



# **DISCOVER OUR PLACE: SCOTT BASE!**

**ANTARCTIC ACTIVITY BOOK**

Name:



**Antarctica  
New Zealand**





**Antarctica  
New Zealand**

## ANTARCTICA AND THE SOUTHERN OCEAN – VALUED, PROTECTED, UNDERSTOOD

Antarctica New Zealand looks after everything Aotearoa does on the icy continent. We take scientists to Scott Base and help them with their world-leading research. A big part of our mahi is to protect the environment. We want everyone to value, protect and understand Antarctica and the Southern Ocean.

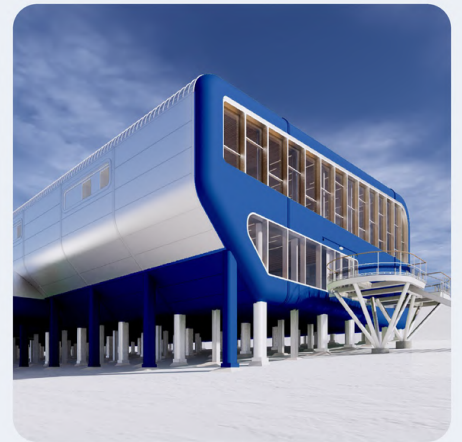
## WE NEED YOU!



**KĀKĀRIKI GREEN**



**KARAKA ORANGE**



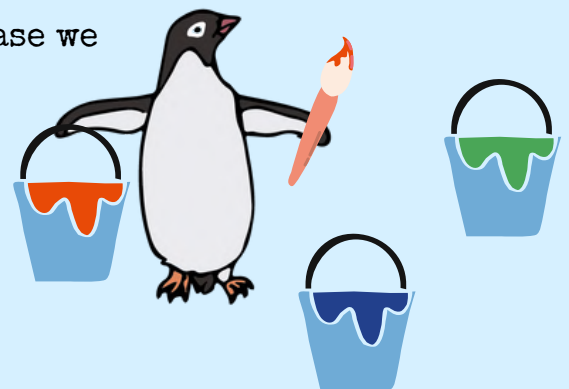
**KIKORANGI BLUE**

Before we even get started on learning about Scott Base we want YOU to have your say!

**HELP US CHOOSE THE COLOUR OF SCOTT BASE,  
AOTEAROA NEW ZEALAND'S COOLEST PROJECT.**

Vote now at:

<http://www.colourscottbase.co.nz/>



Can you find the lost Adélie penguin on the front cover?

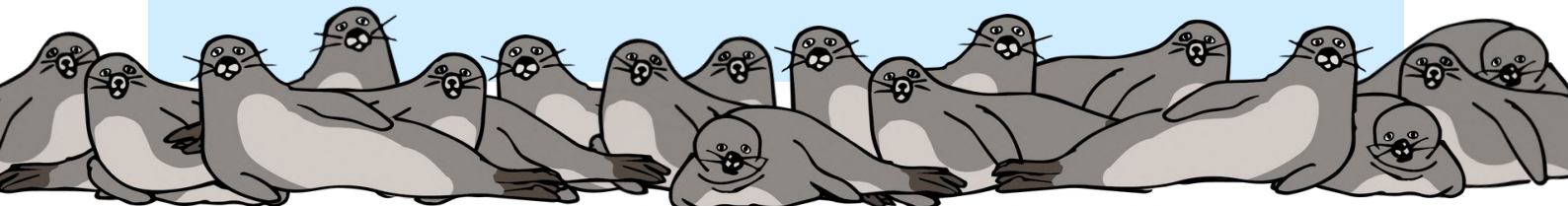
'DISCOVER OUR PLACE: SCOTT BASE!' BOOKLET  
CREATED BY **ANZAC GALLATE** FOR ANTARCTICA  
NEW ZEALAND

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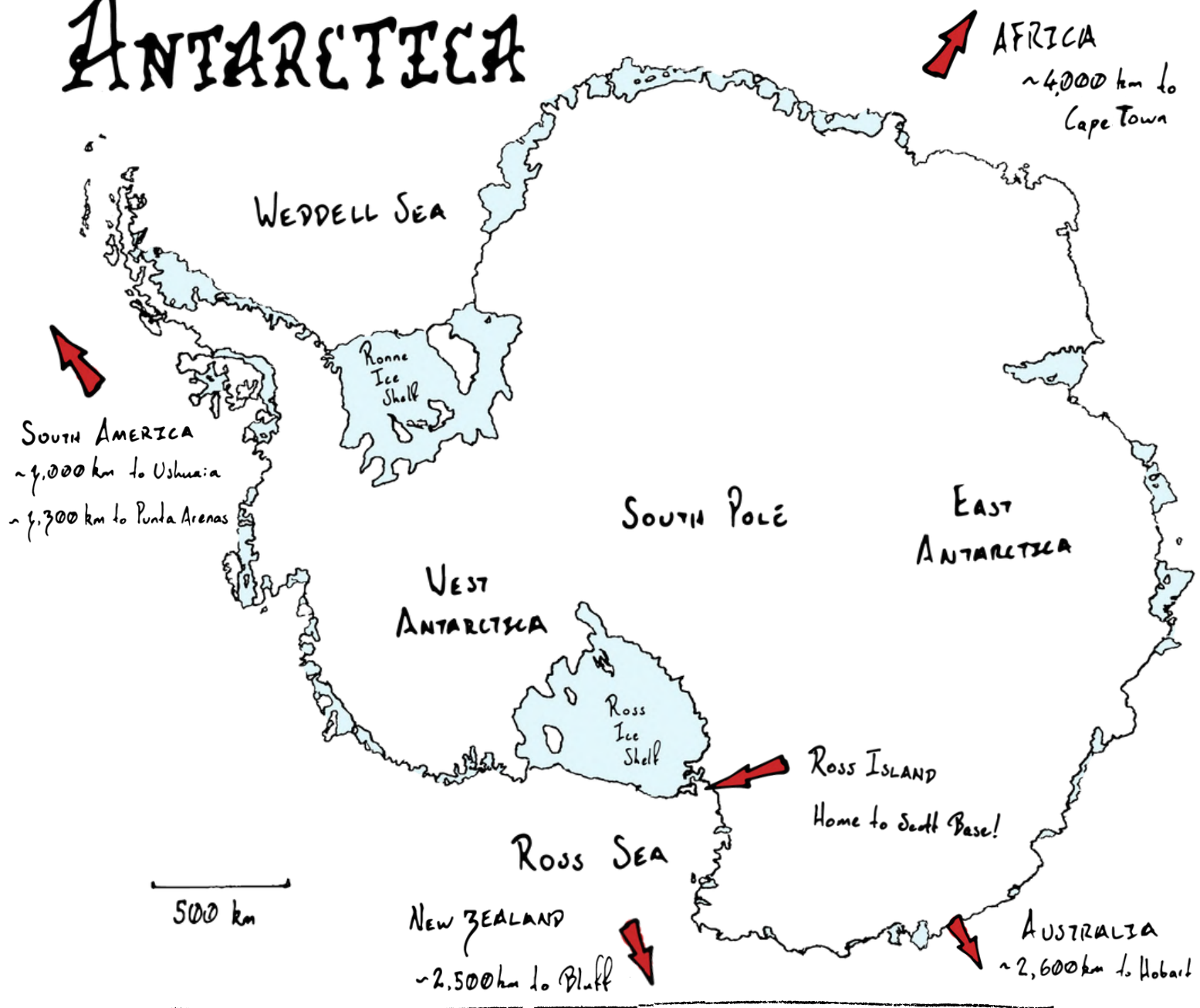


