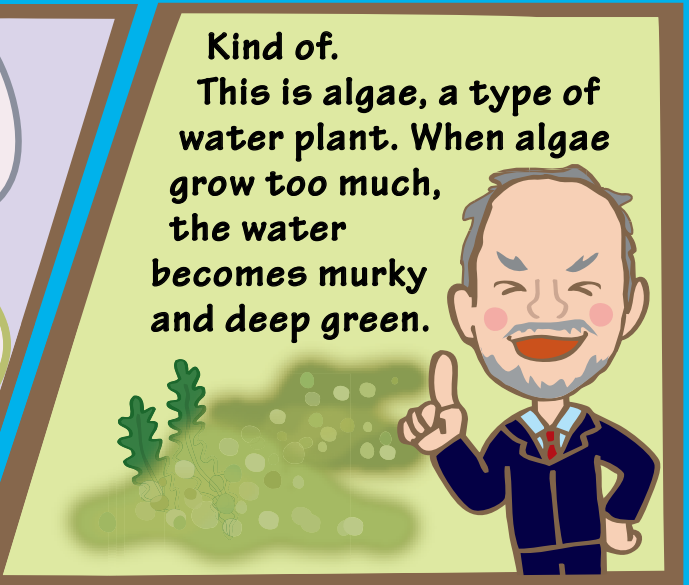
But it used to be green and murky. My research started because I wanted to make this lake clean.

How did you make it clean?



Why do you think the water turned green?

Hmm, grass?



Kind of. This is algae, a type of water plant. When algae grow too much, the water becomes murky and deep green.



Wow, this lake is huge!

It's so clear and beautiful!



Isn't it great? This lake is my old friend.

Professor Stephen Carpenter



2022 Laureate of the Blue Planet Prize



Why did the algae grow so much?



If you want to make flowers bloom beautifully, what else is needed besides water?

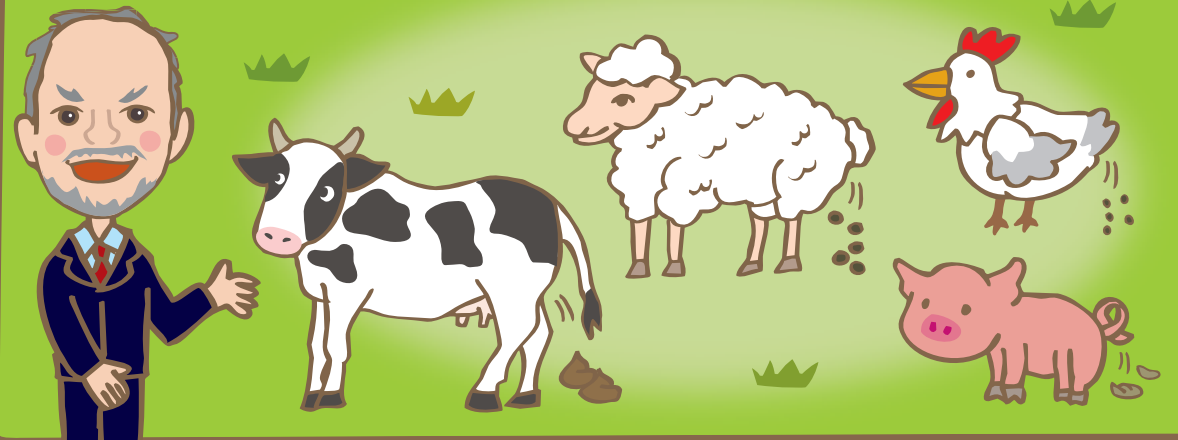
Fertilizer?

Hmm

Yes! Fertilizer. Algae are plants, so they grow more when they have nutrients.



Poop and pee from farm animals contain nutrients.



