The Ocean is my home

EuroGOOS
European Global Ocean Observing System

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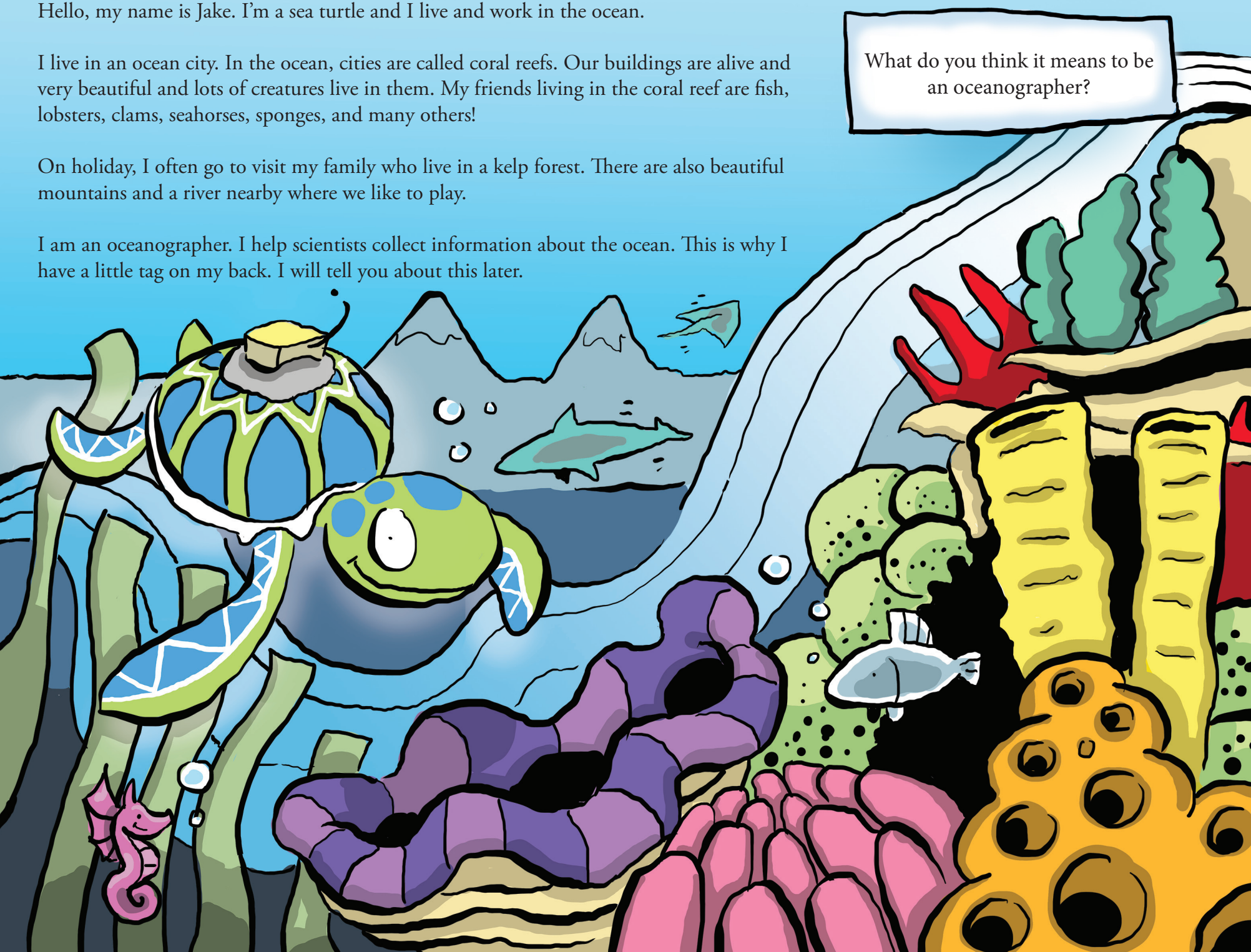
For children,
parents, and
our ocean

