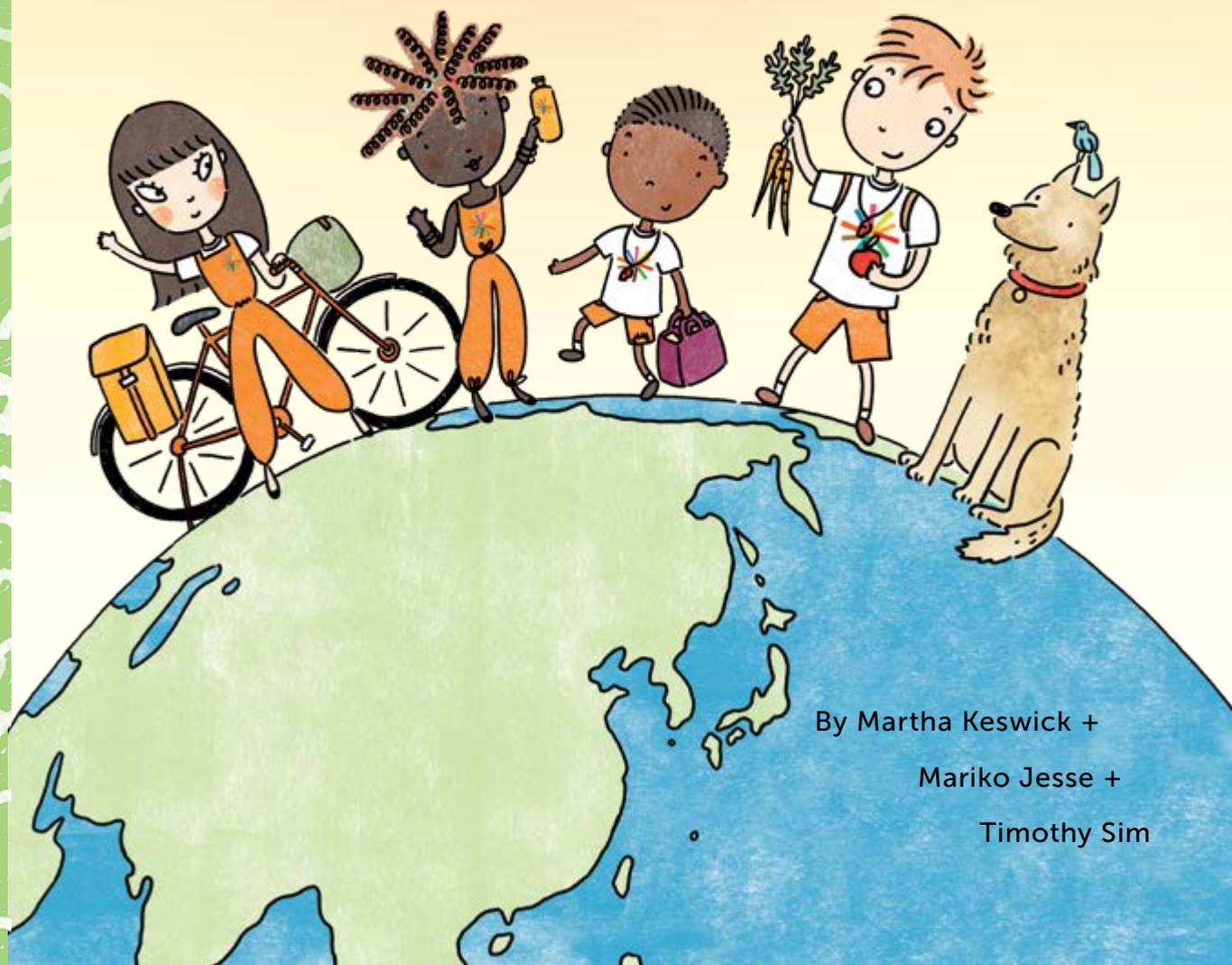




COPE

.....
Disaster Champions
.....

CLIMATE CHANGE



By Martha Keswick +
Mariko Jesse +
Timothy Sim

What is Climate Change?

Climate change refers to long-term shifts in temperature and weather patterns, mainly due to human activities like burning fuel, cutting down trees, and using lots of energy. These actions release **greenhouse gases** into the air, which trap heat from the Earth and cause **global warming**. Climate change affects the entire planet, from oceans to forests to frozen regions, and causes an increase in some kinds of natural hazards and disasters.

COPE will teach us more about climate change, and how we must all act now, for tomorrow.

What are natural hazards ... and disasters?

Natural hazards, such as tropical cyclones, earthquakes, floods and heatwaves, are harmful and dangerous events. When these natural hazards pose a threat to humans or the environment, they can lead to **disasters** and cause destruction in a community.

The World Meteorological Organisation helps countries to better forecast and manage natural hazards.







Disaster Champions – Climate Change

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Climate change

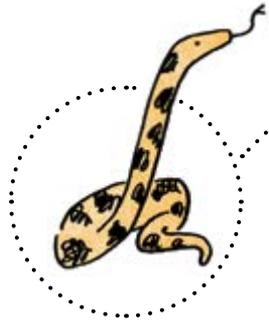
*Who is
Grand Mistress Fu?*

A famous Chinese martial arts teacher and founder of the Mount Emei Wushu School. Grand Mistress Fu, also known as Shifu, is disciplined and tough yet has an enormous heart. She narrowly escaped death as her school collapsed during the Wenchuan Earthquake in May 2008 and has since dedicated her life to Disaster Risk Reduction.



*What is
the COPE Academy?*

An international disaster hub, hidden in Sichuan Province, set up by Grand Mistress Fu. The COPE Squad – Candy, Ollie, Ping and Eddy are teenage orphans who were plucked out of their care homes to live at The COPE Academy and trained to be disaster risk reduction agents.



Sense
THE SNAKE

A beautiful 25-year-old python. Sense has a special gift for predicting disasters. Grand Mistress Fu feeds her mice every month.

Rescue
THE DOG

A huge 8-year-old Kunming Wolf Dog, Rescue tracks missing people. His favourite hobby is catching flies.



The COPE Squad



Candy

THE CARER

12 years old from Kranshoek, South Africa. Candy is kind, strong, lively and loves playing drums and hula-hooping. Her role is to care for vulnerable groups affected by disasters such as children, elderly or disabled.

Disaster Experience:
Wildfires



Ollie

THE SCIENTIST

13 years old from Christchurch, New Zealand. Ollie is clever, popular, sporty and loves astronomy and rugby. His role is to understand weather patterns, climates and ecology.

Disaster Experience:
Earthquakes



Ping

THE NETWORKER

12 years old from Hong Kong, China. Ping is practical, chatty, creative and loves cooking and Wushu. Ping is the networker and spokesperson within the COPE squad.

Disaster Experience:
Floods



Eddy

THE ENGINEER

12 years old from Bahia, Brazil. Eddy is curious, witty, chilled out and loves Lego and skateboarding. Eddy is a talented engineer focusing on the safety of buildings.

Disaster Experience:
Landslides



COPE Signs

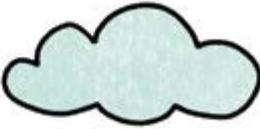
Since Eddy has a hearing disability, COPE sometimes chat using the Brazilian sign language, LSB. Can you spot the signs for **climate change**, **disaster** and **mindful**?

It was late November on Mount Emei.

COPE celebrated the early snowfall by building a snow man.



Let's use twigs for the arms!



Yes! And buttons for the eyes.

Woof Woof!





A carrot for the nose,
raisins for the mouth?

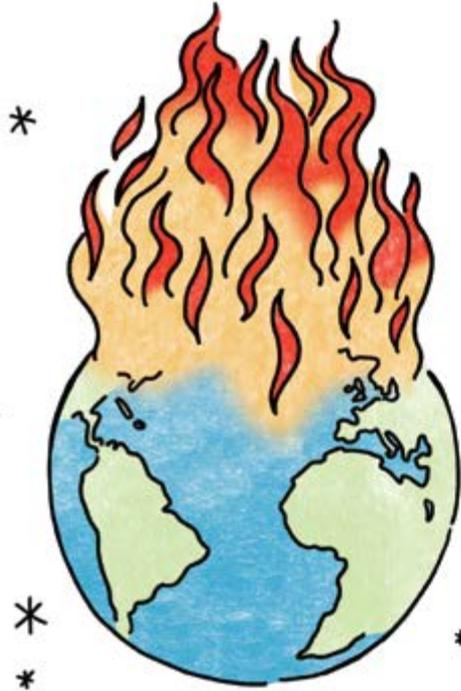
Great job, COPE!

Soon it was back to work. COPE was learning about climate change and how it connects with increasing extreme weather events and disasters, such as floods and wildfires.

It's a complicated topic.

But important to understand!





The squad realise this is urgent. They want to know more.
How can they, as disaster risk reduction agents, help?

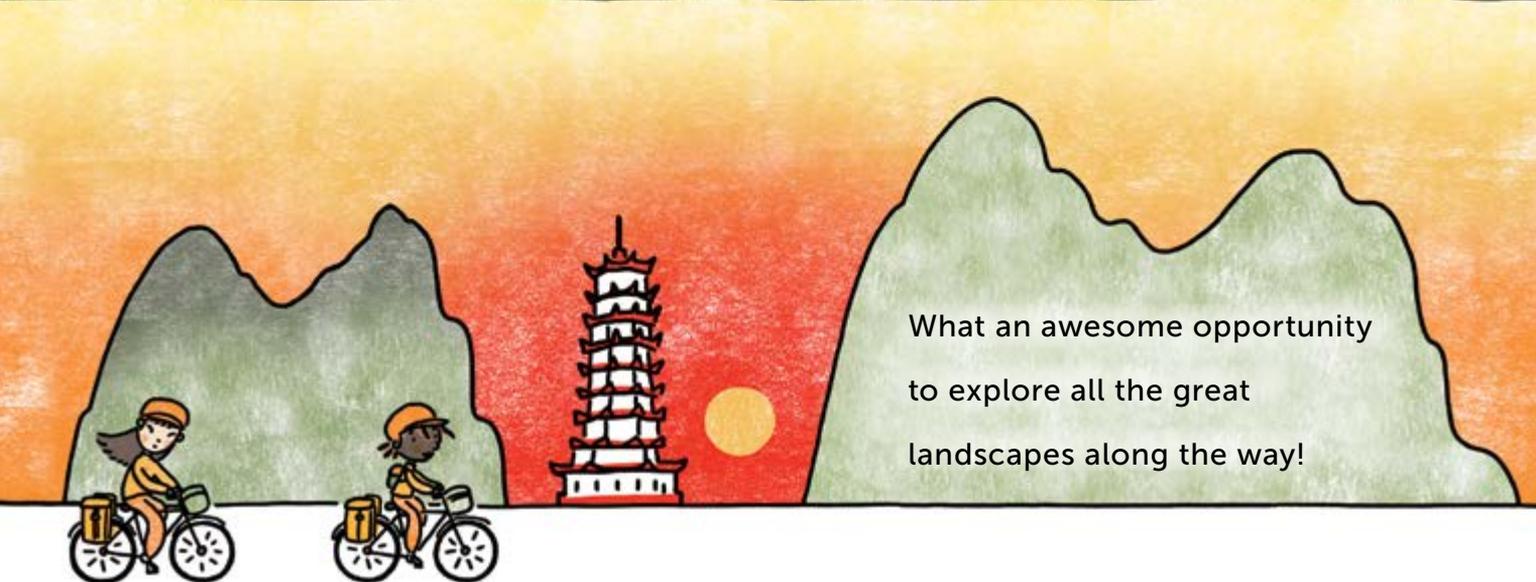
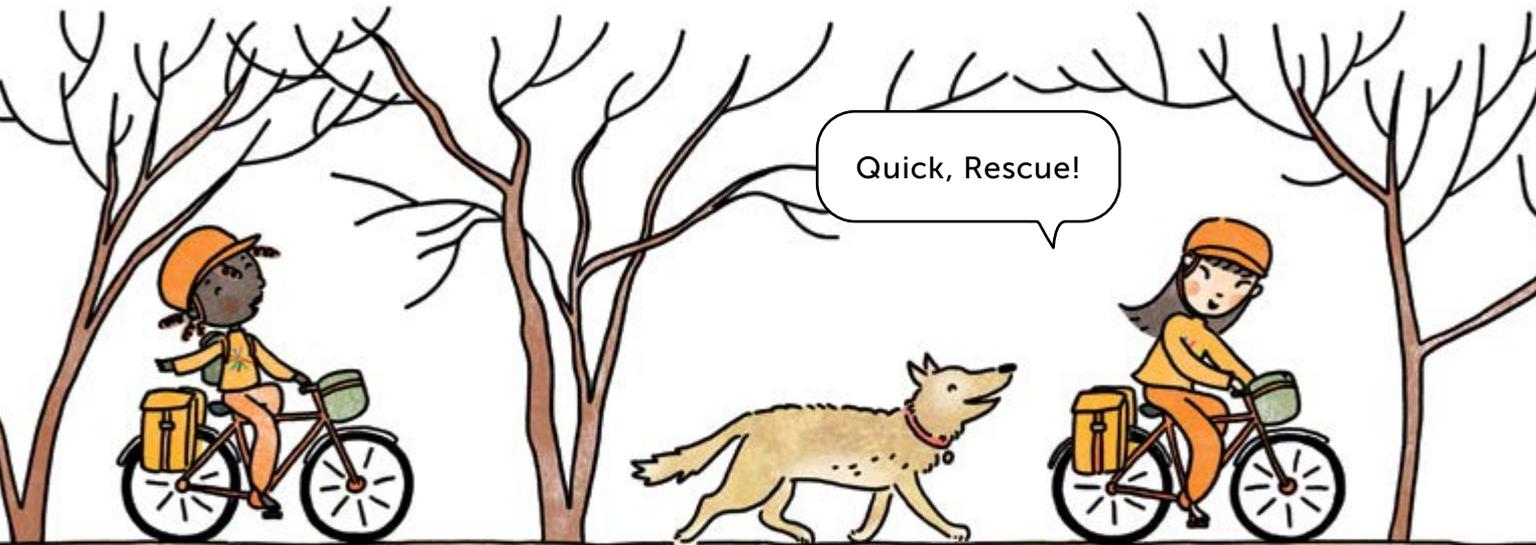
We must
**ACT NOW,
FOR TOMORROW!**