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\*Match the numbered snowflakes throughout this book with extra resources on page 25



# ANTARCTICA



## Freezing Fun Facts:

- A giant, icy continent at the bottom of the world, Antarctica is the driest, coldest, and windiest of the seven continents. Temperatures can reach as low as  $-89.6^{\circ}\text{C}$ , winds can blow up to 320kms/hr. The lack of precipitation on the continent makes Antarctica the world's largest desert!
- Antarctica is, on average, 2200m high which makes it the world's highest continent.
- Antarctica is the fifth largest continent, almost double the size of Australia, and 52 times the size of New Zealand!
- Antarctica isn't owned by any country, and is instead governed internationally through the Antarctic Treaty System, declaring Antarctica a place of peace and science. Today, many countries operate research stations in Antarctica to study this unique environment, check them out on the next page.
- In winter, sea ice forms in the waters around Antarctica, and doubles the continent in size from 14 to around 29 million square kilometers!
- While considered a desert, Antarctica contains 90% of the world's ice.

# FLAG SCRAMBLER!

Can you unscramble the names of countries with stations in Antarctica and match them to their flags?

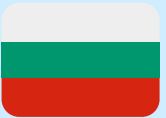


IEAATRGNN

Argentina



SARITLAAU



ALRSUBE



MILGEUB



ZIBLAR



ULBAGAIR



ELCIH



HICNA



IACHZEC



UDRACOE



FNNIDAL



FECANR



ANGMYER



NIDAI



TLIAY



AJNPA

Japan



EARLNTDEHSN



ENW EDNZALA



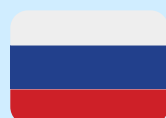
YWONRA



PRUE



DNALPO



SURASI



THSOU AARFCI



OUTSH KAERO



SPINA



NDEWSE



RIENAKU



EIUNTD OMIDGKN



ITUDNE STTSAE



RYUAGUU



# SCOTT BASE - HOME ON THE ICE!

As New Zealand's only research station in Antarctica, Scott Base is a hub for scientists from New Zealand and across the globe, who come together to carry out some of the **most important research in the world**.

Scott Base was built to enable New Zealand to play its part in the Commonwealth Trans-Antarctic Expedition (TAE), officially opening on the 20th of January, in 1957! Scott Base then became a permanent research station in 1962. Since then, a lot of changes have been made to the base to host research activity, with many buildings being added and removed. Only three original buildings remain today, including the restored TAE Hut, built by Sir Edmund Hillary and his team in 1957.



## Staying at Scott Base

Scott Base operates all year long. Over the summer, the research station is a bustling hub of scientists and staff, with room to accommodate 86 people at a time. By the end of the summer, over 300 people will have stayed at the base, carrying out research and supporting operations. Usually only around 12 people stay for the winter, helping to run the station and collect data for research projects. **Check out the Scott Base timeline here.**

## EXPLORE SCOTT BASE!



### Station Cameras

Did you know there are cameras around Scott Base that regularly upload photos to the internet? Scan this QR code or go to **[antarcticanz.govt.nz/scott-base/webcams-weather](http://antarcticanz.govt.nz/scott-base/webcams-weather)** to check them out! What do you notice about the photos? What is the weather like?



### Inside Scott Base

Want to explore more of Aotearoa New Zealand's home on the ice? Scan this QR code or go to **[antarcticanz.govt.nz/scott-base/facilities](http://antarcticanz.govt.nz/scott-base/facilities)** to take a 360° tour of the inside of the base! Click on the red dots on the bird's-eye-view of Scott Base. What do you notice about some of the rooms? What are they used for?