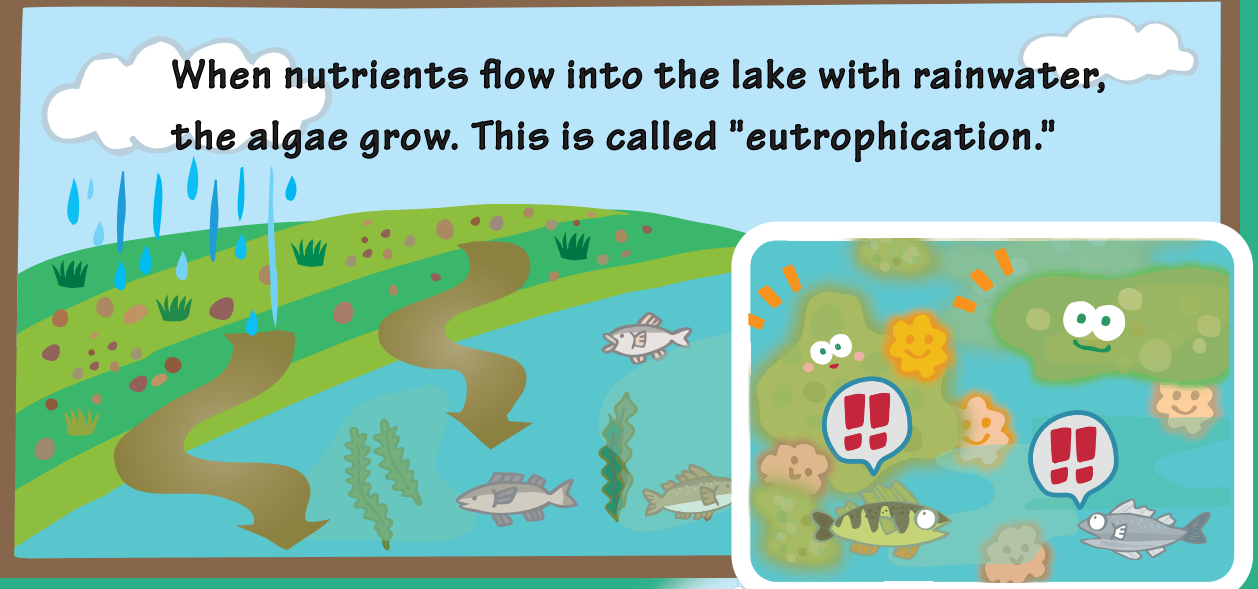
Did someone give fertilizer to the algae?



Not directly to the algae. A lot of fertilizer is used to grow crops on farmland around the lake.