Little changes in our daily lives
can make a difference.

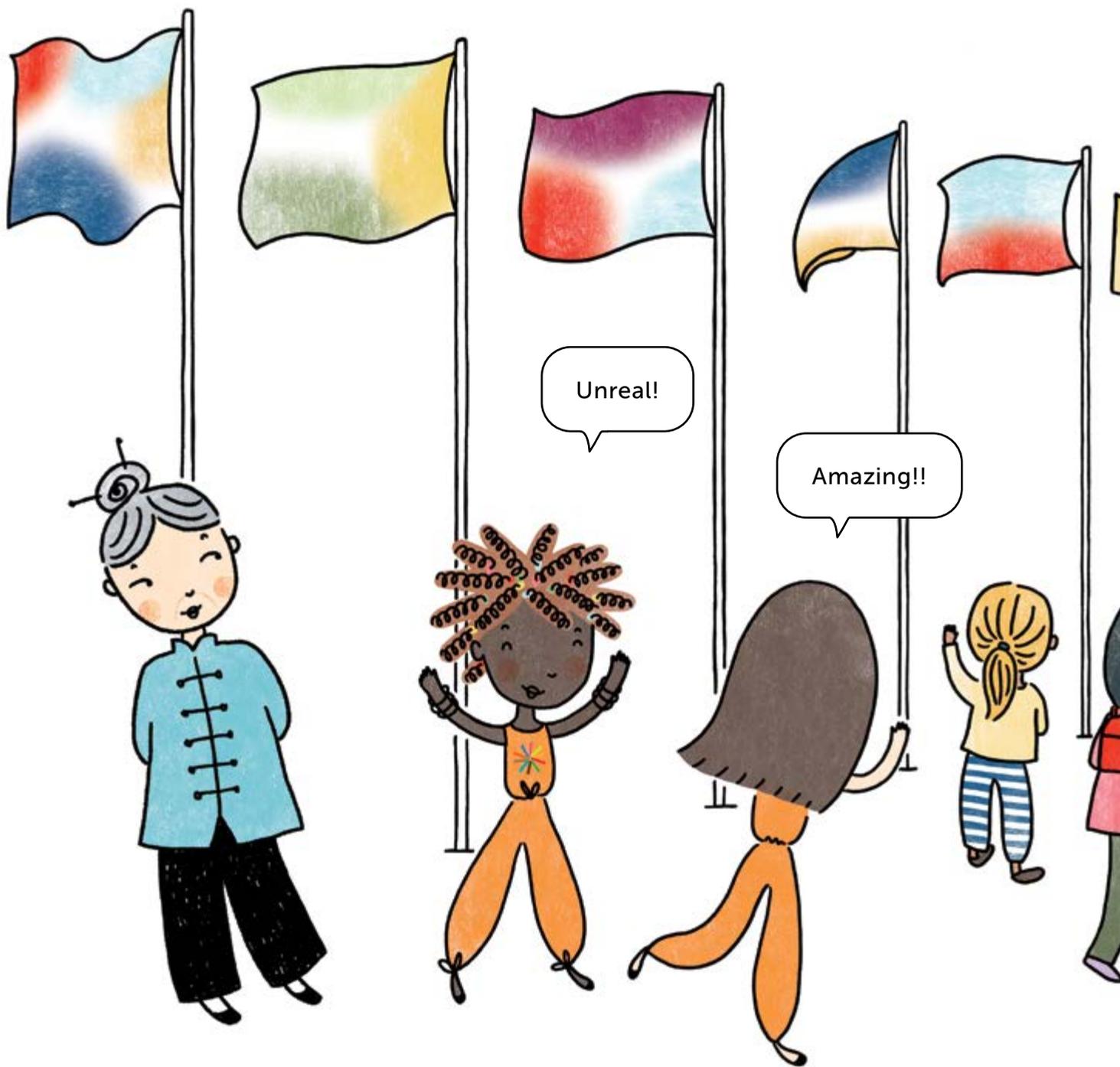


The squad set off on a journey to the *United Nations Climate Conference*. Instead of flying in Grand Mistress Fu's helicopter, they decide on a bikepacking adventure, to reduce their carbon emissions.





Arriving at the conference, the squad is in awe of its size, with global leaders coming together to tackle climate change.



First stop, the **World Meteorological Organisation** (WMO) pavilion. Here, scientists would explain the **seven climate clues** which indicate how our planet is changing.



Now COPE, what do we know about

GREENHOUSE GASES?

We know that greenhouse gases are gases that trap heat in the Earth's atmosphere. The ones with the largest climate impact are Carbon Dioxide, Methane and Nitrous Oxide.

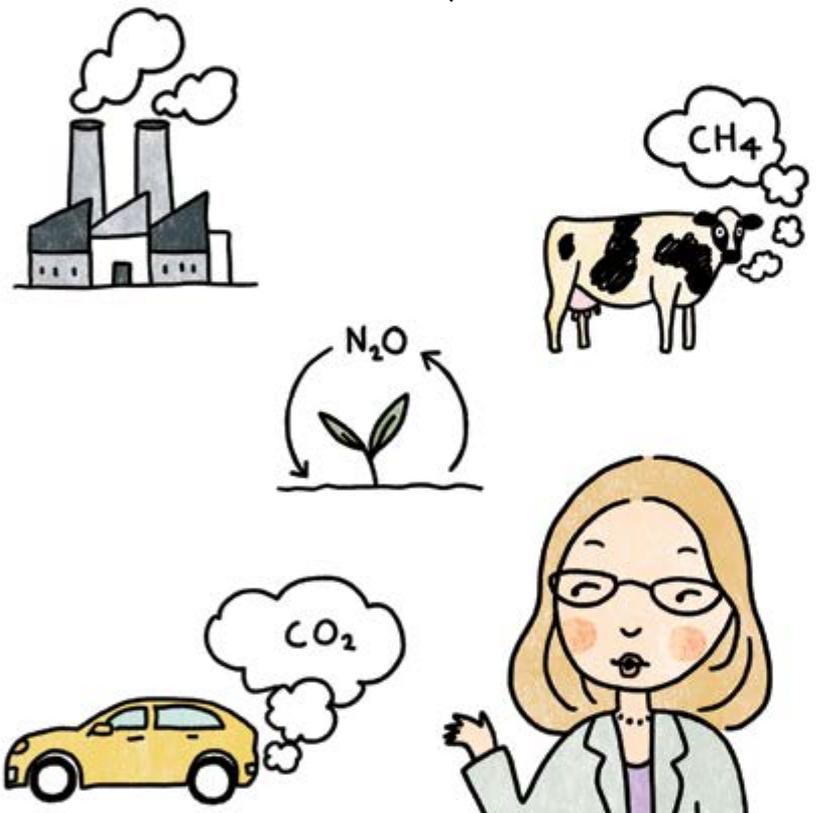


Scientists use numbers and letters to help identify them: Carbon Dioxide – CO_2 , Methane – CH_4 , Nitrous Oxide – N_2O .



Greenhouse gases already exist,
but human activity increases
them to harmful levels.

Major sources are the
burning of fossil fuels,
such as gas, coal and
oil. These are burned
for electricity, industry,
transport and farming.



COPE, what do we know about

TEMPERATURE?

We know that greenhouse gases act like a blanket in the atmosphere, trapping heat. As they increase, so does the air temperature.

It's true. As our planet warms, certain hazards such as heatwaves and floods will be more frequent and intense.

This has big effects on our climate.



Early Warnings for All

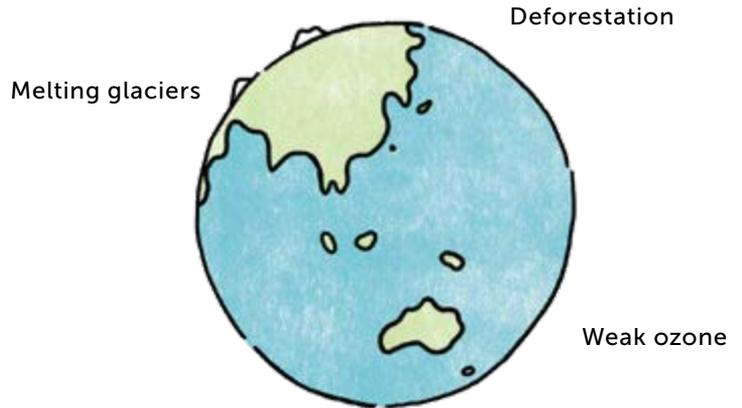
Early Warning Systems send alerts for these hazards to help people get ready and protect their homes.



HAPPY EARTH



UNHAPPY EARTH



RELATED HAZARDS



Floods



Storm Surges



Blizzards



Avalanches



Cyclones



Heatwaves



Droughts



Wildfires

COPE, what do we know about

OCEAN HEAT?

We know that the ocean absorbs most of the heat trapped by the greenhouse gases.



The world's oceans are now at their hottest since records began.