## Tropical Paradise

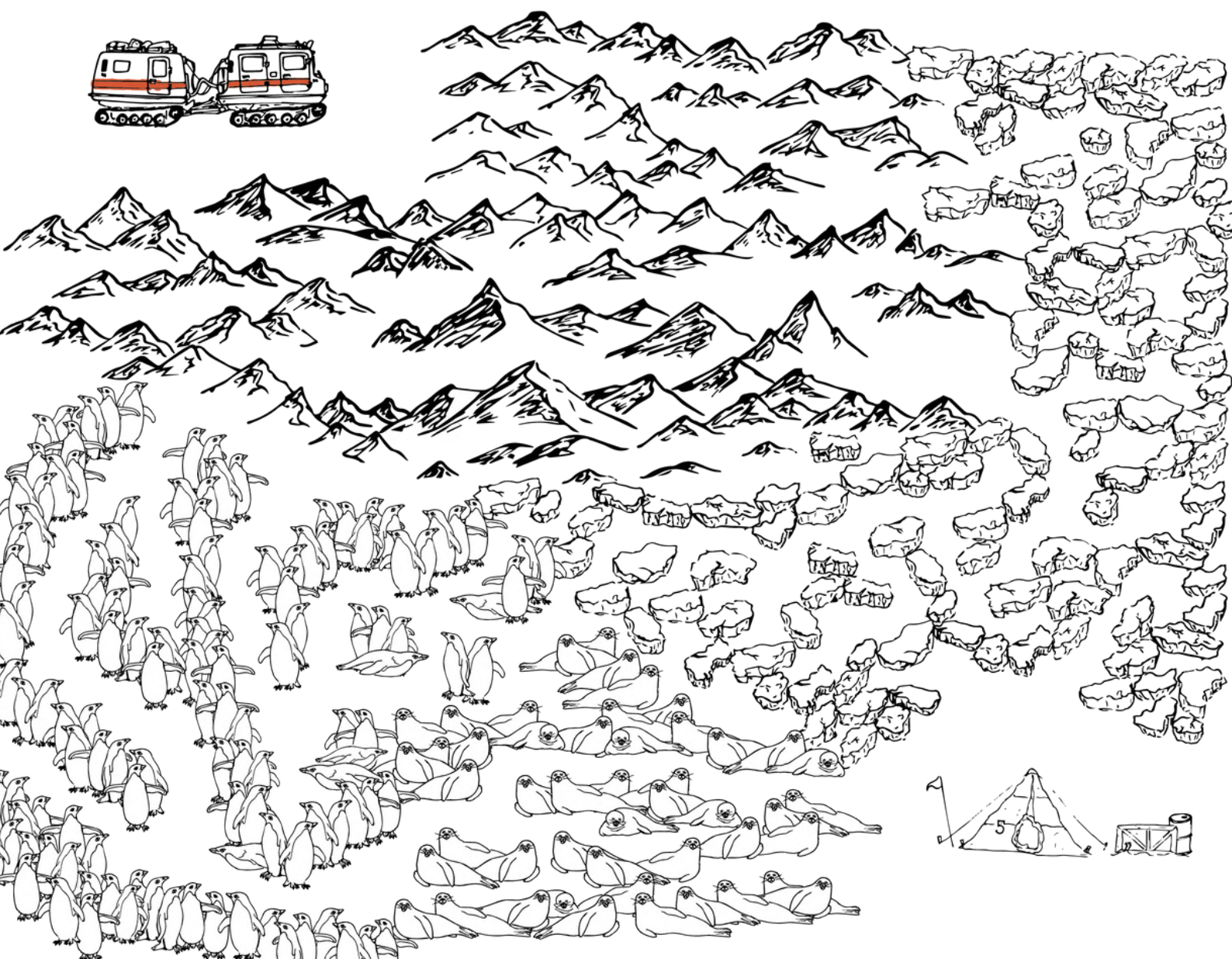
The lowest temperature ever recorded at Scott base was  $-57^{\circ}\text{C}$ , in 1968. The highest temperature ever recorded was  $8^{\circ}\text{C}$ ! Throughout the year, average temperatures rest around  $-19.8^{\circ}\text{C}$ . winter temperatures at the base are usually around  $-29^{\circ}\text{C}$ , and  $-11.3^{\circ}\text{C}$  in summer!

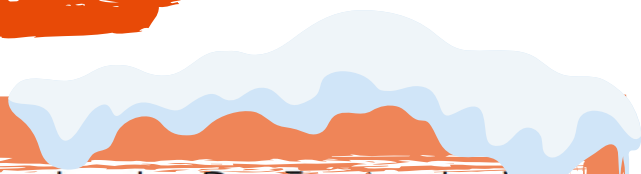
## Te Kaiwhakatore o Te Raki (Navigator of the Sky)

In front of Scott Base, Te Kaiwhakatore o Te Raki stands proud. The pouwhenua was carved by Ngāi Tahu master carver Fayne Robinson, and personifies exploration, adventure and discovery. The upper face looks up into the stars in the sky for navigation, while the lower face looks to the South Pole. Decorations of stars, water, waves and Antarctic animals represent nature and how important it is to protect the environment.

# ANTARCTIC LABYRINTH!

Can you get the Hägglunds through the Antarctic mountains, ice, seals and penguins to reach the field camp?





E	H	Z	D	U	S	Z	H	H	R	S	L	I	D	E	A	I	W
E	N	E	F	S	S	F	C	Ä	S	E	J	O	E	V	T	H	Q
M	C	E	X	S	L	C	R	P	G	N	S	A	M	T	Y	M	E
P	O	S	R	P	K	I	I	O	E	G	O	E	C	I	J	S	A
T	N	U	U	G	E	I	P	E	Z	N	L	W	A	K	U	V	D
Y	S	K	W	P	Y	D	D	J	N	E	G	U	S	R	E	A	J
S	T	F	A	W	P	S	I	O	M	T	N	U	N	T	C	T	G
N	R	S	D	O	O	L	H	T	O	R	I	Y	I	D	O	H	N
F	U	R	D	K	K	Y	I	I	I	V	X	S	O	N	S	R	G
L	C	F	L	I	Z	P	N	E	P	O	J	X	T	R	S	O	M
G	T	P	E	M	L	F	W	H	S	M	N	W	G	S	G	M	K
B	A	S	E	V	F	W	A	S	T	E	Z	X	G	A	S	M	N



BASE  
CONSTRUCT  
EMPTY  
ENERGY

EXPEDITION  
FROZEN  
HÄGGLUNDS  
JACKET

**PENGUINS  
RESEARCH  
SCIENTISTS  
SHIP**

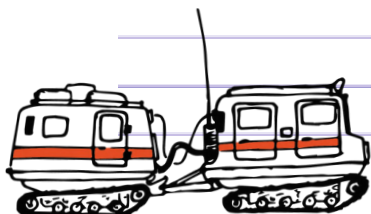
SKIDOO  
SLIDE  
SLIP  
SNOWSTORM

**SUPPLIES**  
**WADDLE**  
**WASTE**



**NOW USE THE WORDS YOU'VE FOUND TO CREATE A SHORT STORY ABOUT YOURSELF ADVENTURING AROUND SCOTT BASE!**

(You might like to use another page)

A simple line drawing of a white van, viewed from the side, with a black antenna extending upwards from its roof. The van is positioned on the left edge of the page, partially cut off. The rest of the page is filled with horizontal blue lines for writing.



# THE NEW SCOTT BASE

9

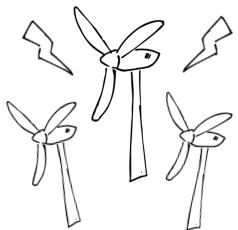


## Scott Base is getting an upgrade!

Over the next few years, Antarctica New Zealand will replace the ageing buildings at Scott Base. The new base will be a safe, modern and more sustainable research station that will support New Zealand's work in Antarctica for the next 50 years!

## Building a ship on the ice!

Building a new research station safely and efficiently in the harshest, driest, coldest and windiest environment on Earth is no easy task! In fact, the Scott Base Redevelopment will be Antarctica New Zealand's biggest project ever! Many challenges simply come with the extreme remoteness of Scott Base. There are no supermarkets or hardware stores to nip into for supplies! No power grid, water supply or sewage system is available to connect to either. Instead, everything possibly needed for the construction of the new base has to be planned for. The finished base then has to be fully self-sufficient, like a ship on the ice!