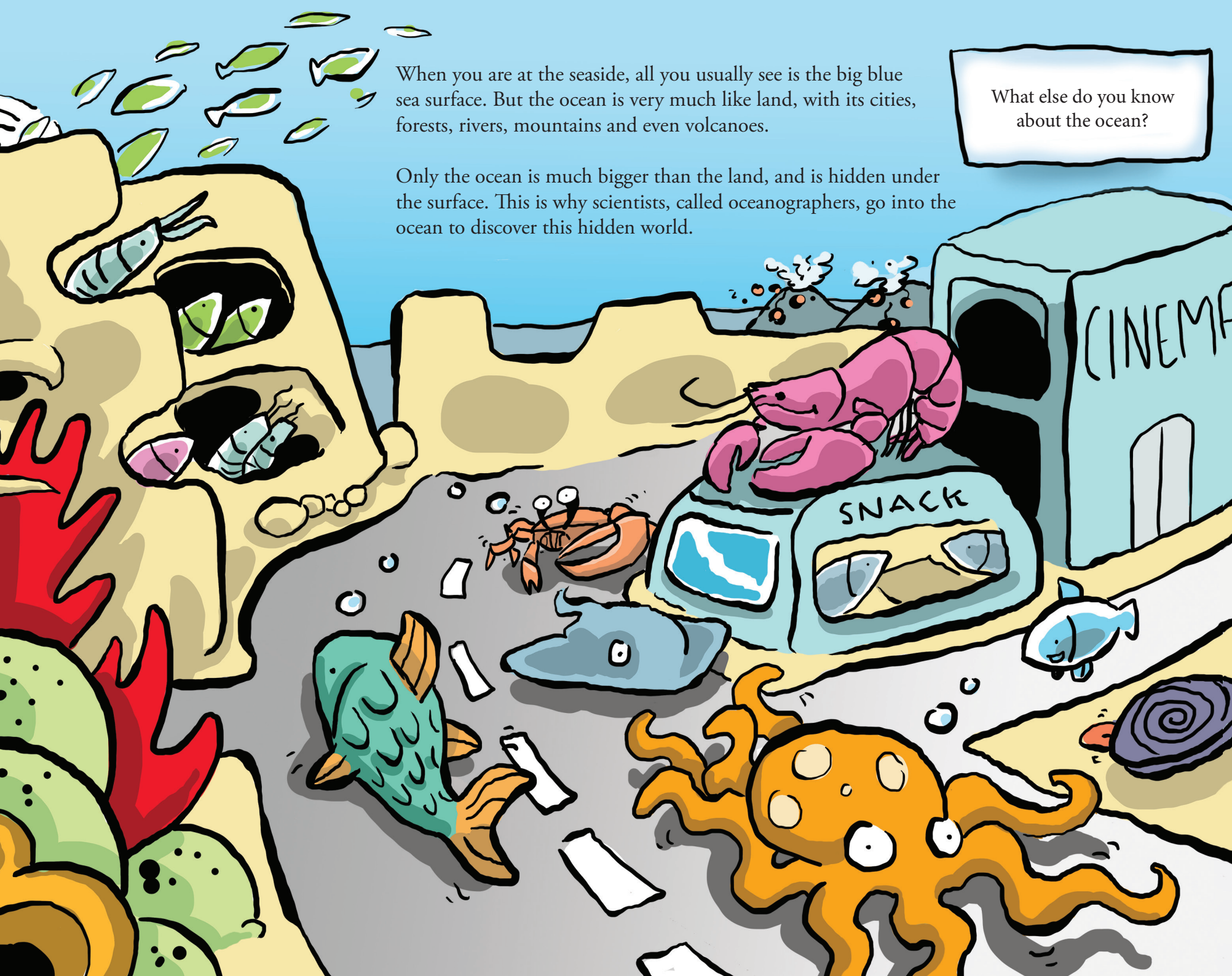
Hello, my name is Jake. I'm a sea turtle and I live and work in the ocean.

I live in an ocean city. In the ocean, cities are called coral reefs. Our buildings are alive and very beautiful and lots of creatures live in them. My friends living in the coral reef are fish, lobsters, clams, seahorses, sponges, and many others!

On holiday, I often go to visit my family who live in a kelp forest. There are also beautiful mountains and a river nearby where we like to play.

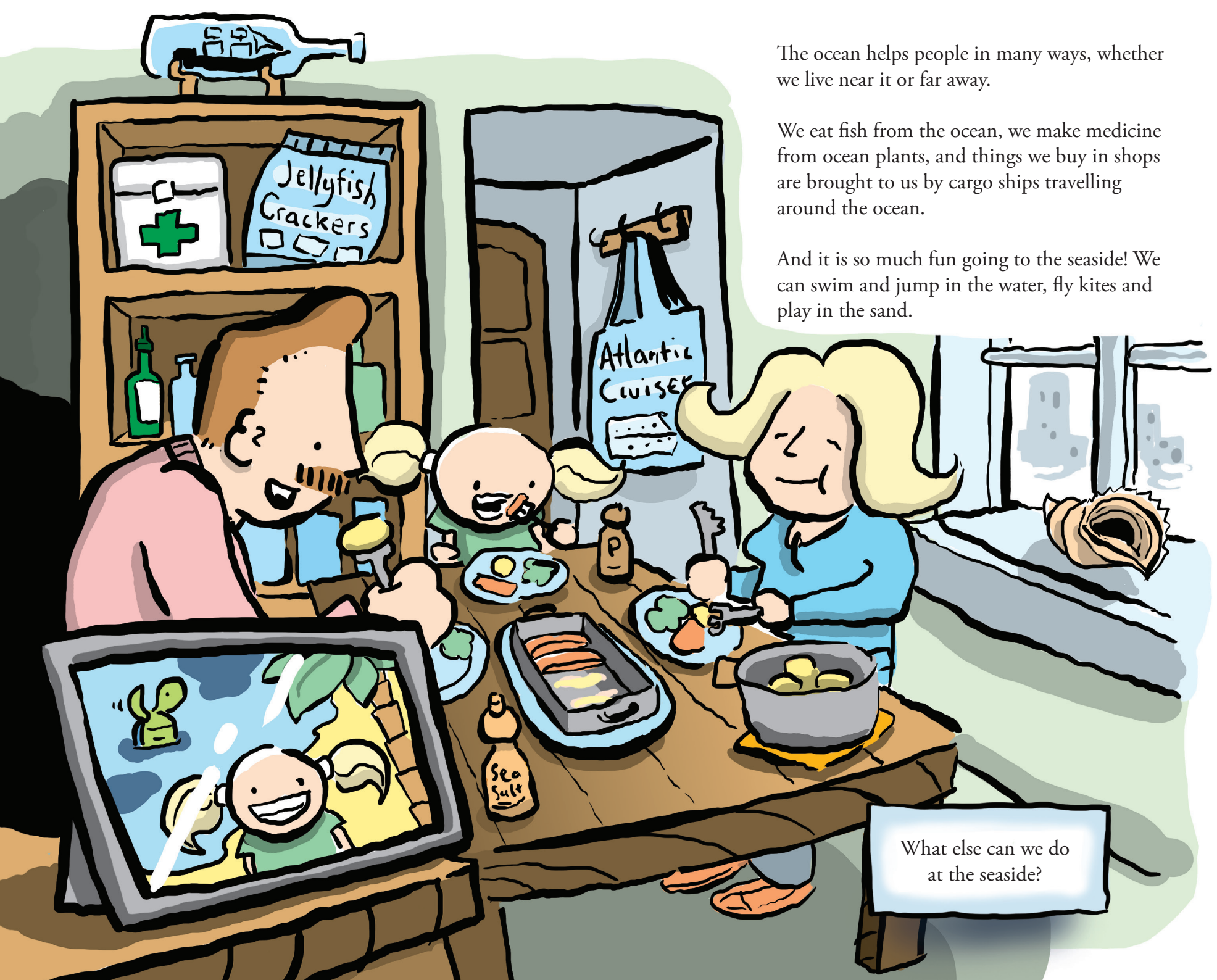
I am an oceanographer. I help scientists collect information about the ocean. This is why I have a little tag on my back. I will tell you about this later.