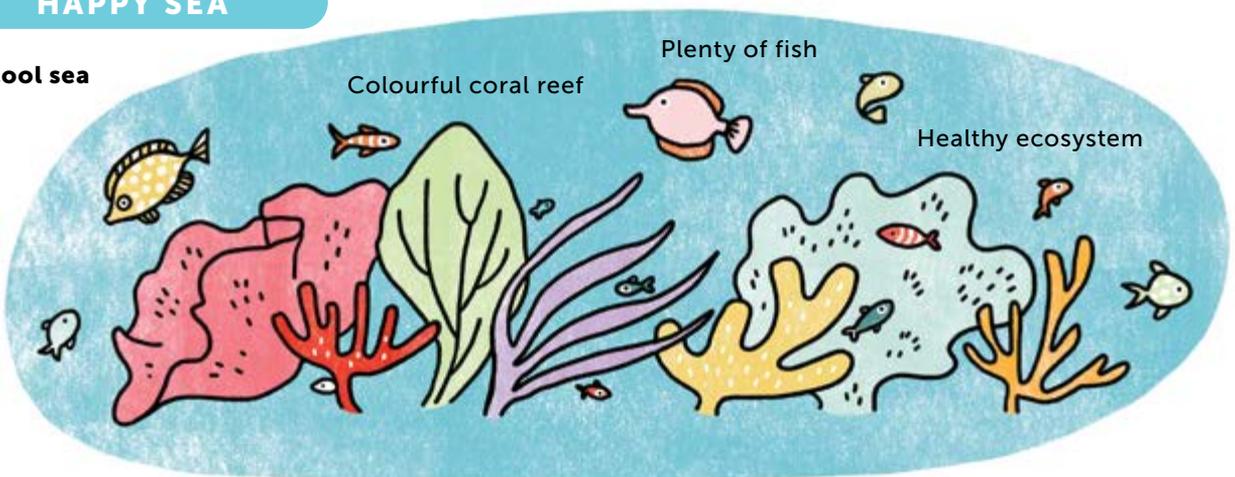
HAPPY SEA

Cool sea

Colourful coral reef

Plenty of fish

Healthy ecosystem



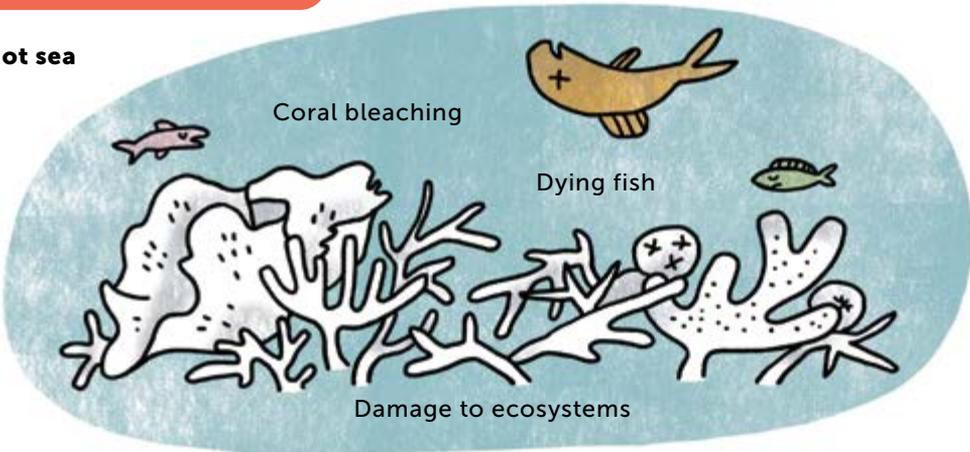
Warm water is a fuel for tropical cyclones. The hotter the water, the more powerful the storm.

Early Warning Systems help us stay safe by tracking changing weather related events.



UNHAPPY SEA

Hot sea



RELATED HAZARDS

-  Cyclones
-  Storm Surges

COPE, what do we know about

SEA LEVELS?

We know that as temperatures rise, glaciers and ice sheets melt, and warmer oceans expand, causing sea levels to rise.



HAPPY SEA LEVELS



Whole islands could disappear!
People will lose their homes. Sea turtles
will have nowhere to lay their eggs.

This is the reality. Sea level rise will
worsen coastal floods and storms.



UNHAPPY SEA LEVELS

Threat to coastal communities



RELATED HAZARDS



Floods



Cyclones



Landslides



Storm Surges

Harm to plants
and animals

COPE, what do we know about
OCEAN ACIDIFICATION?

We know that the ocean soaks up the CO₂ from the air, which makes the water more acidic, almost like it is turning sour.



HAPPY SEA

Thriving coastal community

Safe home for sea creatures

Healthy coral reef



This is not good for ocean life. Many sea creatures, including fish and corals will struggle to grow, losing their homes or food sources.

Coral reefs actually protect shorelines from floods and storm surges, but only when they are strong and healthy.



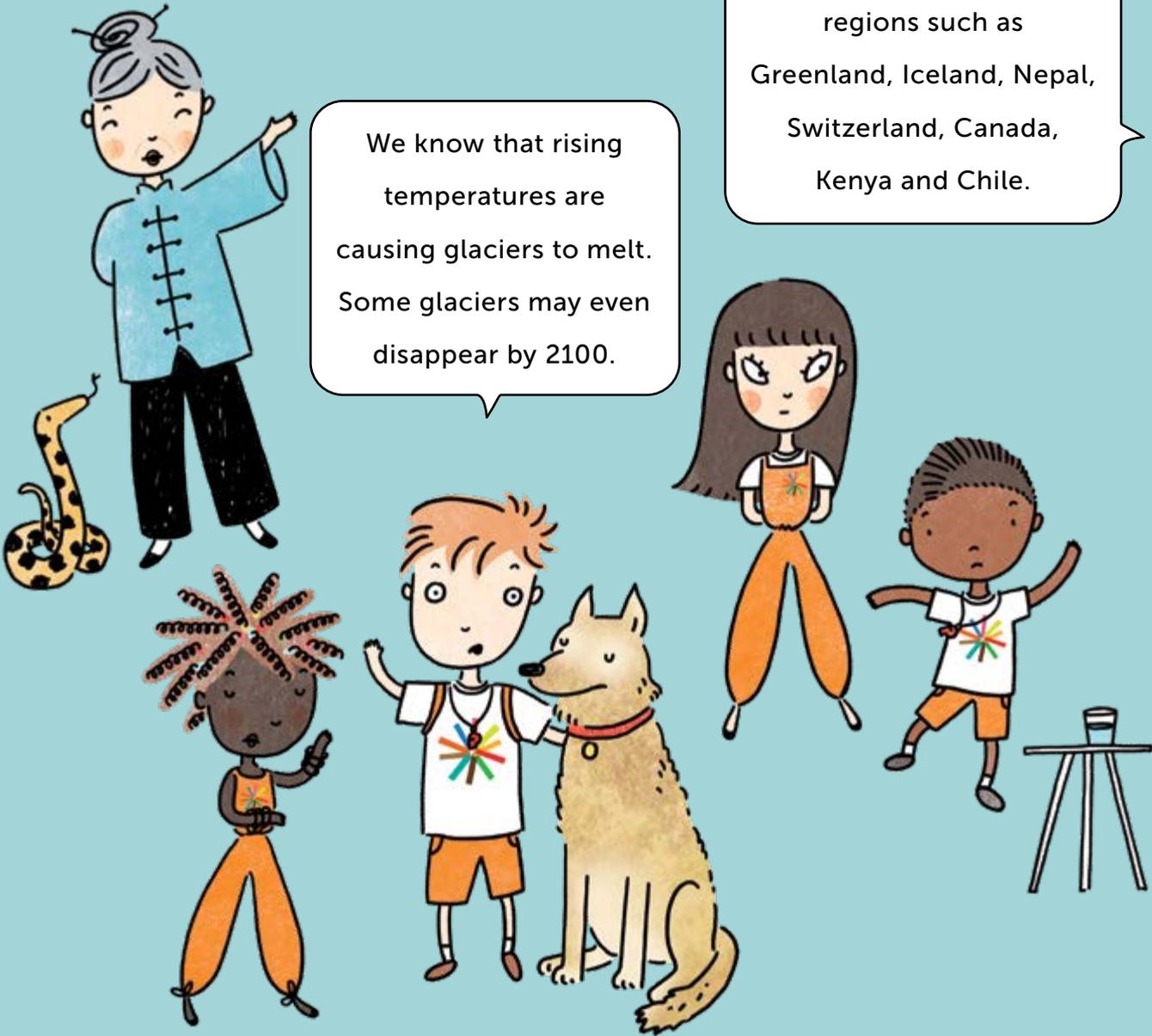
UNHAPPY SEA



COPE, what do we know about
GLACIERS?

This affects the Arctic and Antarctic regions, as well as other mountainous regions such as Greenland, Iceland, Nepal, Switzerland, Canada, Kenya and Chile.

We know that rising temperatures are causing glaciers to melt. Some glaciers may even disappear by 2100.



HAPPY GLACIER

Healthy mountain wildlife Secure alpine community



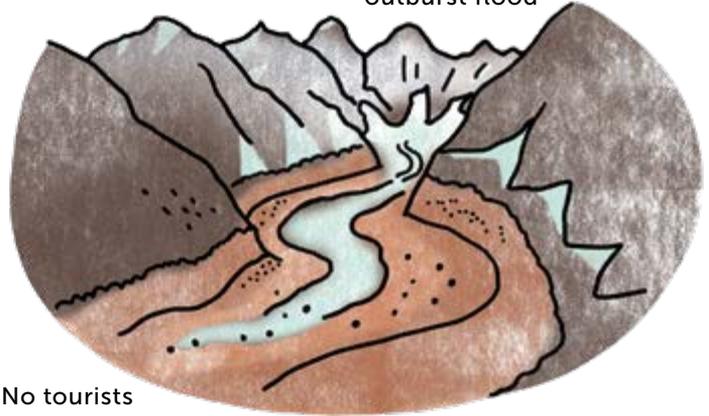
Fresh water supply

Of course, physical changes in our glaciers provide evidence of shifts in temperature, rainfall, or snowfall.



UNHAPPY GLACIER

Land erosion Glacial lake outburst flood



No tourists

RELATED HAZARDS



Floods



Avalanches

COPE, what do we know about
SEA ICE?

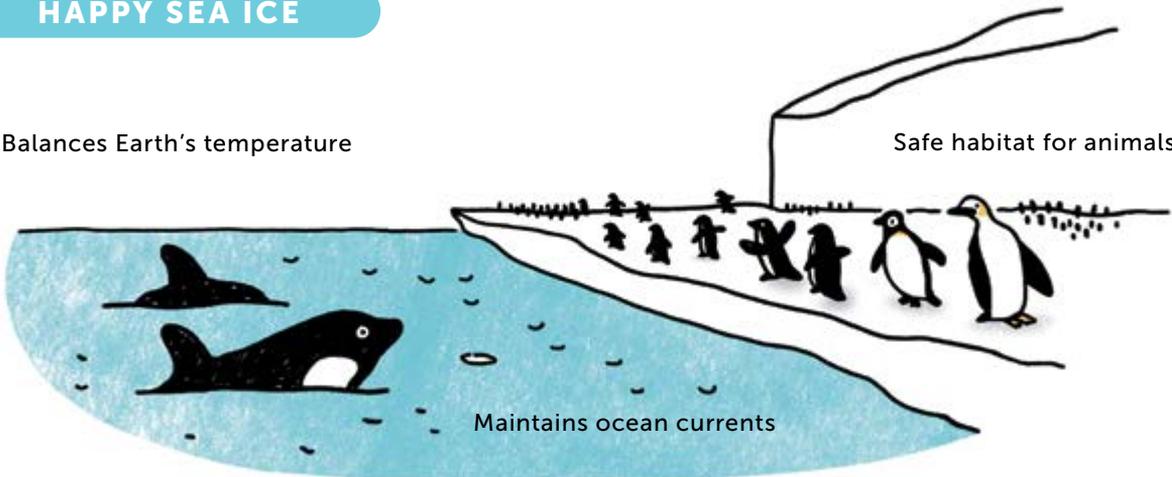
We know that the areas covered
by sea ice in the Arctic and
Antarctic have been shrinking.