## The southern-most wind farm in the world

There's no national electricity grid in Antarctica so Scott Base gets most of its electricity from three wind turbines which are shared with McMurdo Station (a large American Base 4km away). With plans to renew this wind farm during the redevelopment, the new base will be powered by up to 97% renewable energy.

## No yellow snow

To protect the unique Antarctic environment, getting rid of human waste also has to be thought about carefully. At Scott Base, human waste is piped from toilets to a Waste Water Treatment Plant, where the 'solid material' (poop!) is separated and then shipped back to New Zealand for disposal! Researchers out in the field also have to bring their waste back to the base!





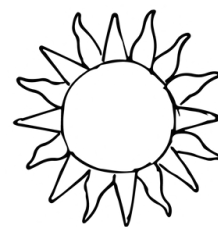


## The yearly grocery shop

In January, a year's supply of food arrives at the base by ship. Most of the food is canned, frozen or dried so it can be stored for a long time without going off. Food supplies are chosen carefully to also minimise packaging. Glass, paper, aluminium and tin are all separated to be taken back to NZ and recycled. The base produces its fresh water by taking the salt out of sea water. This is called 'reverse osmosis' ❄️ 3

## Bright midnight Sun

During most of the summer season in Antarctica, the sun never sets below the horizon. For staff and researchers to get some sleep, blackout curtains in bedrooms are a must! Winter brings several months of darkness, where the sun doesn't rise at all - fortunately there is a movie room at Scott Base! Can you find it on the 360° Base tour? (pg.6) (Hint: Check out the Hatherton Lab!)

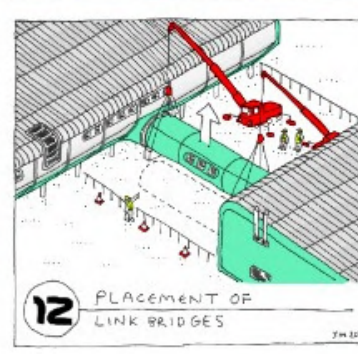
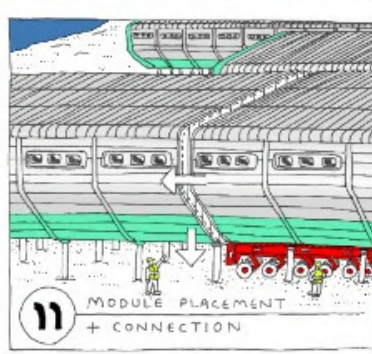
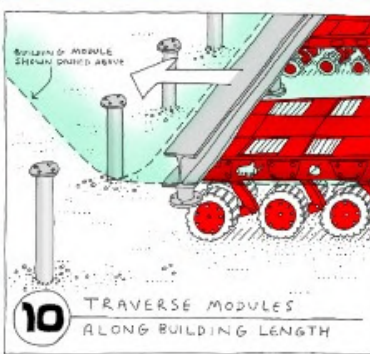
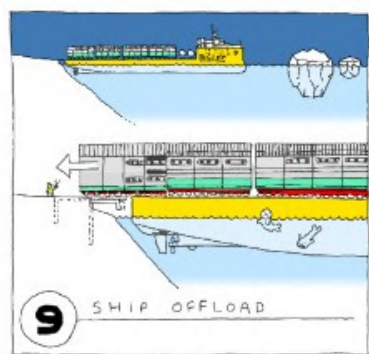
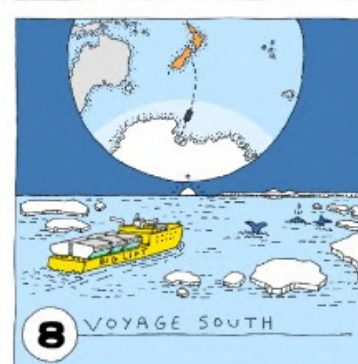
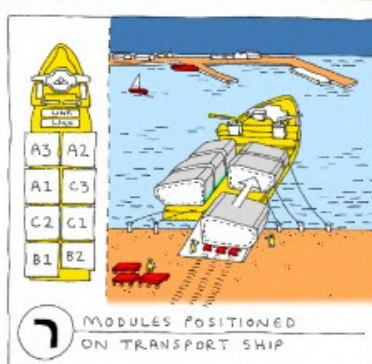
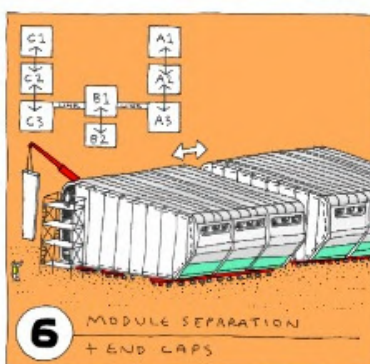
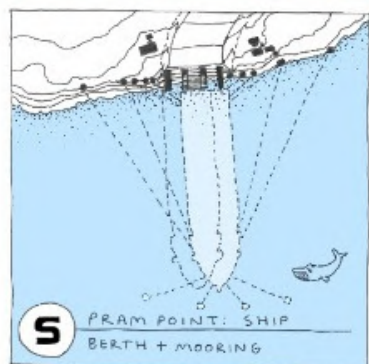
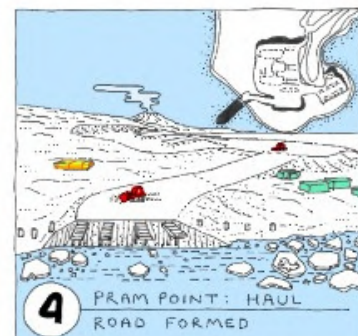
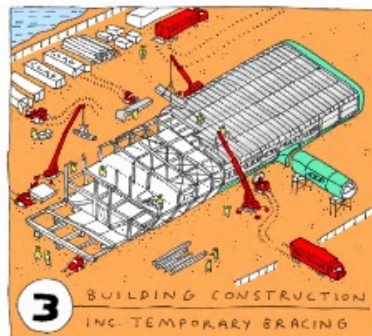
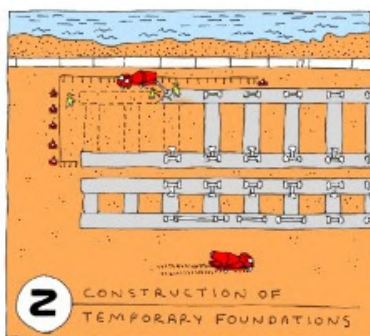
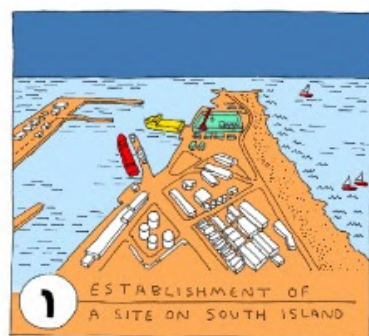


## Made in New Zealand

What's much easier than packing all the materials and tools needed for a new base, shipping them to Antarctica, and quickly building a research station in windy, cold, dry conditions before the 24-hour darkness arrives? Building a base in New Zealand! The three new buildings will be pre-constructed in Timaru, then shipped to Antarctica in sections on a huge transport ship.