When you are at the seaside, all you usually see is the big blue sea surface. But the ocean is very much like land, with its cities, forests, rivers, mountains and even volcanoes.

Only the ocean is much bigger than the land, and is hidden under the surface. This is why scientists, called oceanographers, go into the ocean to discover this hidden world.



The ocean helps people in many ways, whether we live near it or far away.

We eat fish from the ocean, we make medicine from ocean plants, and things we buy in shops are brought to us by cargo ships travelling around the ocean.

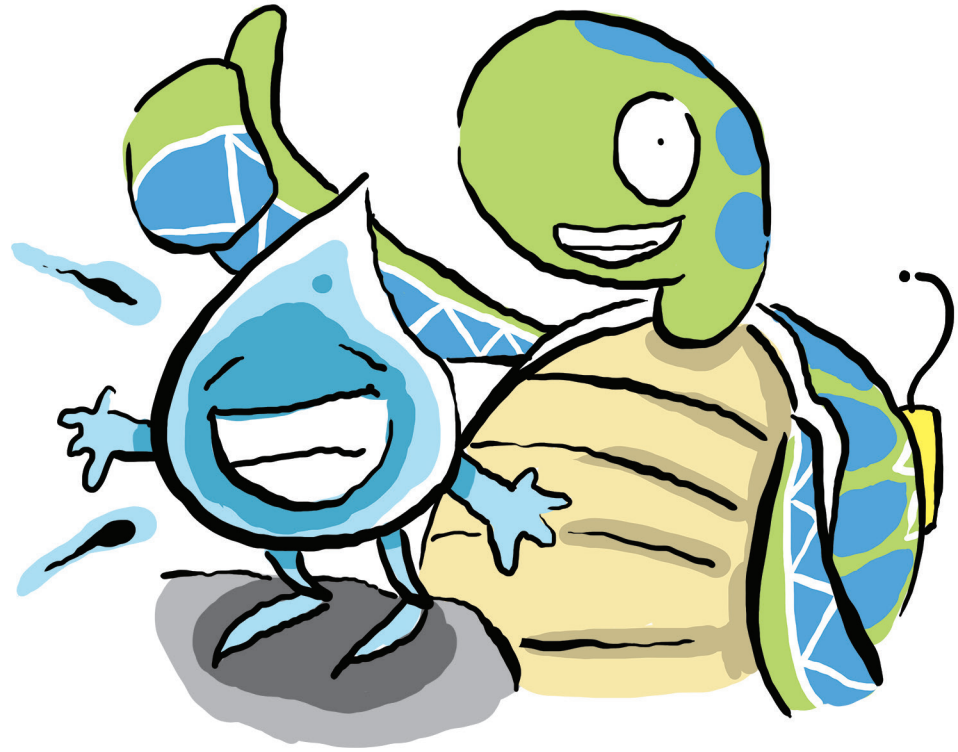
And it is so much fun going to the seaside! We can swim and jump in the water, fly kites and play in the sand.

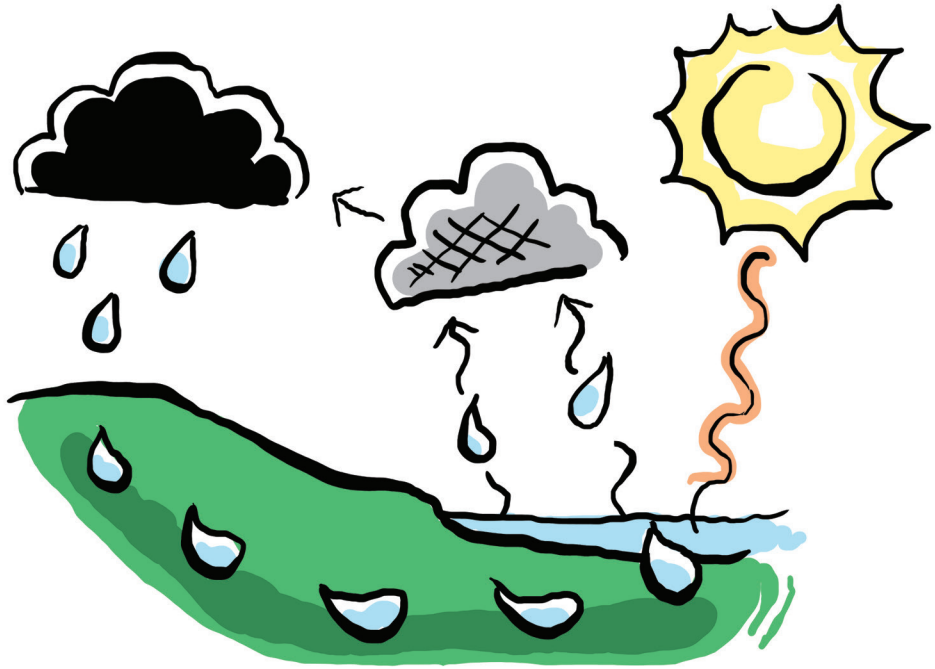
Now you know that the ocean helps us in many ways. But did you know that when it rains the water comes from the ocean?