HAPPY SEA ICE

Balances Earth's temperature

Safe habitat for animals



Maintains ocean currents

Changes in sea ice are a sign of climate change and how our planet is doing.

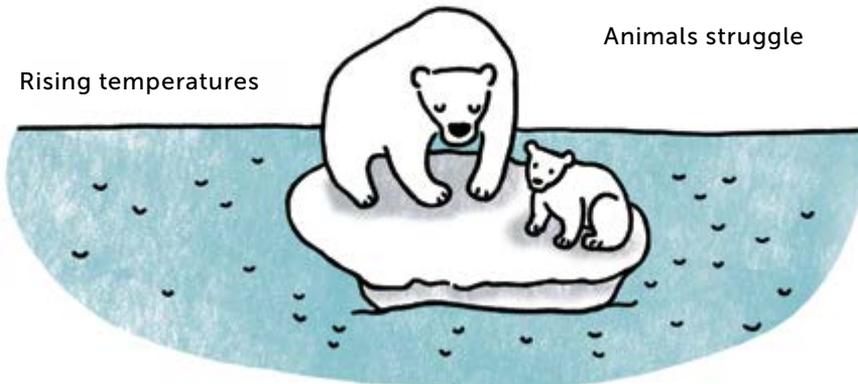
Indeed. When scientists study sea ice, they look at how much there is, where it moves, how it gets squeezed together, and how old it is.



UNHAPPY SEA ICE

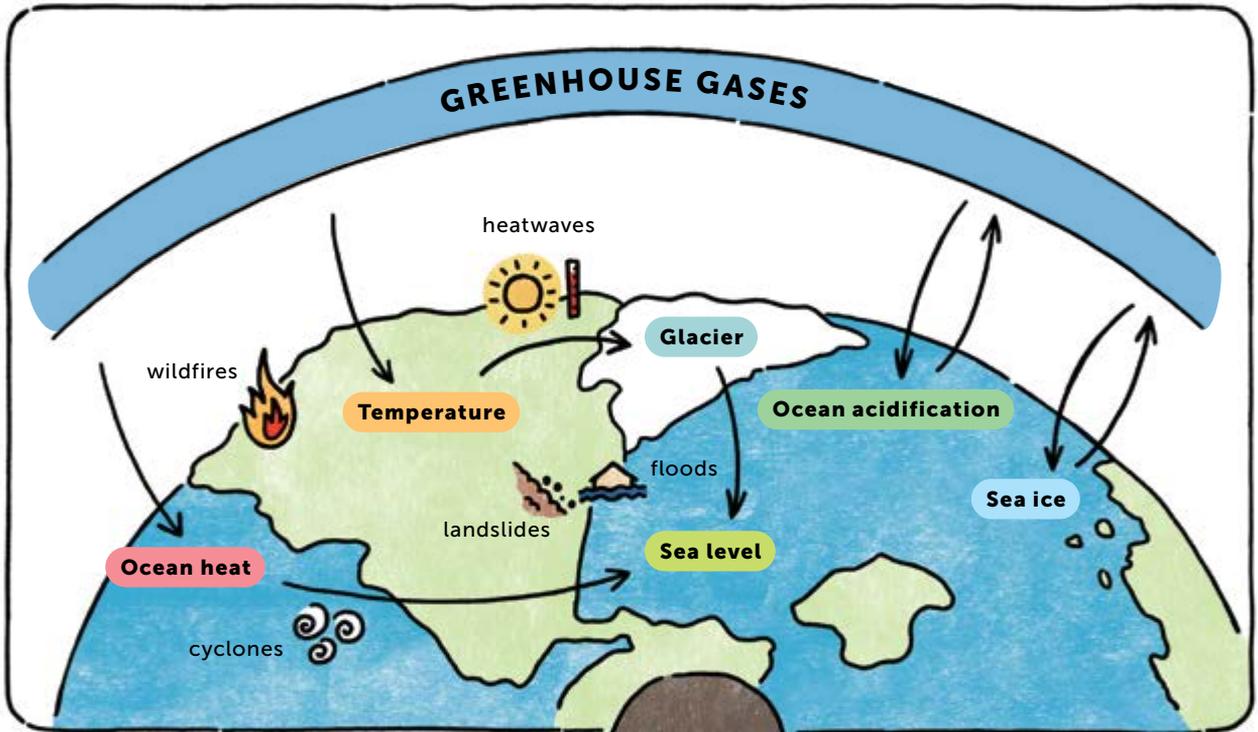
Rising temperatures

Animals struggle



Changes in ocean currents

There was so much to learn! COPE understood now about the climate clues and how greenhouse gases are affecting us. As the planet gets warmer, big changes are happening to our land, our oceans, and our ice, which leads to increasing disasters such as wildfires and landslides.



I get it now!

How can we all make
positive change?

We need to

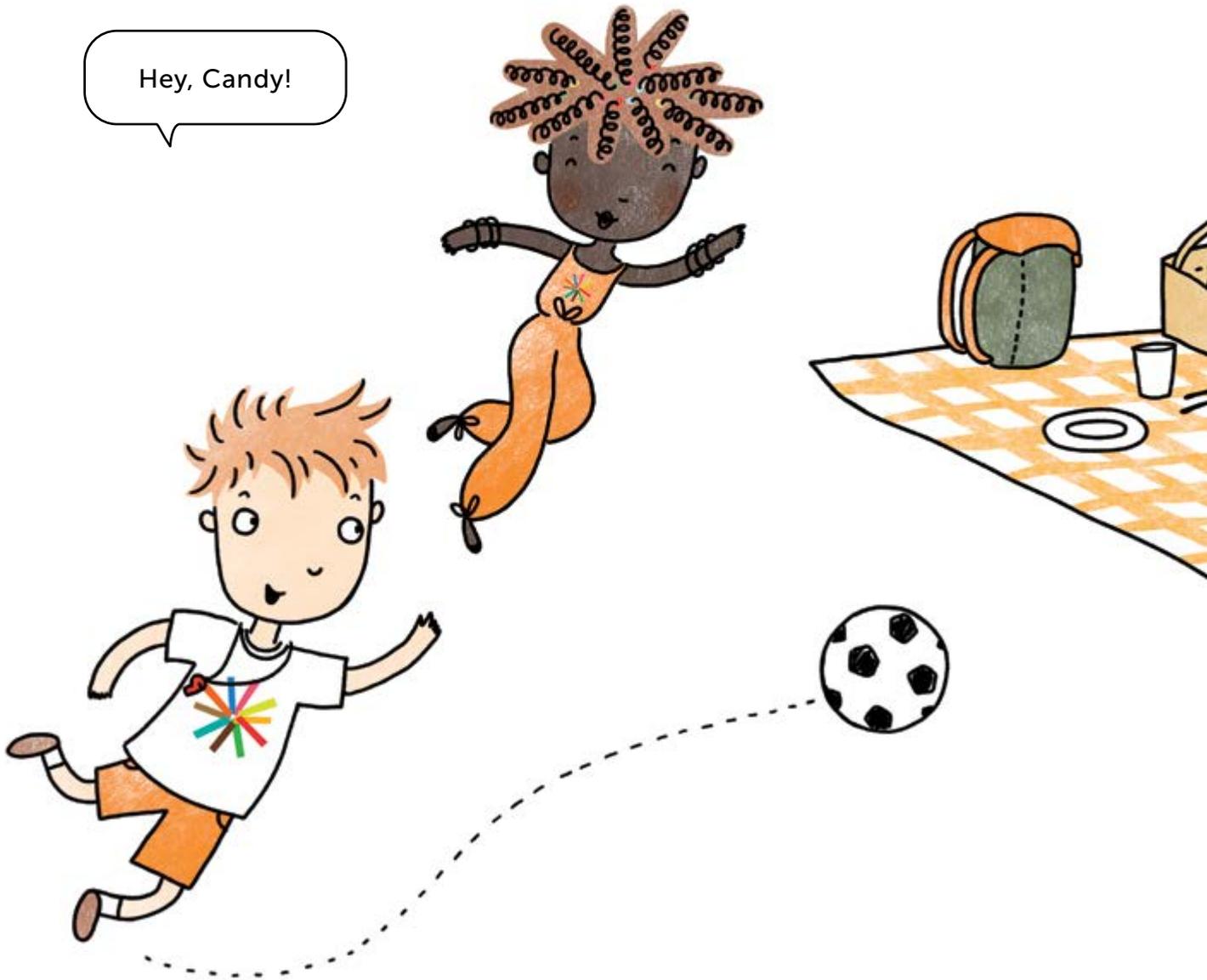
ACT NOW, FOR TOMORROW!



But first, COPE took some time out for a picnic... and FOOTBALL!

Hey, Candy!

Nice kick, Ollie!





Well rested, the squad set off to the different country pavilions at the conference. Here, they would meet other young champions and share their global disaster risk reduction missions.

In the French pavilion, COPE recalled their heatwaves mission:

Stay Cool and Hydrated!



Drink water.
Play in the shade.

Listen to government warnings.

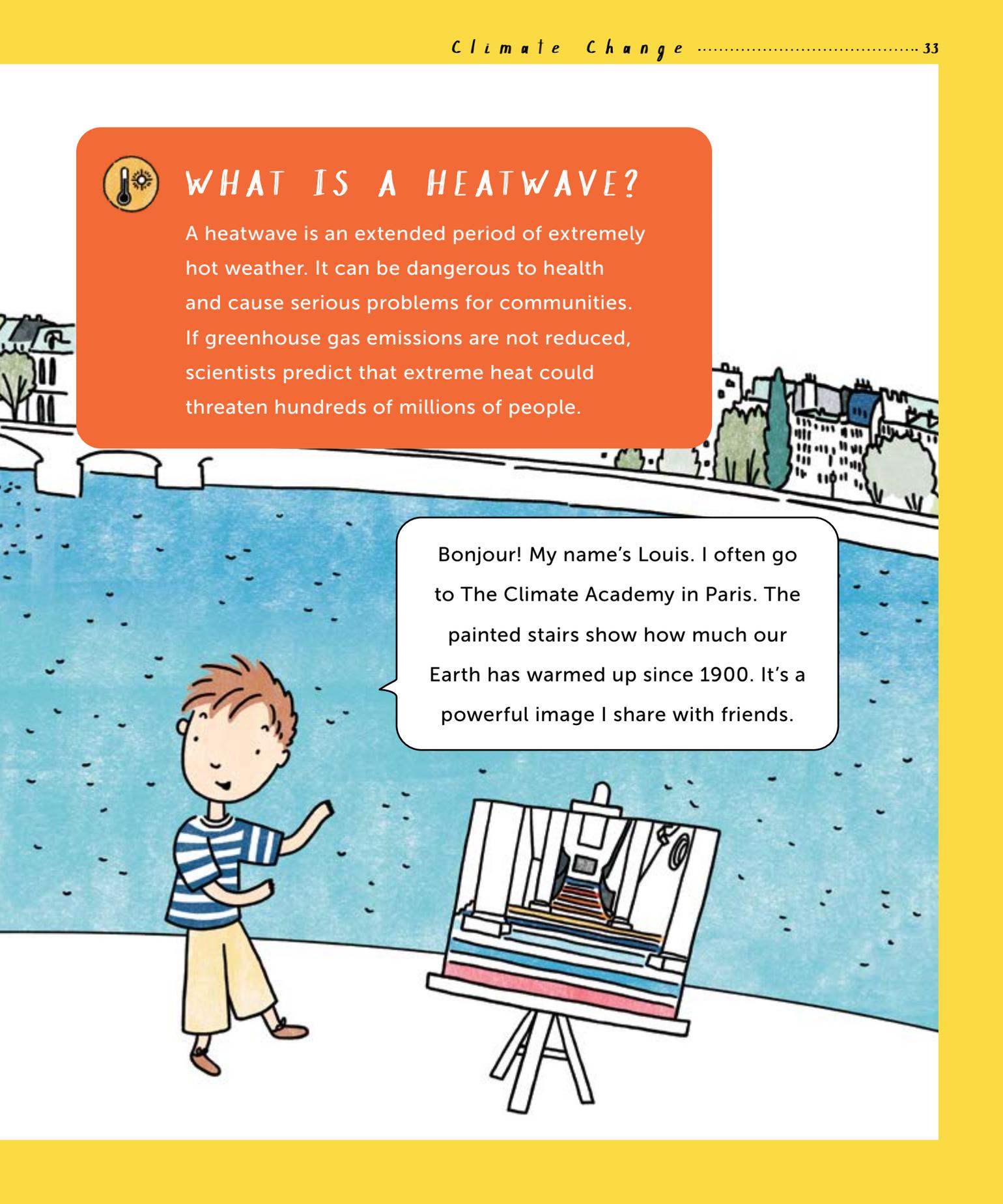
Wear a hat.