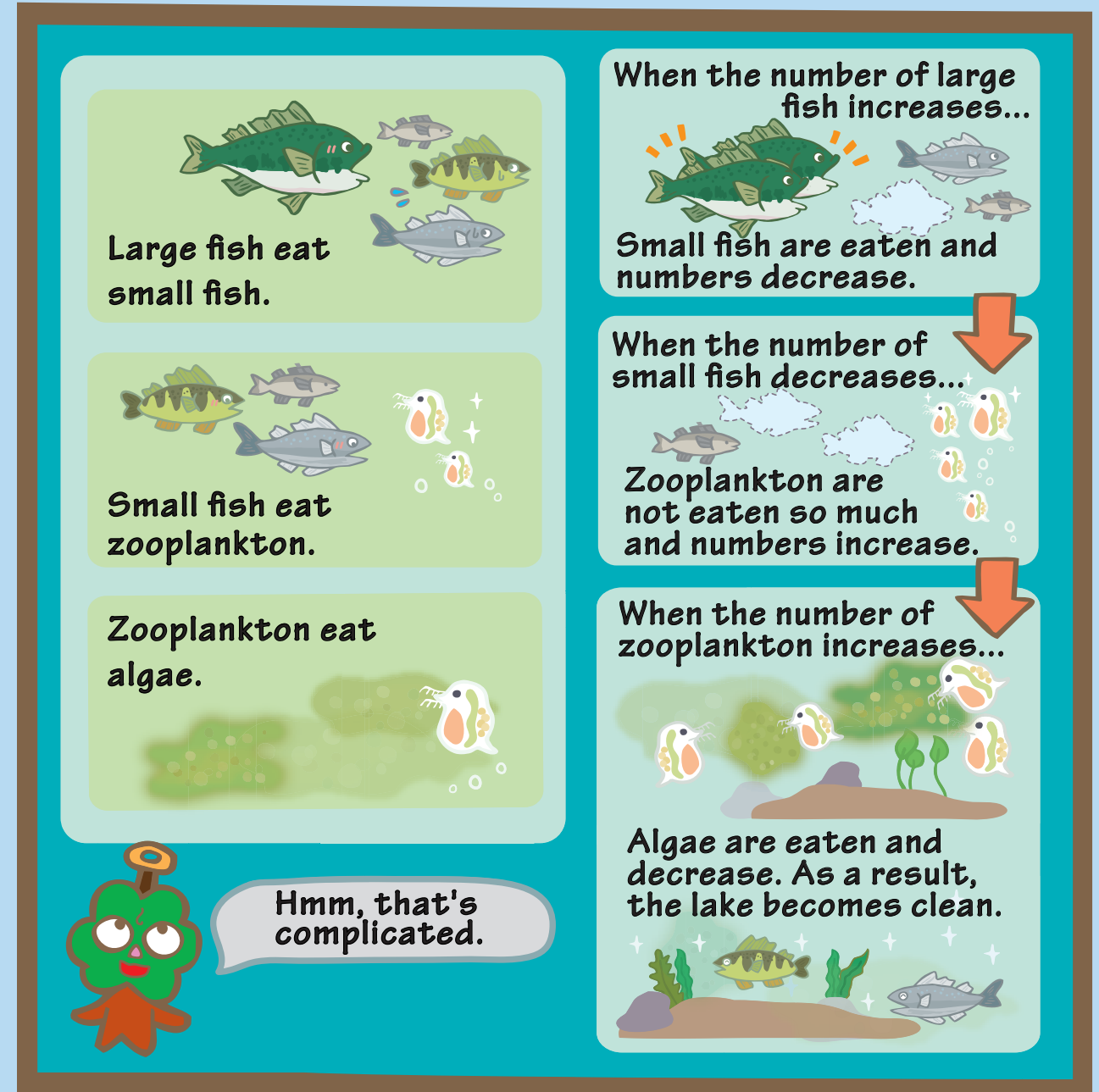
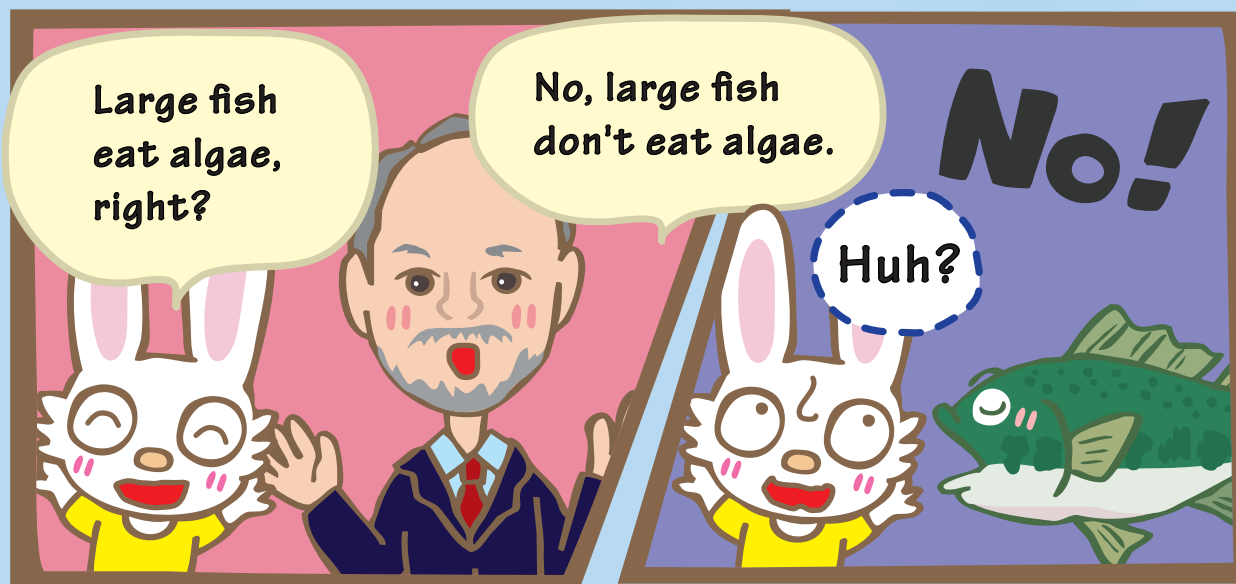