When the Sun heats up the ocean, the water on the surface turns into tiny droplets, so light they float up into the sky. They join together high in the sky and form clouds.

The rain falls down from the clouds and gets straight back into the ocean. Some rain falls on land and flows into the ocean by rivers and streams.

And – so it starts again, the water from the ocean turns into droplets, they form clouds in the sky, and the clouds turn into rain flowing back into the ocean.
This is called the water cycle.





Rivers move rain water
from the land into the ocean.
Did you know that rivers also
exist under the ground?
How does rain water get there?

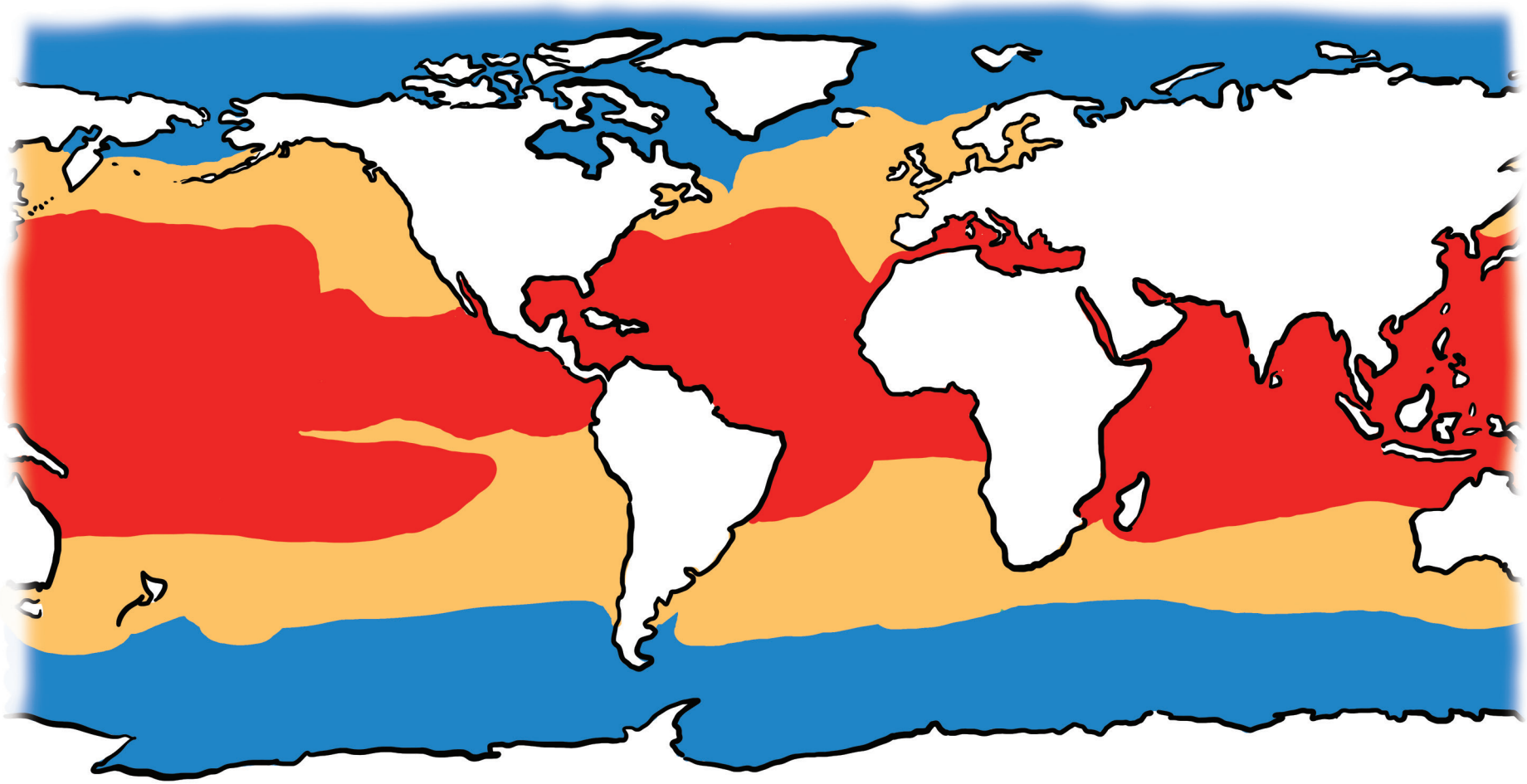
And did you know that the ocean controls our weather and climate?

The Sun heats up the air and the ocean mostly in the middle, at the Equator. Ocean winds and currents transport this heat to the North and South Poles of the Earth. And they transport cold water and air from the Poles to the Equator. Without this, the weather would be much hotter in the middle of the Earth and much colder at the poles.

Look at this picture – do you see red in the middle and blue in the poles? In between, it is orange – this is moderate temperature.

I live in a warm climate in the middle of the Earth. But my family lives all around the ocean. Some of my cousins can even travel to the coldest areas in the North Pole!