Check the temperature
before you go out.



WHAT IS A HEATWAVE?

A heatwave is an extended period of extremely hot weather. It can be dangerous to health and cause serious problems for communities. If greenhouse gas emissions are not reduced, scientists predict that extreme heat could threaten hundreds of millions of people.



Bonjour! My name's Louis. I often go to The Climate Academy in Paris. The painted stairs show how much our Earth has warmed up since 1900. It's a powerful image I share with friends.

In the Australian pavilion, COPE shared their cyclones mission:

Stay Safe!

Write your emergency contact card.

Pack a survival bag!

Listen out for storm warnings.

Stock up on basic food and water.





WHAT IS A TROPICAL CYCLONE?

A big circular storm over oceans that brings heavy rain and strong winds. When tropical cyclones hit land, they can cause widespread destruction to people and communities. Climate change means more powerful storms, with stronger winds, heavier rainfall, and increased flooding due to rising seas.



G'day! I'm Waru. Floods and cyclones have badly damaged our aboriginal community. We should all make practical changes to help prepare for these disasters, such as developing better early warning methods and good evacuation plans.

In the Hong Kong, China pavilion, COPE recalled their storm surge mission:

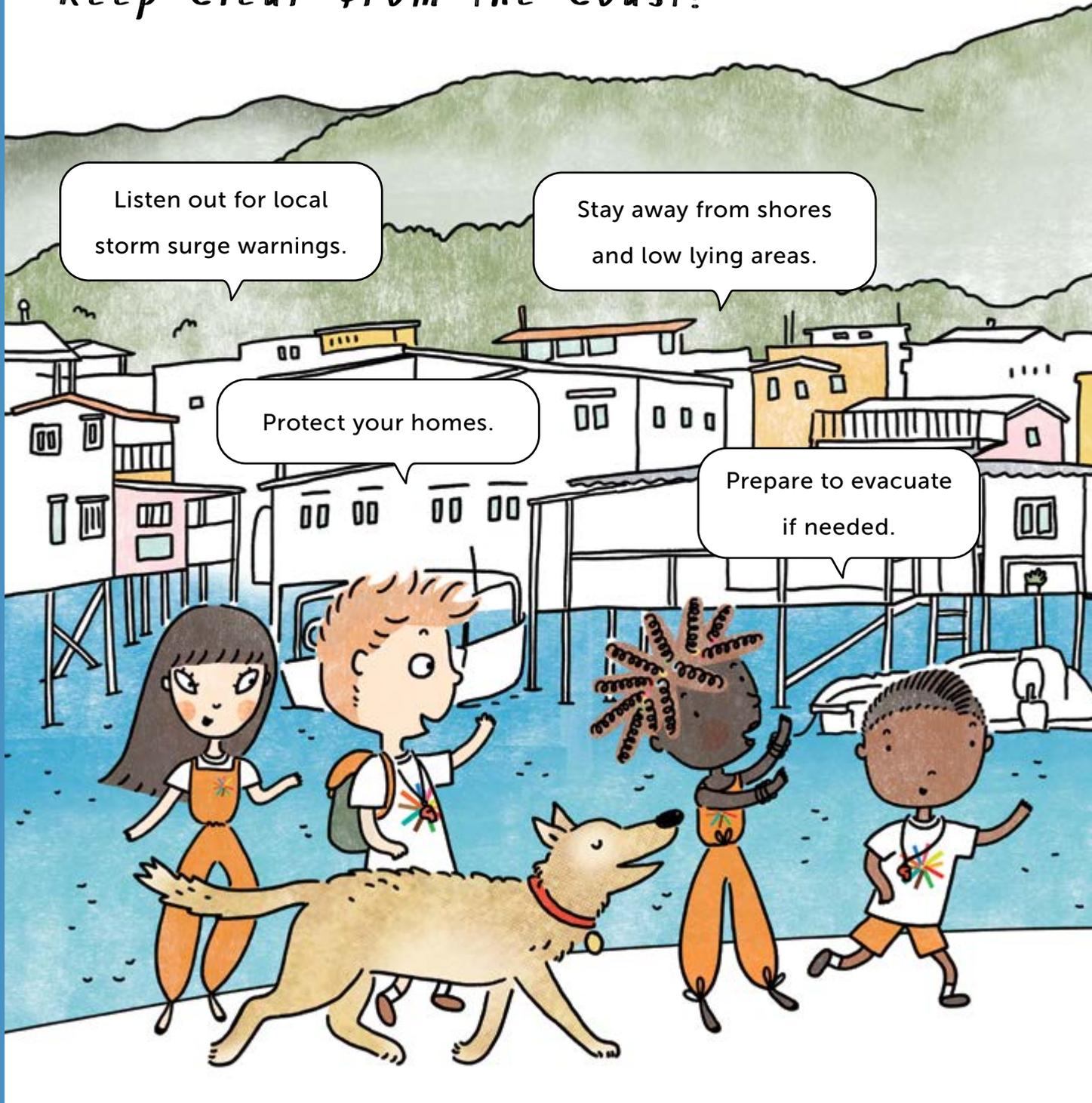
Keep Clear from the Coast!

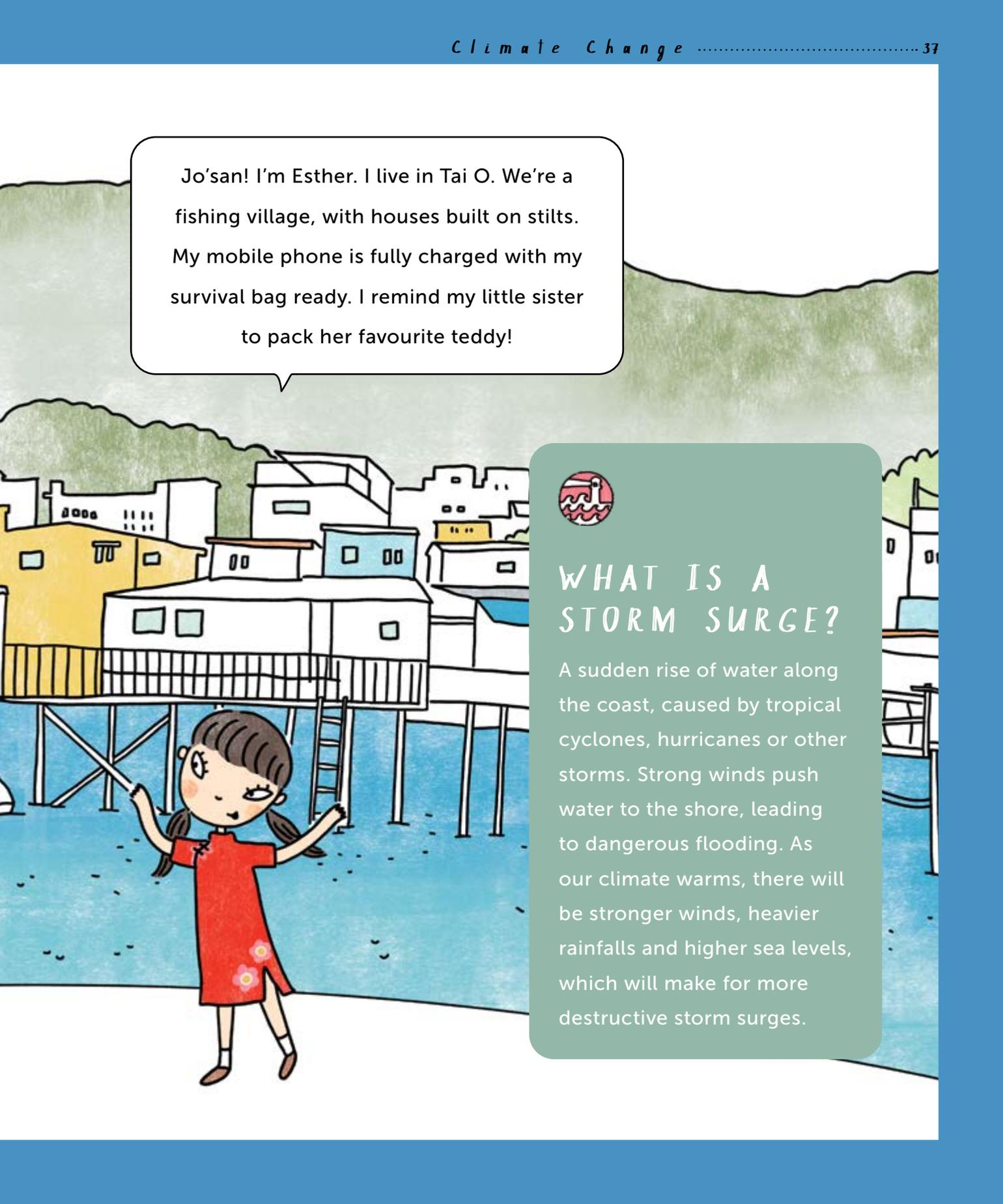
Listen out for local storm surge warnings.

Stay away from shores and low lying areas.

Protect your homes.

Prepare to evacuate if needed.





Jo'san! I'm Esther. I live in Tai O. We're a fishing village, with houses built on stilts. My mobile phone is fully charged with my survival bag ready. I remind my little sister to pack her favourite teddy!



WHAT IS A STORM SURGE?

A sudden rise of water along the coast, caused by tropical cyclones, hurricanes or other storms. Strong winds push water to the shore, leading to dangerous flooding. As our climate warms, there will be stronger winds, heavier rainfalls and higher sea levels, which will make for more destructive storm surges.