When the sections arrive at Pram Point, remote controlled trailers (like big skateboards) will be used to move them to the site before reassembly.

Check out the comic below to find out more about moving entire buildings from New Zealand to one of the most extreme environments on the planet!

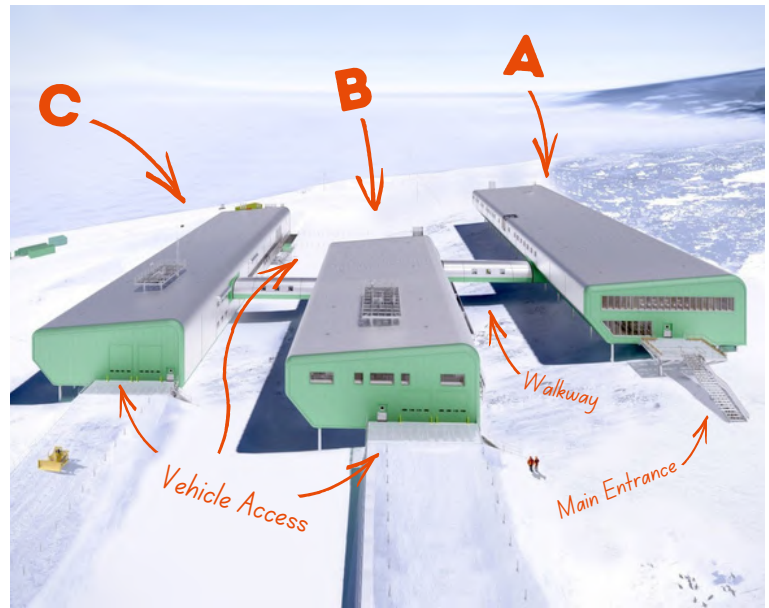




# INSIDE THE NEW BASE!

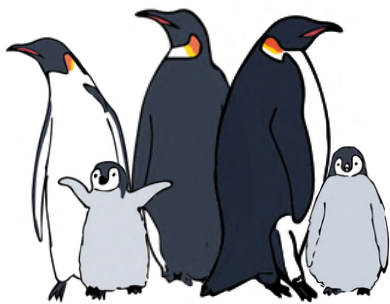
11

The new Scott Base will be made up of three buildings. The top building, **Building A**, will contain accommodation and living areas, including kitchens and a dining space. **Building B** will be for science labs, offices, and a preparation area for going out into field camps. **Building C** will contain storage areas, cargo, and workshops. **Walkways** will connect the three buildings to allow for access between them without needing to go outside. Multiple **vehicle entrances** will also allow for Antarctic vehicles to drive right into the base for loading and repairs! Take a virtual tour through the new Scott Base