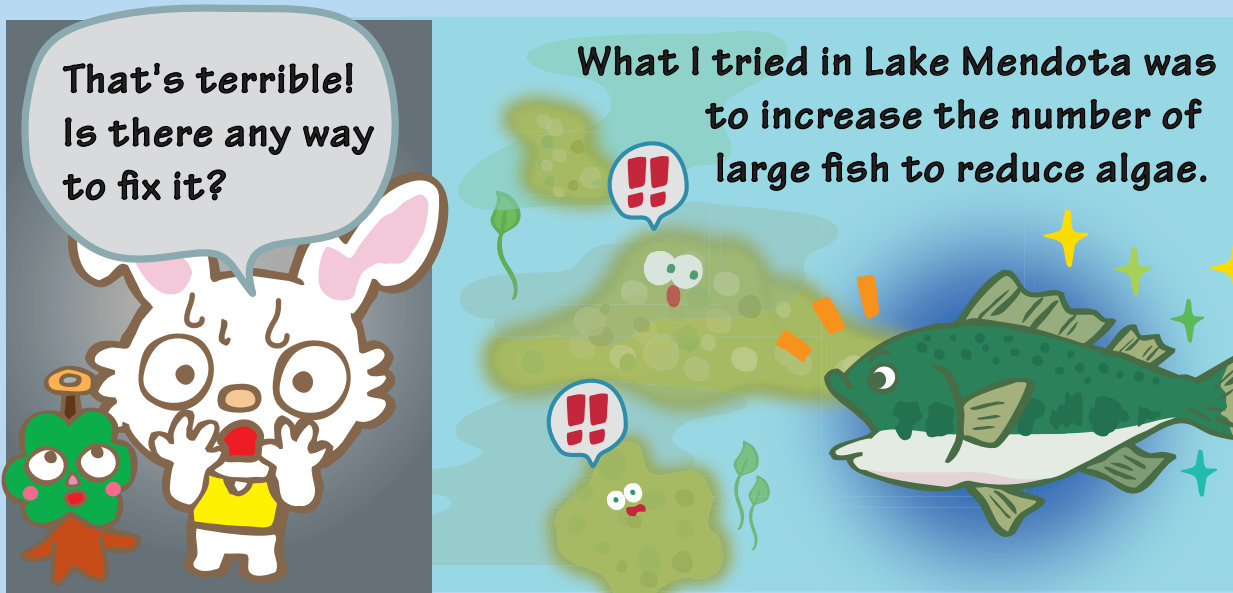
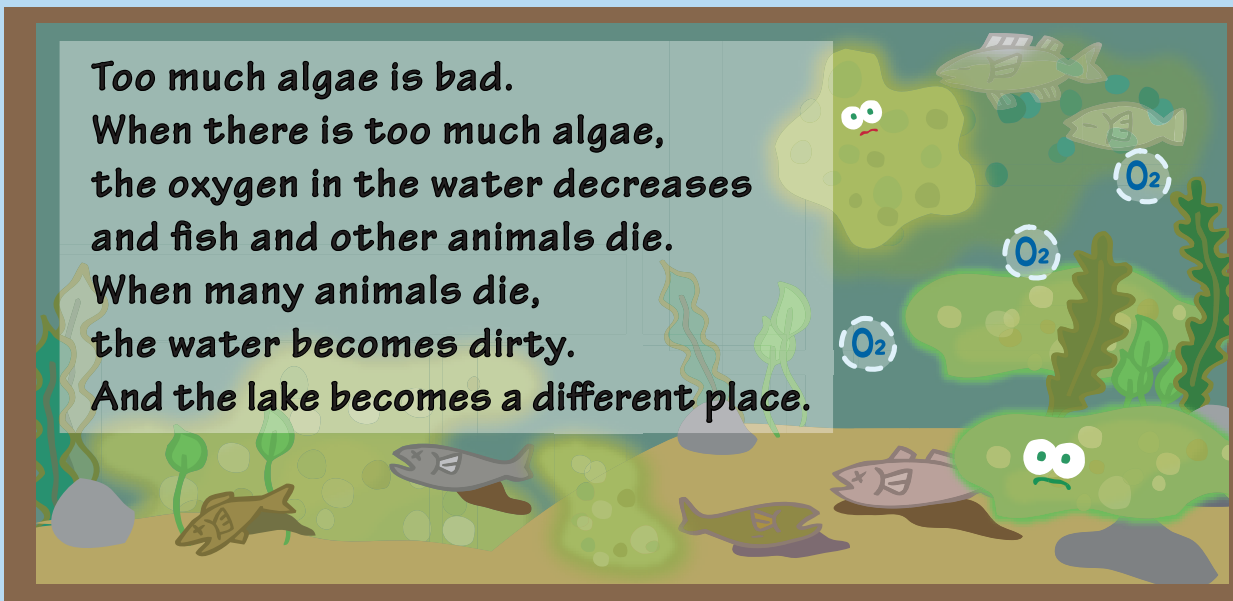