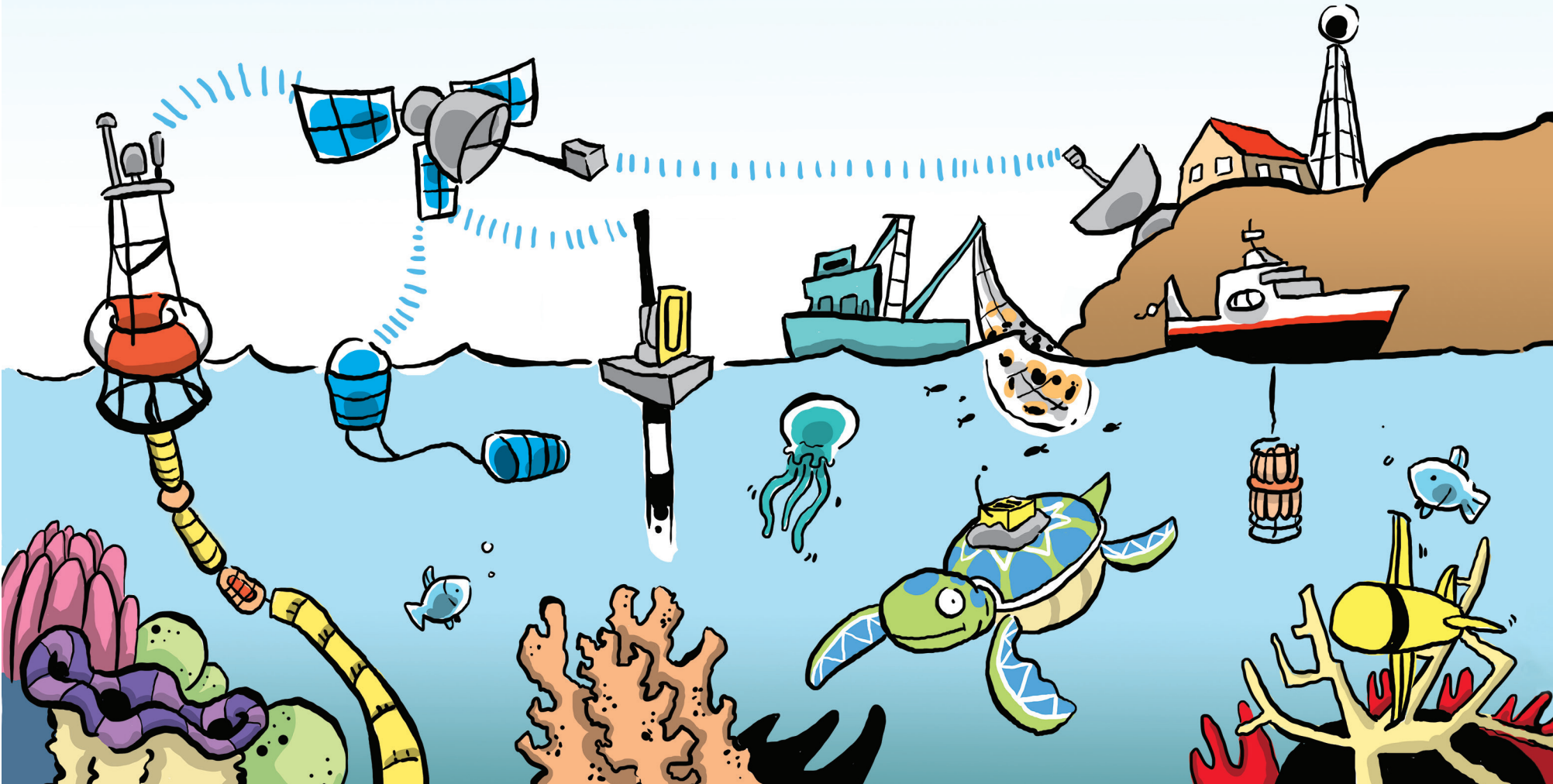
Is the ocean warm, cold, or moderate where you live?



The ocean is changing every day. You can see how the water is constantly moving around when you are by the ocean. Scientists, called oceanographers, try to record these changes and make forecasts for the oceans, like we do for the weather each day.

Oceanographers deploy all kinds of robots in the ocean. These robots collect ocean data and send them to the shore via satellites or cables. Doing this work, oceanographers can alert people living at the coast about a storm. But we also need this information for anything else we want to do in the ocean: sailing a ship, catching fish, or building an installation on the seafloor. To do all this, we need to know how quickly the water moves and where it goes, whether it is warm or cold, what shape the ocean floor is, what plants and animals live in the water, and many other things.