In the Malaysian pavilion, COPE showcased their floods mission:

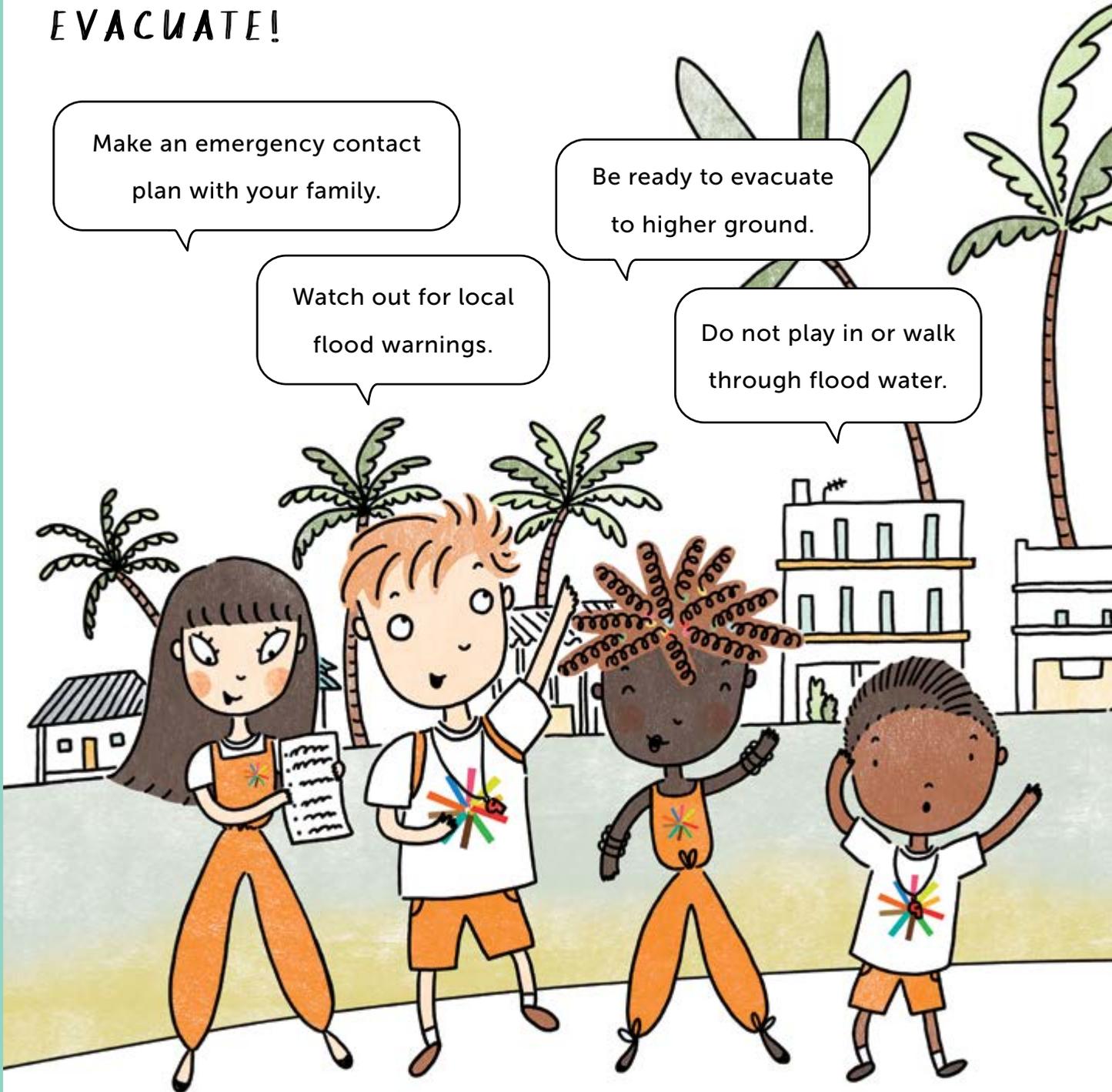
EVACUATE!

Make an emergency contact plan with your family.

Watch out for local flood warnings.

Be ready to evacuate to higher ground.

Do not play in or walk through flood water.





WHAT IS A FLOOD?

Floods occur during heavy rains, when rivers overflow, ocean waves come to the shore, or snow melts quickly. They can range from a few inches to covering entire homes. Climate change is bringing heavier rainfall, melting ice and higher sea levels leading to more severe floods, especially in coastal and low-lying areas.



In the South African pavilion, COPE shared their wildfire mission:

Be Ready to Go!

Stay calm and alert.
Listen out for warnings.

Pack your survival bag.

Make evacuation plans
with your family.

Keep indoors away from the
fire. Be ready to go if you
need to evacuate.





WHAT IS A WILDFIRE?

Uncontrolled fires in open areas like forests and fields. Wildfires start small but can spread quickly. They can be caused by natural events or humans. Climate change makes wildfires more likely because warmer temperatures can make the land drier.



Hallo! My name's Anna. I'm a 17-year-old climate activist from Pretoria. I write letters to local leaders with my ideas on how to better protect our planet. Our voices matter!

In the Chinese pavilion, COPE shared their droughts mission:

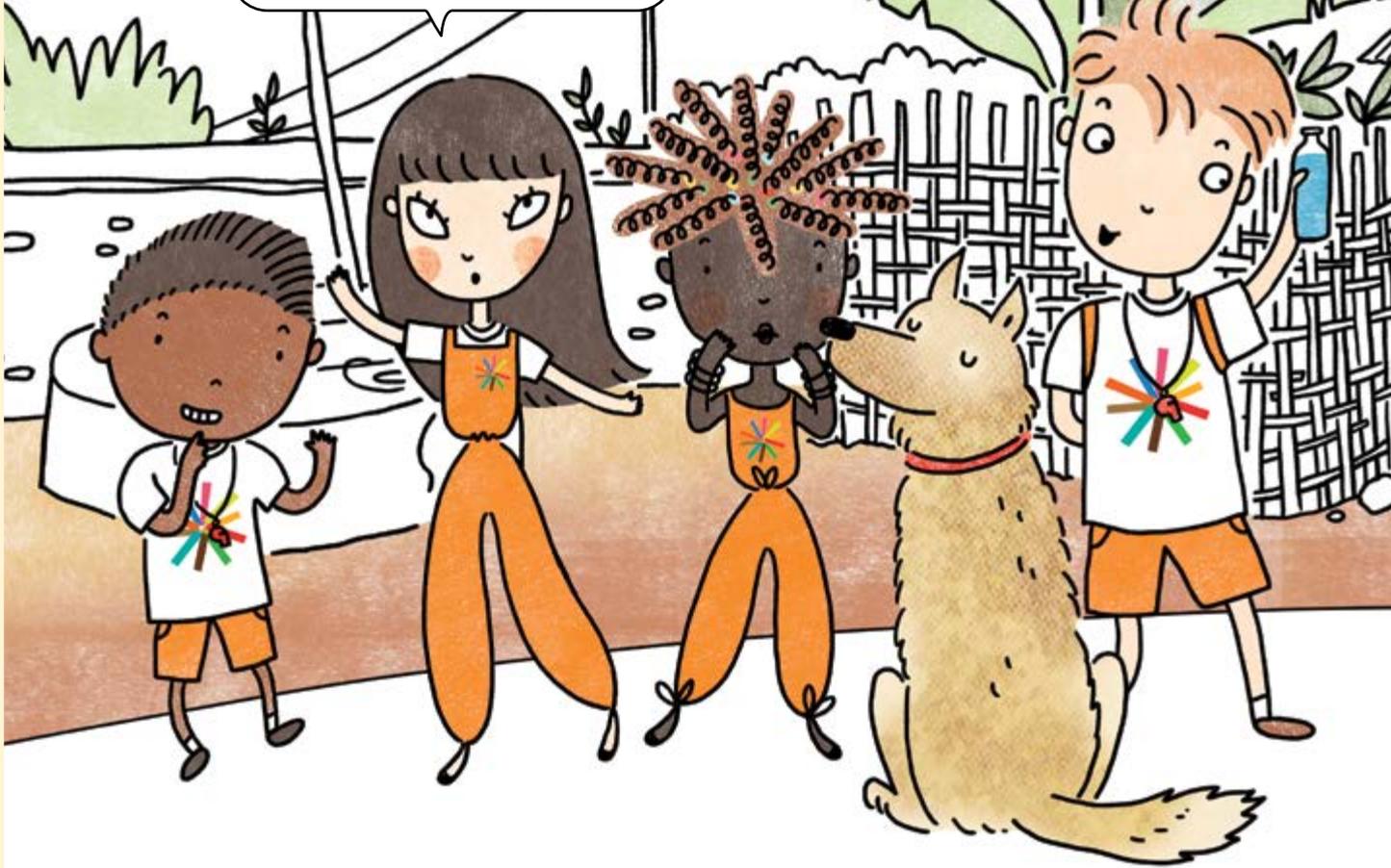
Every drop counts!

Turn water off when brushing your teeth

Try not to waste water when washing dishes.

Take a short shower.
Do laundry less often.

Store water bottles in case of an emergency.





Nuòmenā! My name's Yang. I'm 15 years old, from Yunnan Province. I belong to the Aini ethnic minority. During times of drought, my friends and I queue up for drinking water from the wells. We carry the water back to our grandparents homes.



WHAT IS A DROUGHT?

A long period of dry weather when an area receives less rain than normal, causing water levels in lakes and rivers to go down, soil to dry out, and plants to wilt. This makes it harder for farmers to grow food, and for people and animals to find water. Climate change sometimes leads to more frequent, longer droughts, which also increases chances of wildfires.

In the Nepalese pavilion, COPE remembered their landslides mission:

In heavy rains, keep away from steep slopes!

Stay alert for landslide warnings.

Look out for small stones falling or new splits in the ground.

Make an evacuation plan.

Listen for strange sounds such as trees cracking or rumbling.



Namaste, I'm Gita. My brother and I lost our homes after a landslide. We lived in tents for a long time. We often played a fun game, called COPESkills, which helped us to remember key disaster messages.



WHAT IS A LANDSLIDE?

A large amount of earth, rock and stones that fall down a steep slope, often triggered by heavy rain or earthquakes. They occur in mountainous areas and can be very dangerous, sweeping away everything in their path. Climate change is leading to more intense rainfall, increasing the risk of landslides.



In the Mongolian pavilion, COPE remembered their blizzards mission:

Wrap up. Stay inside!

Stay warm!

Keep in contact
with your family.

Listen to weather updates
and local news.

Stock up with
food and water.





WHAT IS A BLIZZARD?

A powerful snowstorm with freezing temperatures, strong winds, and heavy snowfall, which makes it hard to see anything. Climate change is contributing to more extreme blizzard conditions, as warmer air holds more moisture which can add to the snowfall and cause stronger winds.



Sain uu. I'm Nomu. I'm super proud to be a Climate Ambassador. We hold community events about energy saving actions, like unplugging devices when they're not in use, which should be a norm in our daily lives.

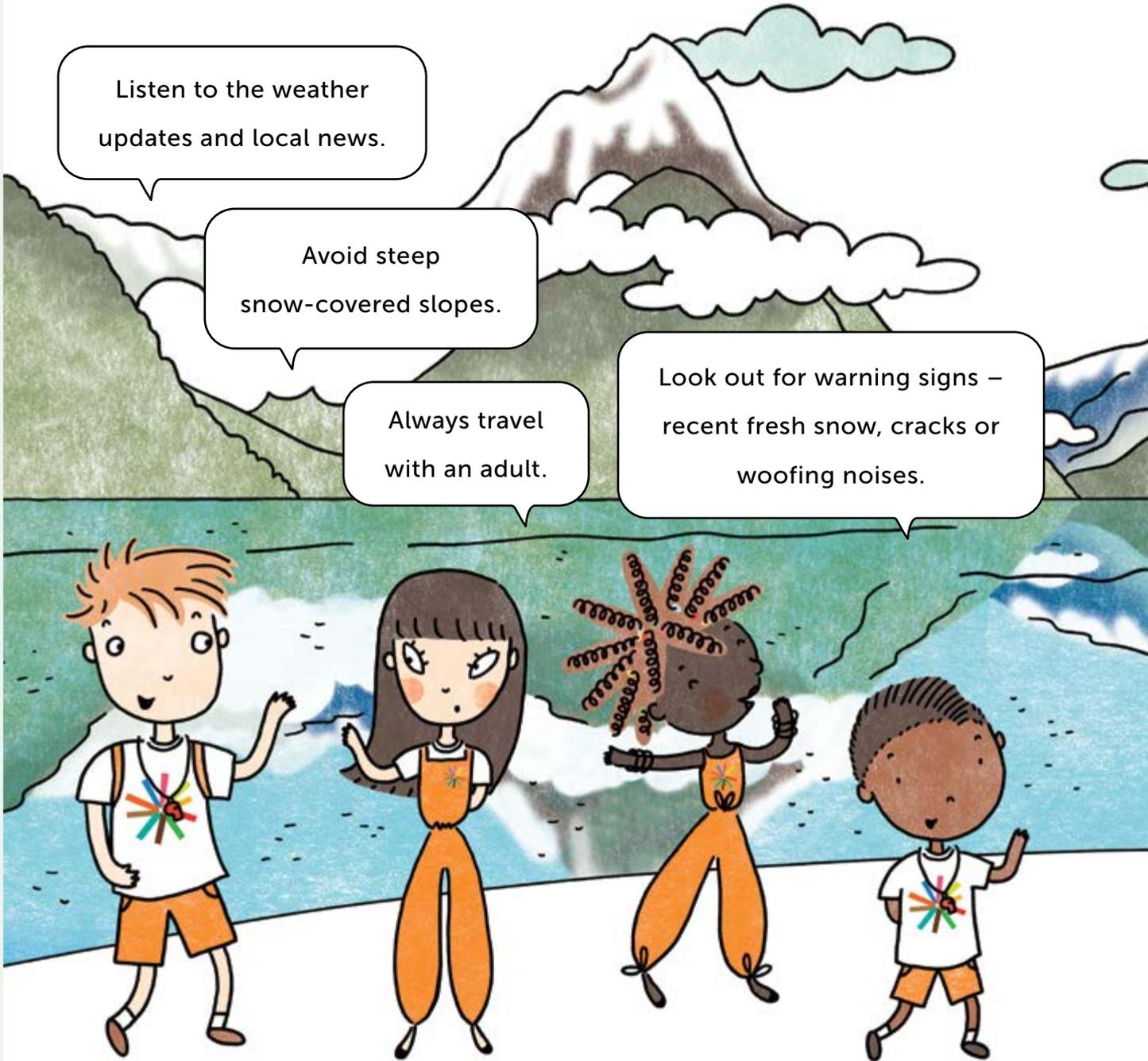
In the New Zealand pavilion, COPE shared their avalanche mission in the back country: *Know before you go!*

Listen to the weather updates and local news.