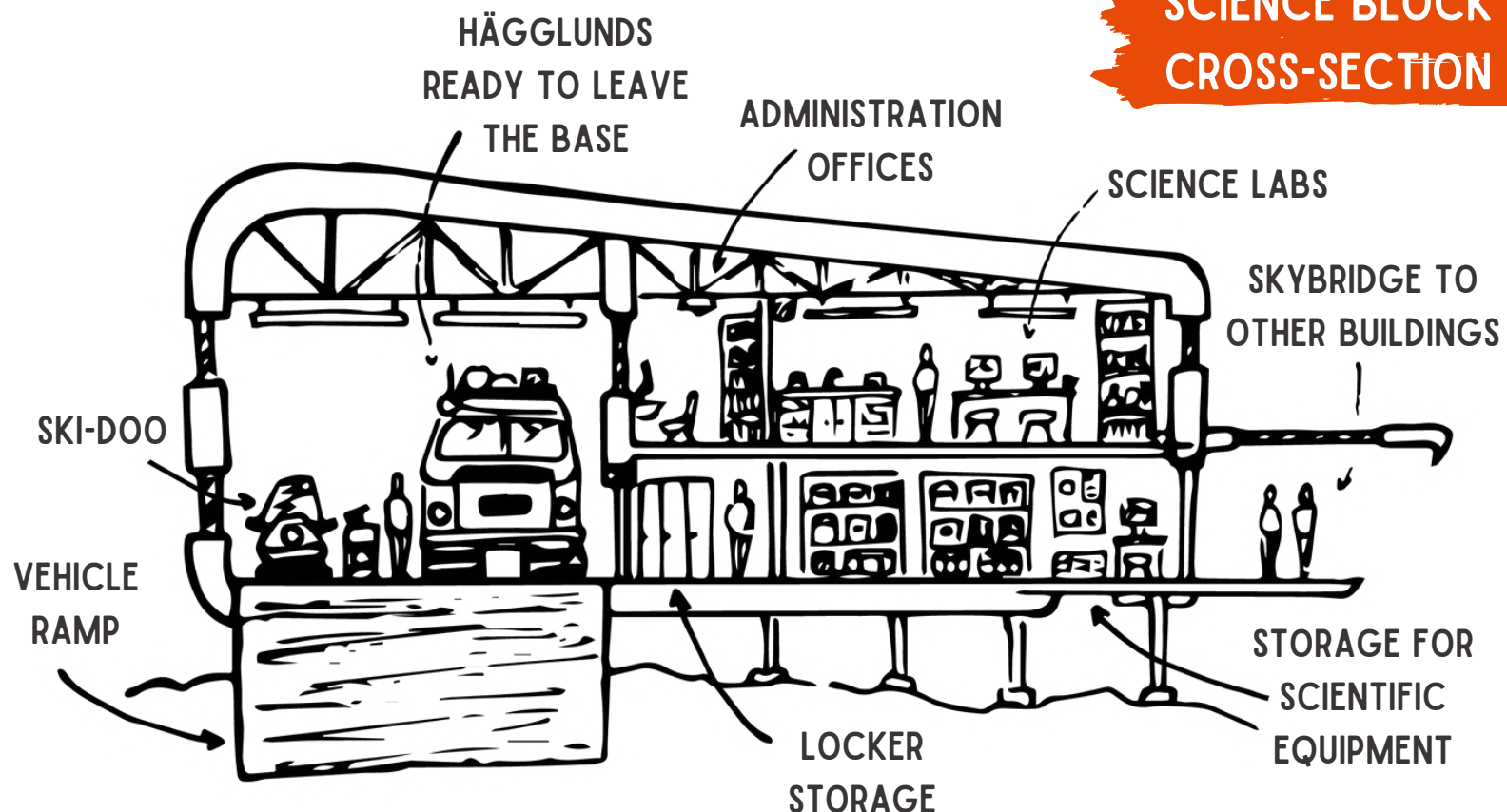


## Sustainability at the new base

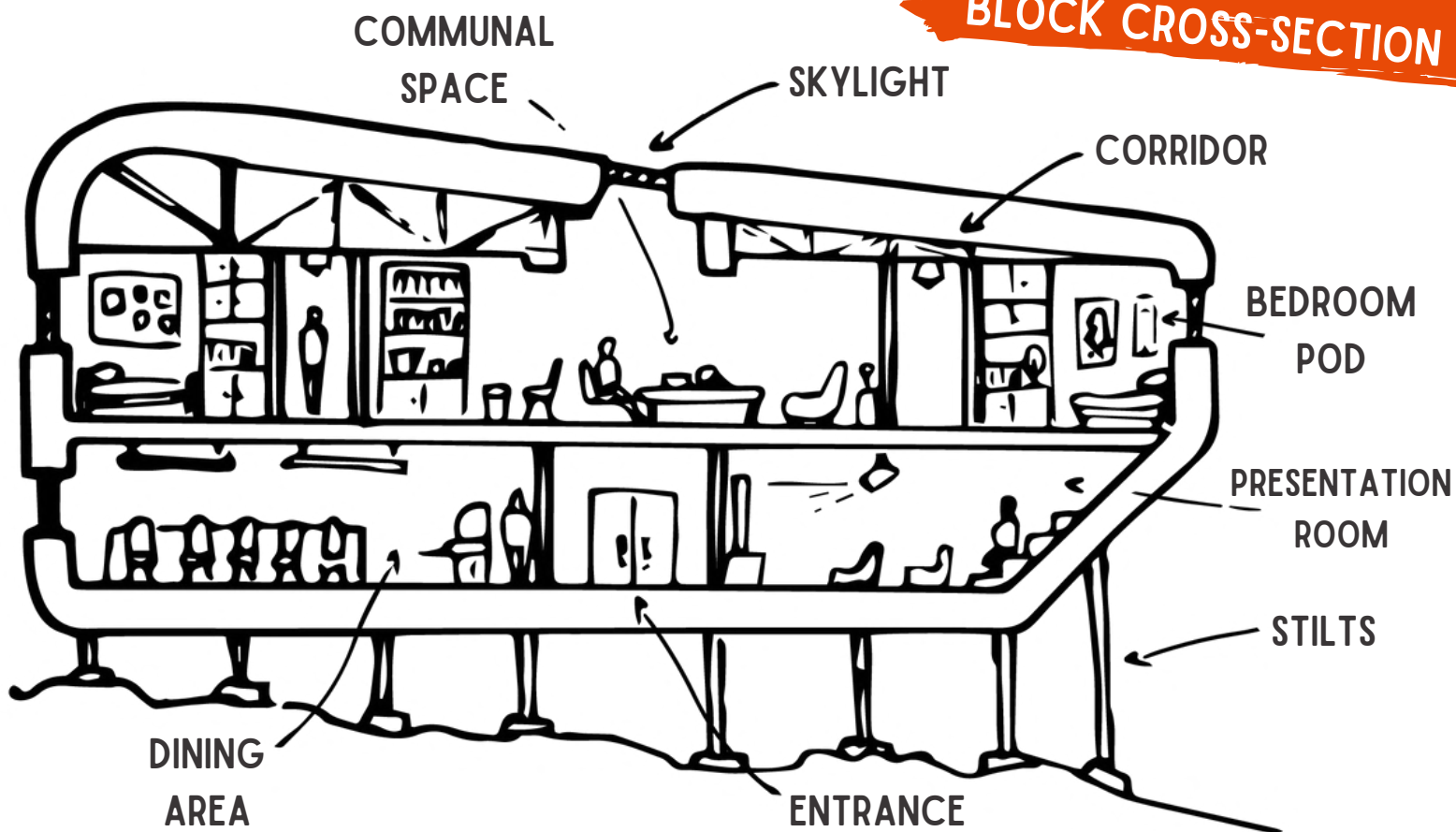
The new Scott Base puts a big focus on minimising New Zealand's impact on the unique Antarctic environment. We've already looked at a few ways to achieve this, including using renewable energy, and making sure waste leaves the continent. Other methods include carefully monitoring water and power use to improve efficiency. Triple-glazed windows and insulation will also help to minimise heat loss, while the interconnected buildings are heated to the same temperature.



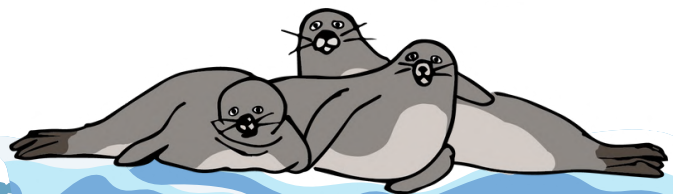
## SCIENCE BLOCK CROSS-SECTION



# ACCOMMODATION BLOCK CROSS-SECTION



## MATCH THE ROOMS!



A research station requires all sorts of different rooms to run smoothly and support research work.  
Can you match some of these room examples to the reason they are important?