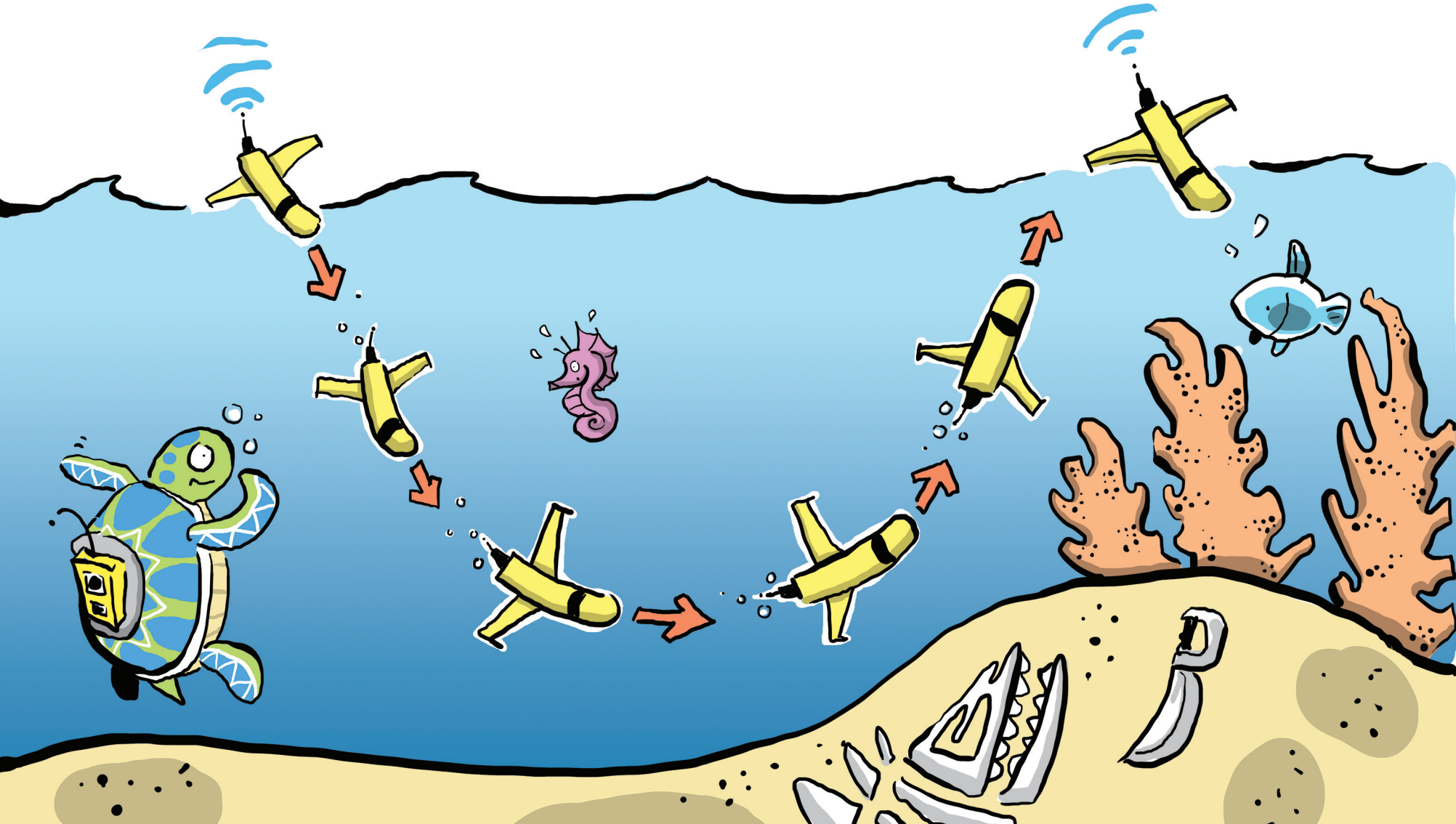
How many ocean robots do you see on this picture? Who else collects ocean data?

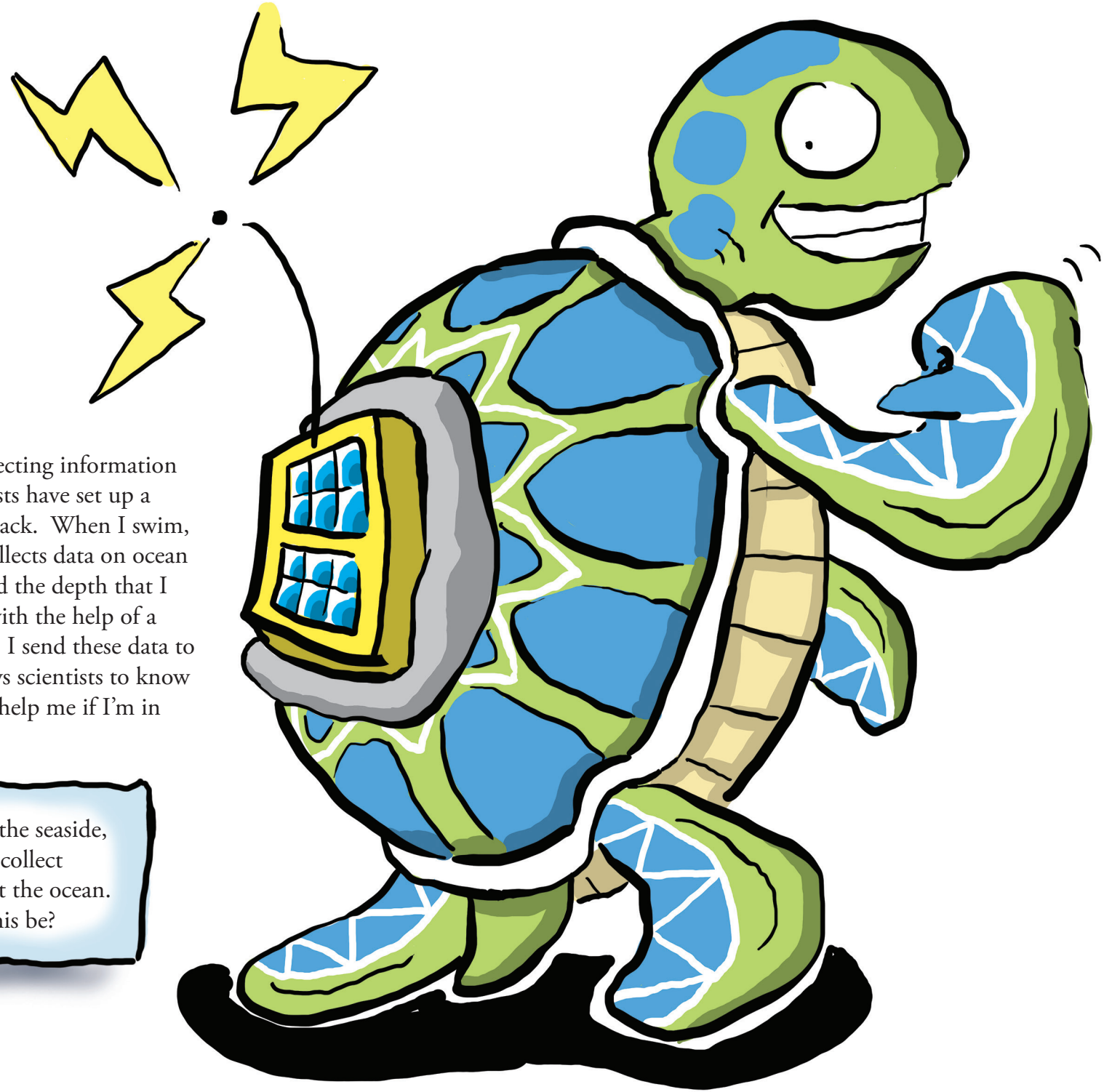


This is a glider, an ocean robot. Gliders collect data about the temperature of the ocean, how much salt and oxygen there is, how clear the water is, and what plants live there. This information helps scientists understand how the ocean is changing and what this means for us.