Avoid steep snow-covered slopes.

Always travel with an adult.

Look out for warning signs – recent fresh snow, cracks or woofing noises.





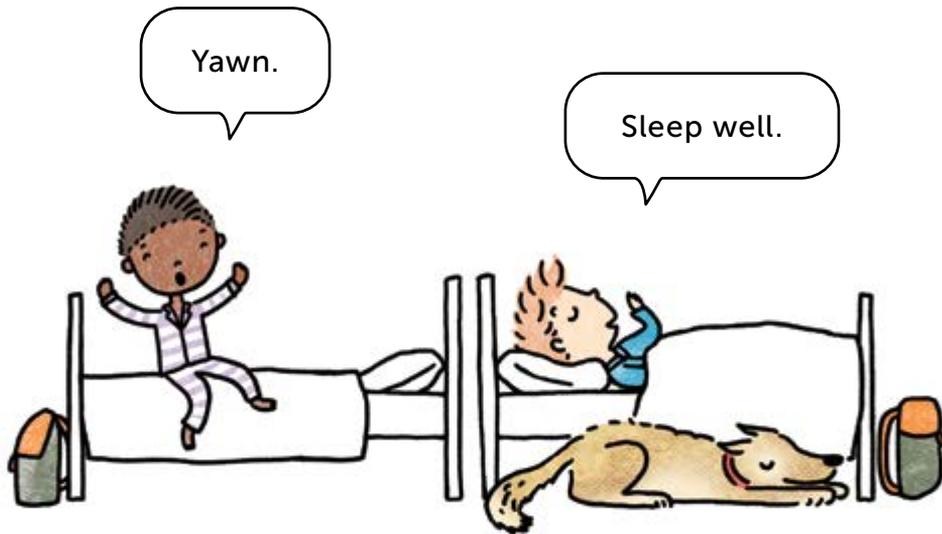
WHAT IS AN AVALANCHE?

A rapid fall of snow and ice down a mountainside, triggered by human activity or weather conditions like heavy snowfall and warmer temperatures. They are extremely dangerous, causing serious injury and even death. Climate change contributes to certain weather conditions that impact avalanche activity.

Kia ora, my name's James. I grew up in these mountains. I like to think I'm avalanche ready. I'm always on the lookout for other kids in a similar situation to me. I show them how to put special snow tyres on their wheelchairs when visiting the slopes.



The days at the conference were BUSY! COPE could barely keep their eyes open. They went back early to rest at their hotel.



In the morning, it was yoga time. Ping showed off her poses. Sense had good moves too!



COPE went in search of the Children and Youth pavilion to meet the Youth Ambassadors. They wanted more tips on how to

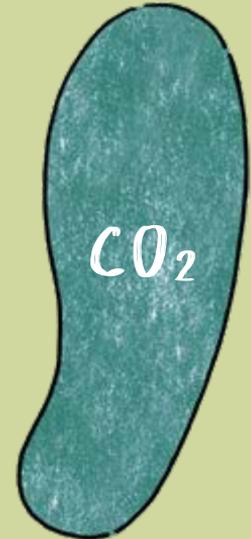
ACT NOW, FOR TOMORROW!



Our carbon footprint is the amount of greenhouse gases released into the atmosphere from our daily activities.

GREENHOUSE GAS EMISSIONS

- Flying on airplanes* _____
- Eating meat* _____
- Driving in cars* _____
- Wasting energy and water* _____
- Buying non-local, non-seasonal food* _____
- Using single-use plastics* _____
- Buying new clothes and toys* _____



Most activities produce carbon dioxide, even just breathing!

Look! The largest carbon footprints are flying on airplanes, driving cars and eating meat.

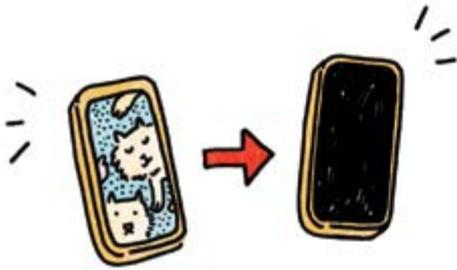
Mmmmmmmmm. Let's think about our own daily activities.

How can we do our bit?



LITTLE ACTS

1. Reduce your screen time.



3. Eat less red meat.



2. Walk to school.



4. Encourage your parents to save energy when heating/cooling your home.



5. Switch off the lights when you leave a room.

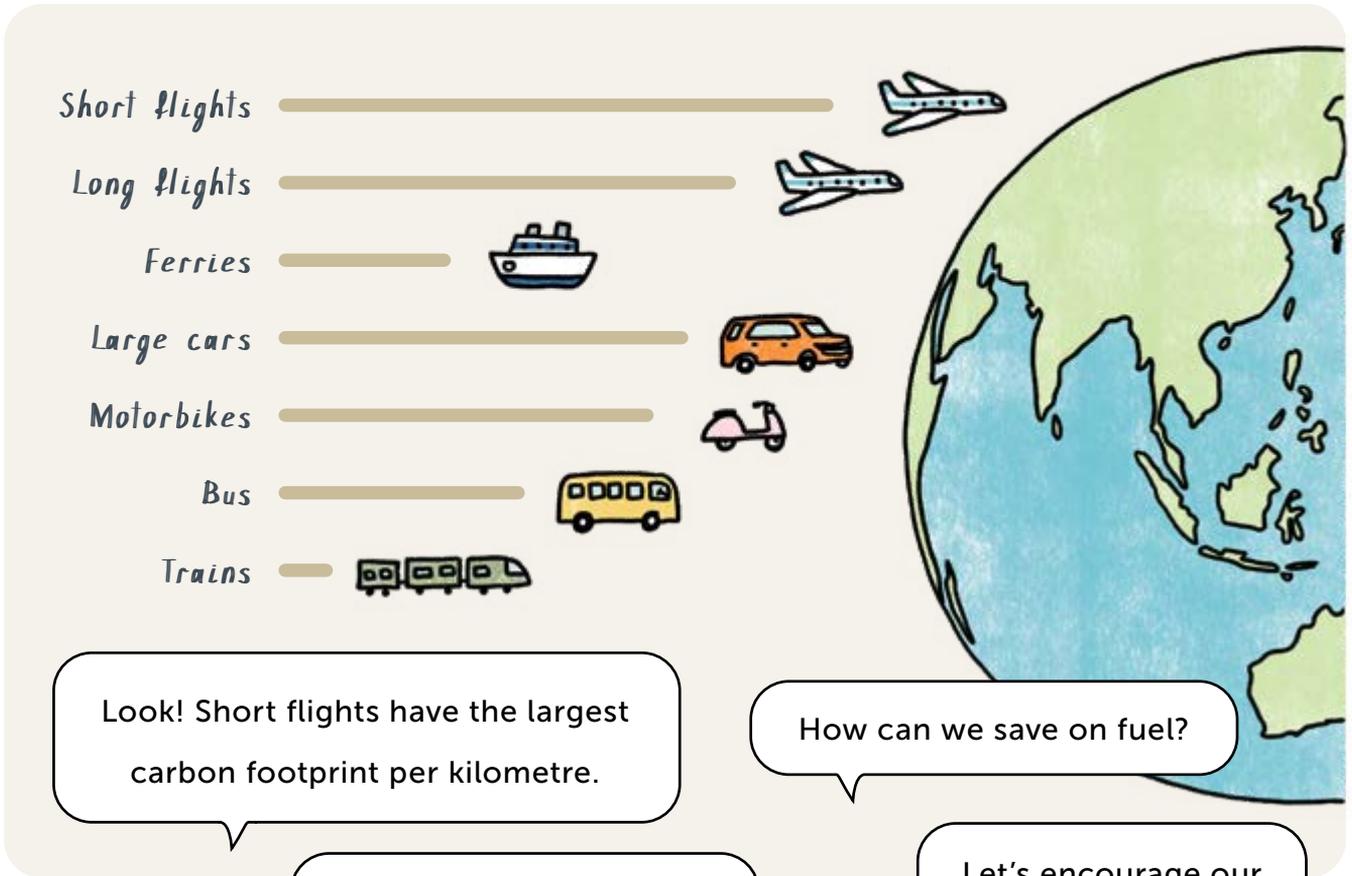


Turn your journey into a mini adventure! Count how many cool things you spot like cute dogs or funny-shaped clouds.

Pretend you are a 'Switch Superhero' saving energy to protect the Earth!



Our travel has a huge impact on climate change.



Look! Short flights have the largest carbon footprint per kilometre.

How can we save on fuel?

Electric trains are a much more environmentally friendly option.

Let's encourage our family and friends!



LITTLE ACTS

1. Cycle to get around.
Be healthy!



3. Pack light!



2. Go on a local holiday.



4. Take a train instead of flying.

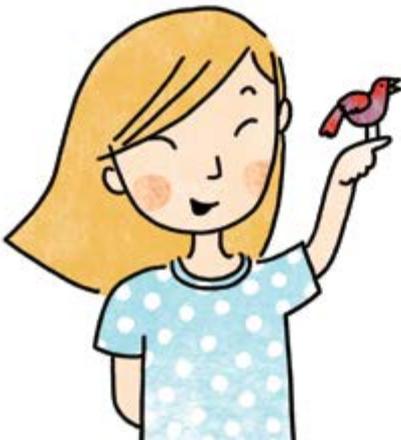


5. Opt for public transport.



Have fun exploring your own backyard or a nearby park! See if you can identify any birds.

You might make a new friend on the bus. It's a great way to be social and help the planet!



Our homes are the next biggest piece of our carbon footprints, after travel and transport.

Houses need so much energy to run!

A cozy home can be a green home too!

There are great renewable energy options, such as solar panels, to produce electricity and hot water.

How can we set a good example?

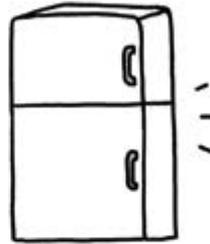


LITTLE ACTS

1. Put on a jumper and thick socks, not the heating!



3. Close the fridge quickly!



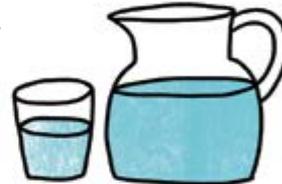
4. Shut down your electronics at night.



2. Recycle paper, plastic and metal!



5. Save water.



Turn old newspapers into fun crafts like paper hats or boats.