LIVING QUARTERS  
SCIENCE LABS AND OFFICES  
MEDICAL ROOM  
DINING AREA  
GENERATOR ROOM  
WATER PLANT  
VEHICLE WORKSHOP  
LOCKER ROOM  
CARGO AREA  
GYM  
MOVIE ROOM

To provide medical aid to sick or injured base crew

So staff and researchers have a place to sleep

For entertainment and relaxation

To store and organise bulky outdoor clothes

To manage and store supplies

So base crew can exercise to stay fit and healthy

For scientists to manage and conduct research work

To provide a place to eat

To manage and generate electricity

For repairing base vehicles and equipment

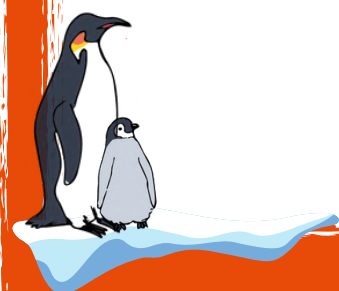
To ensure a fresh water supply

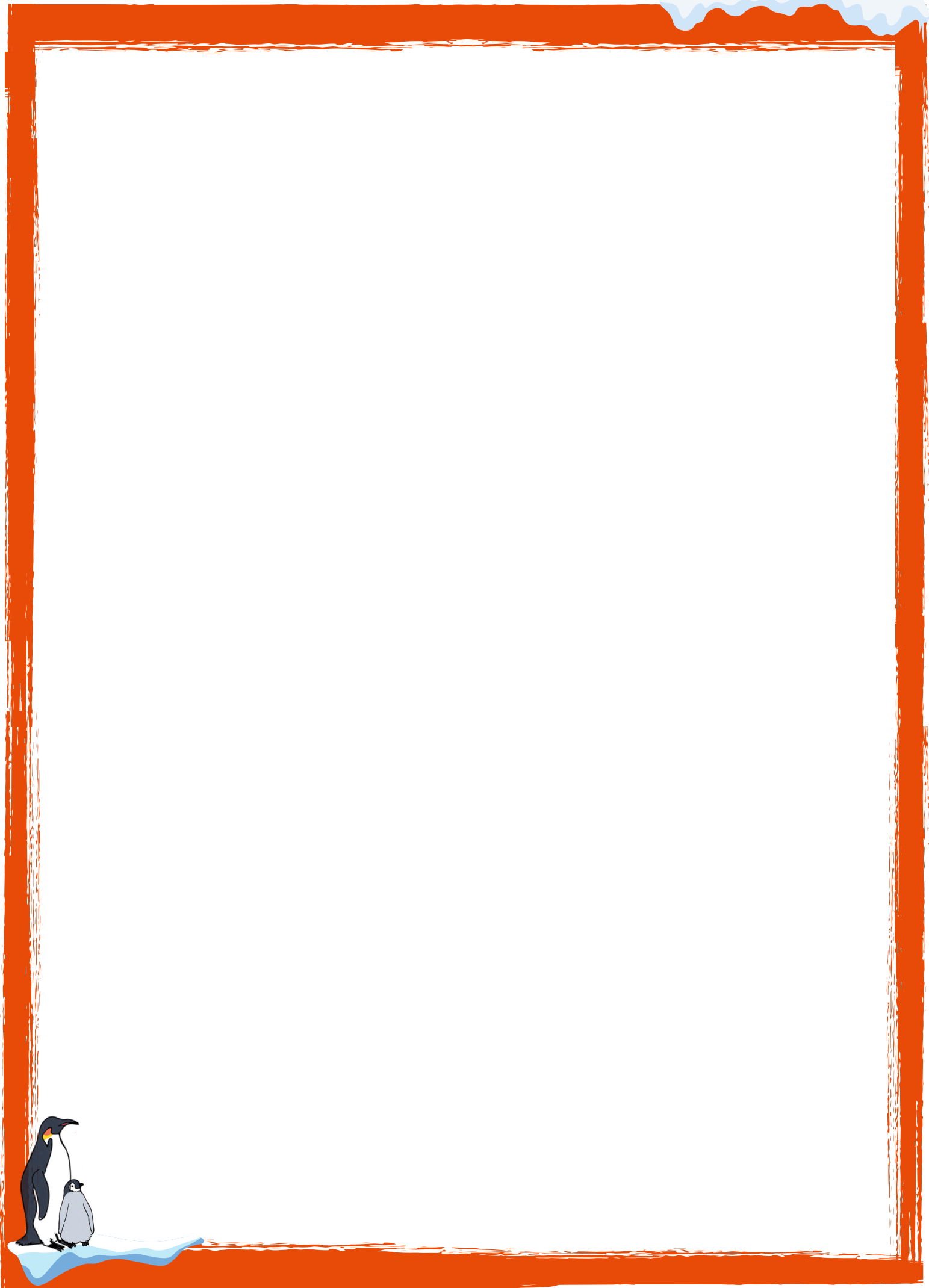


# A BASE OF YOUR OWN!



Now it's time to create your own base! You might choose to draw a cross-section like the ones above, or perhaps from a bird's-eye view perspective. Think about what rooms you might need for your base. How will you get your electricity, collect water and manage waste? You might like to do a brainstorm before you get started! ❄️









# 5 WORKING IN ANTARCTICA!



It takes a lot of people with different interests and skills to run a research station down in Antarctica. While researchers and scientists arrive and depart from the base to carry out scientific work, a whole team is needed to support them. Without running water, food, electricity, communications, transport, planning and a bed to sleep in, it would be awfully hard to get any research done! Most staff at Scott Base work there during the busy summer season, with a smaller team staying on to look after the research station and experiments over the winter.

In addition to its regular crew, the Scott Base Redevelopment will see many more staff travelling to the ice to help build the new research station.

## MATCH THE ROLES!



*It takes staff in all sorts of different roles to make sure Scott Base can run smoothly and important research can be carried out. Can you match the job examples below with their crucial role?*

**CARGO HANDLING**

**CARPENTER**

**CHEF**

**DOMESTIC**

**ELECTRICIAN**

**FIELD SUPPORT STAFF**

**MECHANIC**

**POWER ENGINEER**

**TECHNICAL SUPPORT**

**TELECOMMUNICATIONS  
TECHNICIAN**

**WATER ENGINEER**

*Taking care of all base electrics - heating, power, lights*

*Cleaning base facilities*

*Managing supplies and people arriving and leaving base*

*Make repairs to the base, manage firefighting gear*

*Plans and prepares meals for base crew*

*Maintaining satellite links and radiocommunications*

*Manage experiments, record data and support scientists*

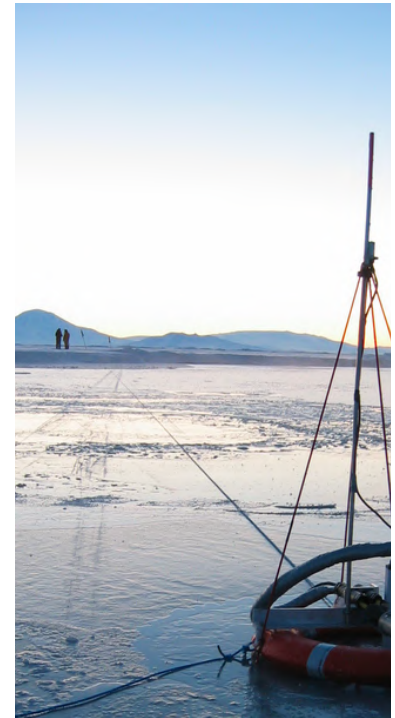
*Deploying people and gear out into the field*

*Maintains sewage treatment plant and water production*

*Repairing vehicles and equipment, training drivers*

*Manages power generation equipment*

Since the days of the first Antarctic explorers, scientists have been studying the extreme environment, unique species, and breathtaking landscapes of Antarctica. More recently, climate change has become a main focus of our Antarctic researchers, who are working hard to tackle big questions. The answers to these questions will help us plan for the future.