Gliders have very strong shells to protect them from ocean animals, currents and waves. Inside, they have intelligent technology to collect all kinds of ocean data. A glider dives deep at regular intervals, collects data and comes back to the surface to transmit these data to scientists with its antenna. And then it dives back again.

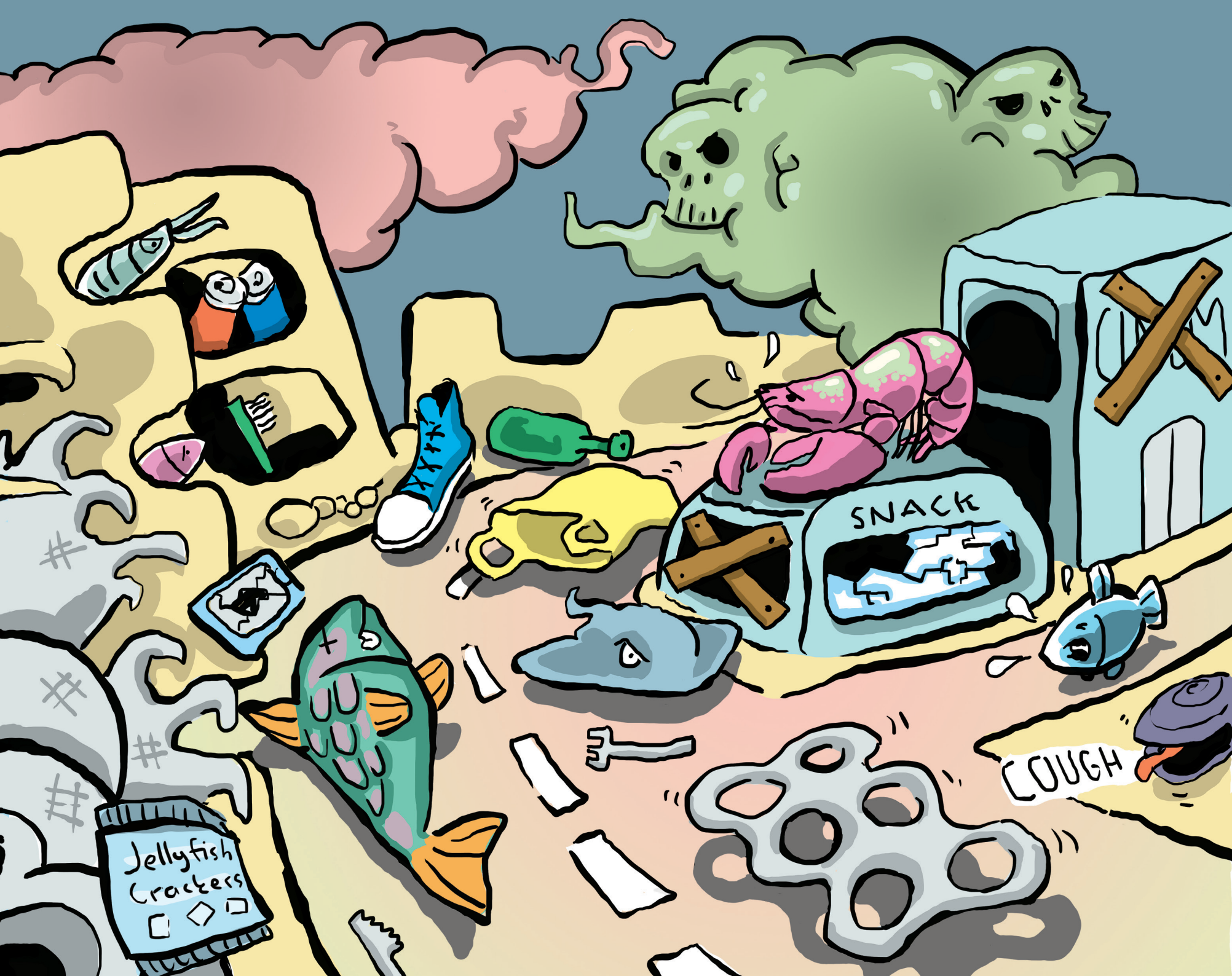
Why do we need information about the ocean temperature?