When nutrients flow into the lake with rainwater, the algae grow. This is called "eutrophication."



I see. But isn't it a good thing for the lake to be nutrient-rich?





In this way, the creatures of the lake maintain balance by eating and being eaten. It's crucial to preserve this balance to protect natural environments like lakes.

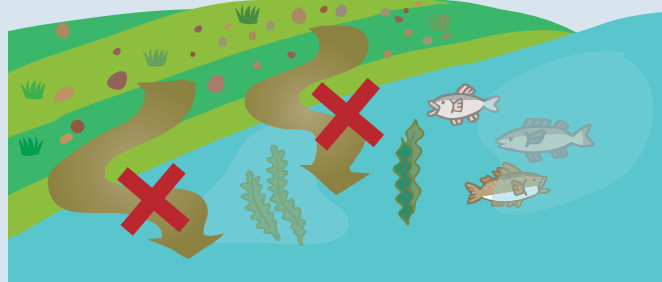


But it doesn't always work. For example, if nutrients continue to flow into the lake for a long time and accumulate at the bottom of the lake, it becomes very difficult to restore the lake to its original state.

What can we do?



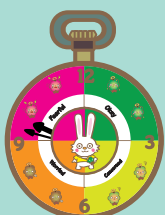
It is difficult to remove nutrients that have accumulated at the bottom, so it is important to think of ways to prevent nutrients from flowing into the lake in the first place.



Another important thing is to let everyone know that human activities can have unexpected impacts on nature, and to learn together. When explaining, you can draw pictures, make stories, or perform plays.



I can do that!
Thank you,
Professor!



Environmental
Doomsday Clock

Prof. Carpenter's Fun School
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