Challenge yourself to a shorter shower by setting a timer!



Our food affects the planet because making and moving it around the world leads to greenhouse gas emissions.

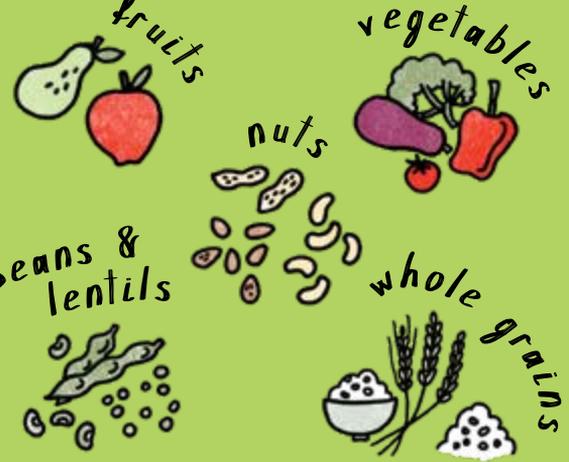
 **HIGH EMISSION FOODS**



red meat
eggs
dairy milk
cheese
farmed fish

Beef has the largest carbon footprint of all.

 **LOW EMISSION FOODS**



fruits
vegetables
nuts
Beans & lentils
whole grains

Beans grow easily and don't need much water or land. Plus, they make the soil healthier!

Yes! Cows eat the crops and burp (!), which releases Methane, a greenhouse gas.

Mmmm. Let's be mindful.



LITTLE ACTS

1. Drink plant-based milk, like oat or almond.



2. Eat more veggies!



Meatless Mondays are fun: make a rainbow plate with all the colourful veggies!



3. Don't waste food.



4. Start a mini compost bin.



5. Locally produced food is the best!



Check out a farmer's market: pick out a locally grown fruit. You're helping the Earth and discovering new flavours!



Our clothes are being thrown away more than ever before.

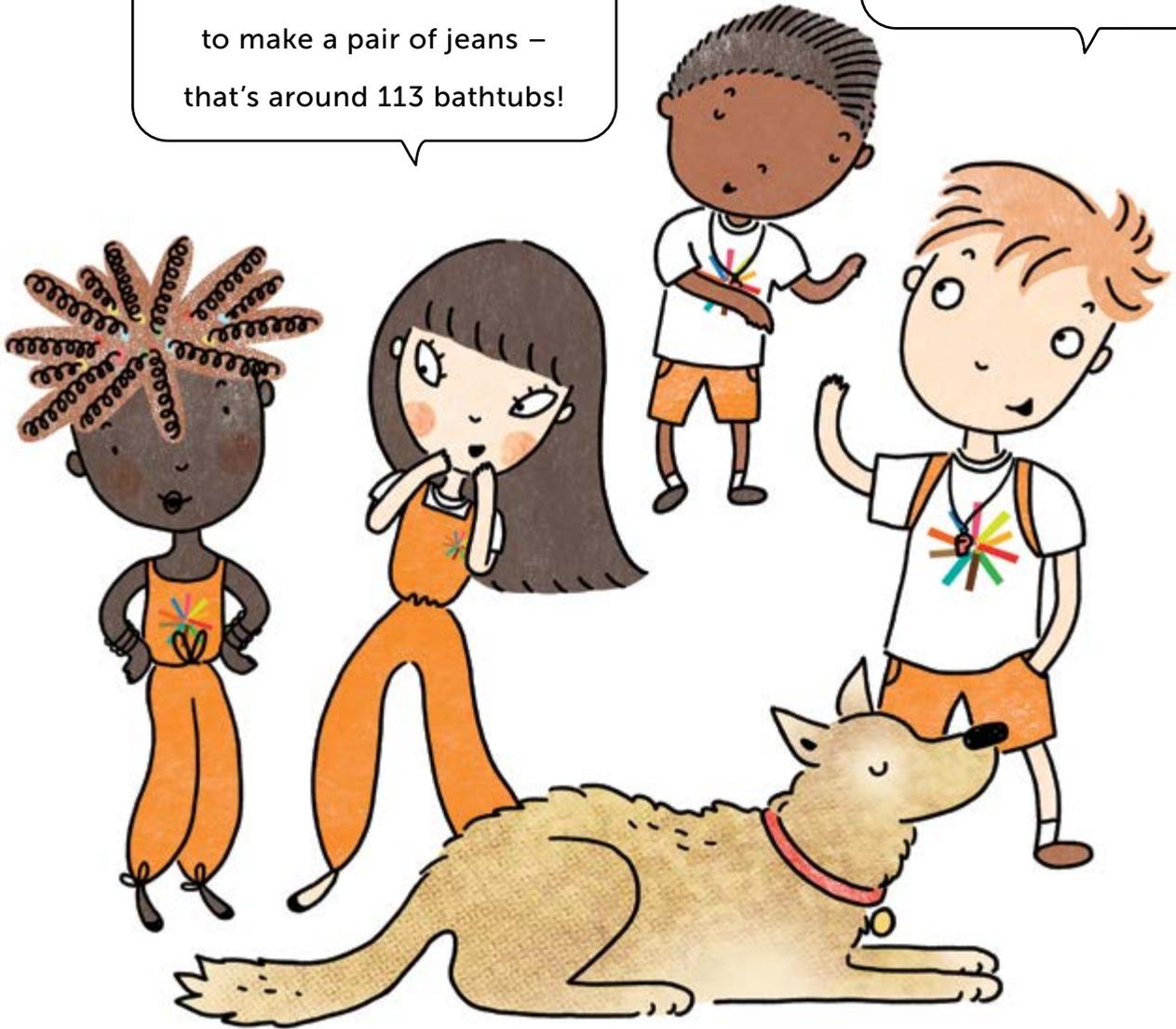
Certain types of clothes use more energy than others.

Polyester is made from oil, a fossil fuel.

'Fast fashion' clothes do not last long, and quickly become trash.

It takes 9,000 litres of water to make a pair of jeans – that's around 113 bathtubs!

How can we look cool AND be sustainable?



LITTLE ACTS

1. Make second hand clothes trendy!



3. Hang your clothes out, instead of using the dryer.



2. Have fun redesigning!



4. Look for natural fabrics like organic cotton or linen.



5. Borrow clothes.

Learn to sew on a button or patch up a hole. Clothes will last longer, and you might even feel like a proper fashion designer!

Host a clothes swapping party. It's like shopping, but without spending money!



Our stuff travels a long way to get to us and uses a lot of energy.

Things like toys are made in factories, shipped in trucks and planes, and delivered to stores leading to a lot of greenhouse gases.

Plastic ends up in the ocean and gets into the bloodstream of sea creatures and humans.

Less is more when it comes to keeping our planet healthy.

How can our actions be less wasteful?



LITTLE ACTS

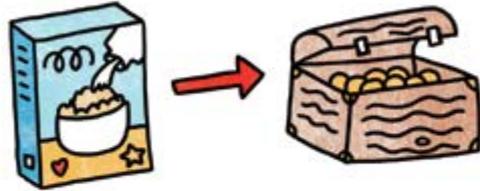
1. Avoid buying new things – charity or thrift stores are great places to shop!



2. Cut down on plastic you only use once.



3. Reuse! Turn a cereal box into a treasure chest.



4. Visit a friend or have an adventure, instead of more shopping.

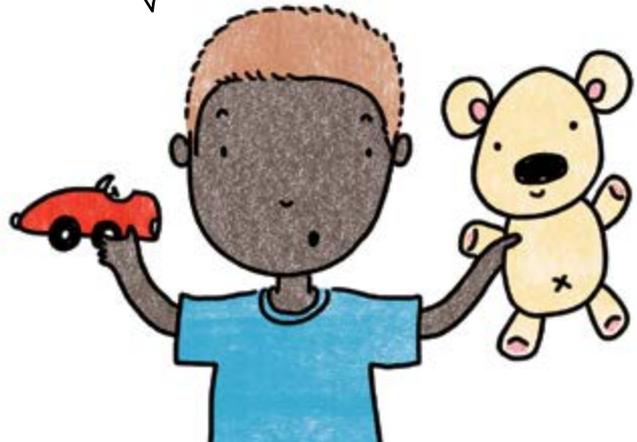


5. Donate!



Choose cool stationery made from sustainable materials. Use them again whenever possible!

Give old toys away. Share the fun with someone who really needs it.



What a week for COPE with so much new information to digest!

Let's think of ways we can all
ACT NOW, FOR TOMORROW!

We'll start right away!

I'll shut down my
computer every night.



I'll make a 'worm farm'
with all the food scraps!

I'll donate my old skate-board,
so someone else can use it.

I'll always reuse
my water bottle.



They finally arrived safely back at The COPE Academy,
to find their snowman still standing.

Let's spread the word!

Together, we can
make a difference.





We've got this!

It's not too late.

T H E C O P E C O N T R I B U T O R S



**Martha
Keswick**

**COPE
AUTHOR**

Martha Keswick is the author of the popular bilingual *Max and Mei* picture book series, the factual *Zhongguo Mingren* series, and the action packed *Pangu* comic book series, all designed for children learning Chinese as a foreign language. Martha's work for the Keswick Foundation often supports disaster related projects in China.

Martha lives in Hong Kong, China with her husband, their four children and two dogs.



**Mariko
Jesse**

**COPE
ILLUSTRATOR**

Mariko Jesse studied at Central St Martins, where she went on to be an Associate Lecturer. She is an award-winning illustrator, working on a variety of projects around the world from picture books to ceramics.

Mariko lives in San Francisco, USA where she is always in a state of preparedness for earthquakes.



**Timothy
Sim**

**COPE
EDITOR**

Professor Timothy Sim started out as a social worker, specializing in family therapy. Tim focused on Disaster Risk Reduction after working with children, their families, schools and communities affected by the horrific Wenchuan earthquake in 2008. He has written many books in Chinese and English.

Tim is currently a professor at the Singapore University of Social Sciences.



This latest book is testament to COPE's ability to explain a complex subject in climate change, which can lead to more frequent hazards such as floods and heatwaves. Through a fun, educational narrative, children are empowered to make positive changes and be ready to act now, for tomorrow.

— **PROFESSOR CELESTE SAULO**
Secretary General, World Meteorological Organisation

Young people are not just affected by climate change—they are a powerful force for shaping our future. Let's equip them with knowledge, courage, and hope.

— **MARCO TOSCANO - RIVALTA**
Chief, UNDRR Regional Office for Asia and the Pacific

Climate change is one of the most important social issues of our time. We can all help reduce greenhouse gas emissions by using fewer fossil fuels. Walk whenever you can. Respect and care for the nature around you. Small steps can make a big difference.

— **PROFESSOR LENA DOMINELLI**
Faculty of Social Sciences, Stirling University

The COPE Climate Change book presents complex concepts such as global warming, its causes and impacts, in a clear and accessible way. It highlights key actions both children and adults can take to help reduce climate change, empowering us to act now.

— **JEKULIN LIPI**
Global Focal Point, Sendai Children and Youth

At The TENG Company, we believe creativity and culture are tools for change. By creating the Jingles to accompany the COPE books, we empower young minds through stories and song, nurturing a generation ready to act for a better tomorrow.

— **DR SAMUEL WONG**
Co-Founder & Creative Director, The TENG Company

COPE Academy, Sichuan Province.

Under Grand Mistress Fu, the COPE squad receive intensive training on disasters and how to be prepared. Join their special mission to a United Nations Climate Conference to find out more about climate change and how it connects with increasing natural hazards... and disasters.



COPE TITLES

- Earthquakes
- Floods
- Cyclones
- Storm Surges
- Landslides
- Wildfires
- Droughts
- Volcanoes
- Heatwaves
- Blizzards
- Avalanches
- Tsunamis
- Climate Change**



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*Make the Difference.
Be Ready!*