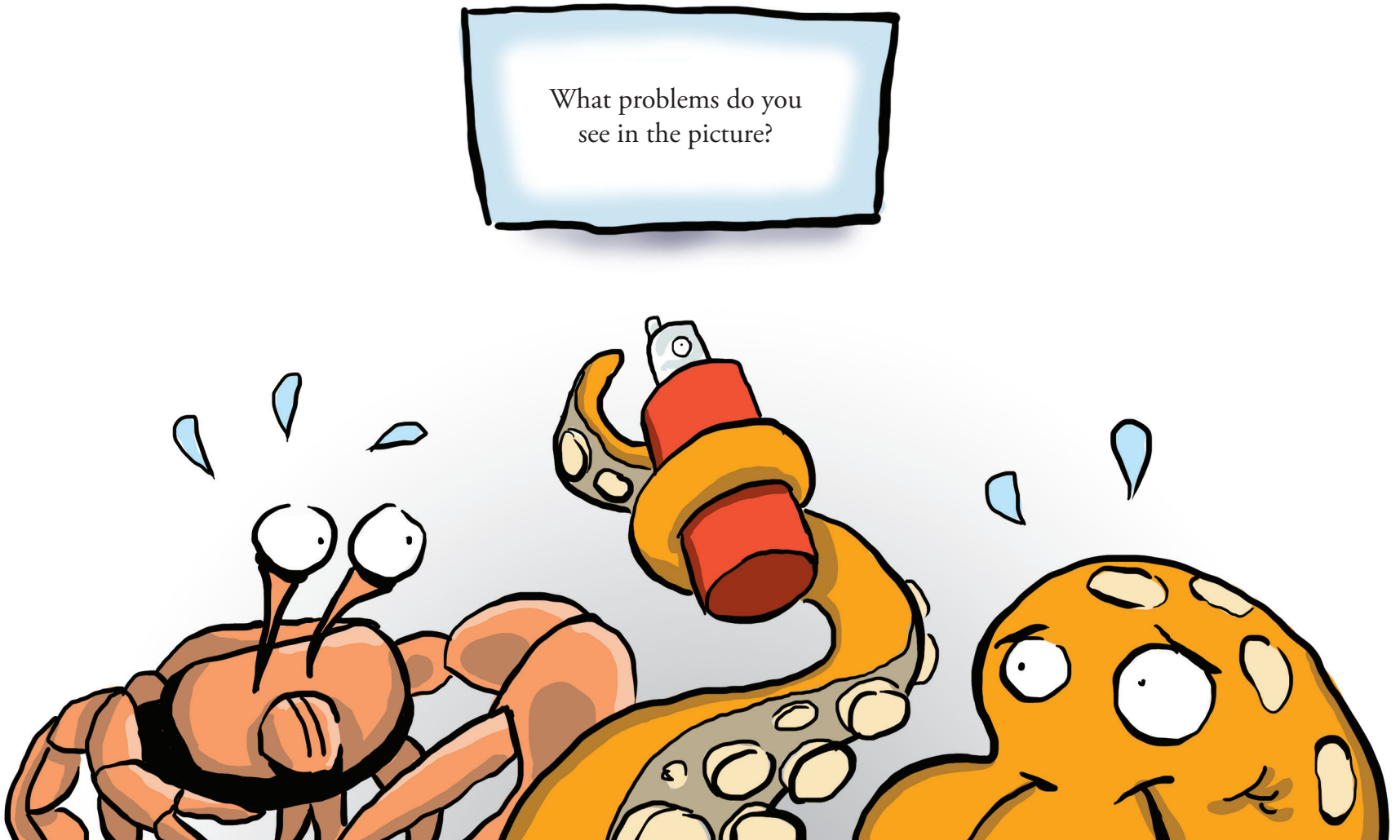


I also do my part in collecting information about the ocean. Scientists have set up a special little tag on my back. When I swim, this tag automatically collects data on ocean temperature, salinity, and the depth that I am swimming at. And with the help of a little antenna on the tag, I send these data to scientists. This also allows scientists to know where I am, so they can help me if I'm in trouble.

When you are at the seaside, you can also collect information about the ocean. What can this be?


SNACK
Jellyfish Crackers
COUGH

The more scientists study the ocean, the better they understand it and can predict what will happen to it in the future. It turns out that the ocean is suffering. Ocean animals and plants are harmed by the plastic litter and chemicals getting into the ocean from the land, from changes of temperature, and the acid in ocean waters because of the bad air people produce with their cars and factories… Scientists even say that my coral reef home may die because of this.



My best friend Maya almost died once when she ate a piece of plastic from the ocean. She thought it was a tasty jellyfish, but it was a piece of a plastic bag from a supermarket.

She told me everyone's daily life affects the ocean, regardless of where you live. For example, most of the plastic people use on land, ends up in the ocean if people don't throw it away properly. But the best way to fight plastic pollution is to use less plastic objects!

Start with plastic straws in your juice! Ask your parents to give you paper or steel straws instead. Otherwise, so many plastic straws are ending up in the ocean, because people all over the world use them every day. Straws are small and sharp and they hurt sea animals like Maya and I.

If you want to stop using plastic straws don't forget to ask not to give them to you when you order a drink in a café. You can also explain to your friends how plastic harms the ocean!

You can help clean the beach by collecting the plastic you find and throwing it away in a trash bin. How many pieces of plastic can you find?


DENT


Fish & Chips
LOCAL
OCEAN
ROCKS

Many scientists all over the world work together to collect enough information about the ocean and how it is changing. This information goes to politicians who make laws, and to industries to change their way of working so it doesn't harm the ocean. But the ocean is so big that everyone should do something to protect it!

Look at the picture – there are many ways to help the ocean. What can you do?

Hope you liked my story. I'm going back into the ocean now. It was great meeting you! See you soon!

This book was published by EuroGOOS. This is an organization helping collect information about the ocean. Our office is in Brussels, Belgium, where the European Commission, Parliament and Council also are. There politicians meet to discuss what decisions should be made to protect our ocean.

We work in Europe but we are connected to the world through the Intergovernmental Oceanographic Commission of UNESCO. This big organization helps scientists all over the world share their knowledge for better policies and better laws.

When you grow up, you will choose your job and if you like can become an oceanographer. But you don't have to wait that long to help our ocean. You can do this every day right now!

The ocean is much bigger than the land but we only see its surface. Jake is an oceanographer. He collects information about the ocean's hidden world. In this book Jake explains how the ocean helps all of us, even if we live far away from it, and how every one of us can help our ocean.