## A Warming World – Climate Change ❄️7

Climate describes usual weather patterns over a long period of time. While changes in climate can occur naturally (usually over hundreds of millions of years), recent and rapid changes in climate have been caused by the release of greenhouse gases by humans. These greenhouse gases trap heat in the atmosphere (the greenhouse effect) resulting in rising ocean and air temperatures. To learn more, head to

<https://www.climate-change-guide.com/greenhouse-effect.html>



## An Antarctic Planet

Antarctica has more of an impact on our daily lives than you might think! Through several different processes, the icy continent helps to regulate the atmospheric and ocean temperatures around the world:



The big, white continent acts like a mirror that reflects the sun's energy back into outer space! This means land, oceans and air do not get as hot.



The cold air in the sky above Antarctica sinks to the ground and becomes freezing winds that flow across land and over the sea – this helps form sea ice which keeps the Southern Ocean cold.



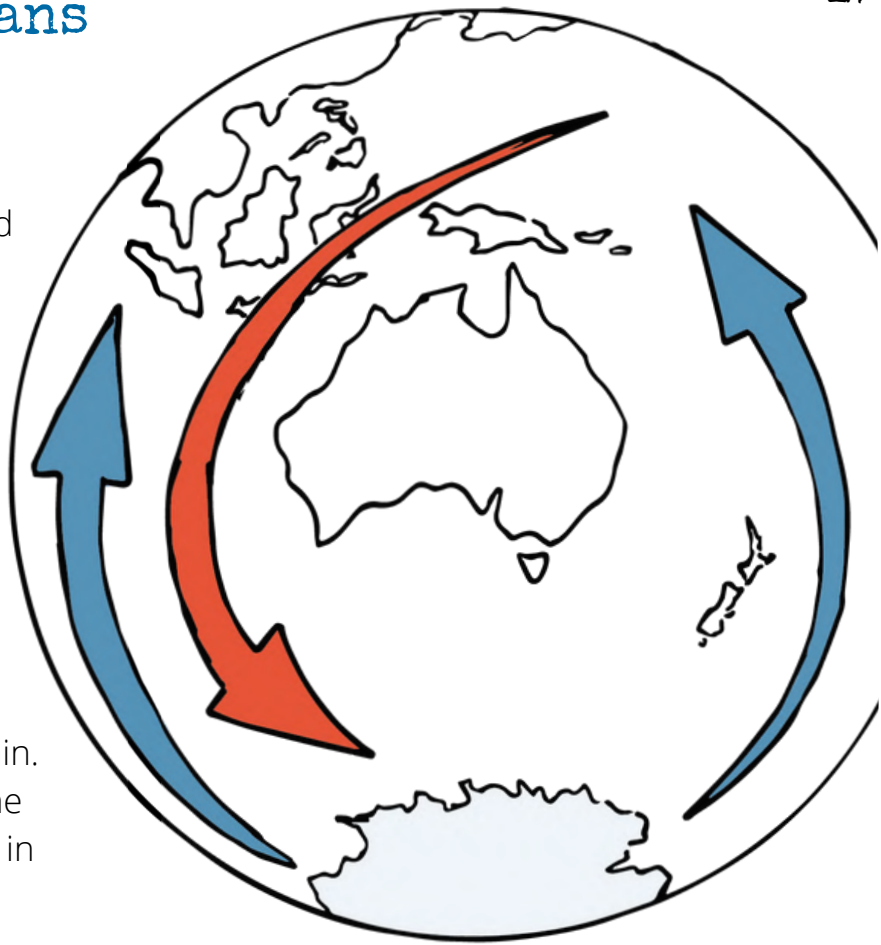
Most water vapour in Antarctica turns to solid ice. This means it isn't up in the atmosphere where it can trap heat as a greenhouse gas.



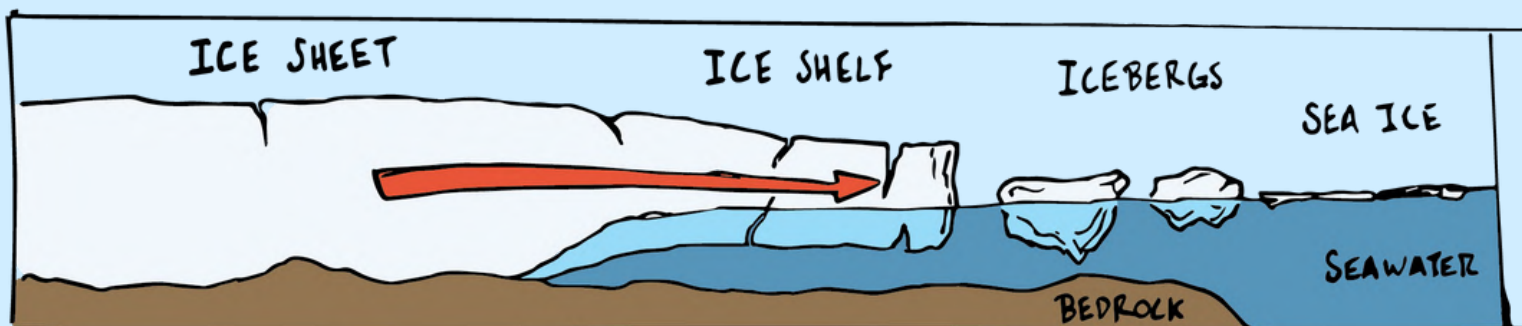
# A Commotion in the Oceans

**Most of all, Antarctica plays a big role in driving the world's ocean currents.**

When surface water in the Antarctic gets cold enough, seawater freezes into sea ice. As most of the salt is left behind, the surrounding water then becomes saltier. Water containing more salt becomes heavier, and sinks towards the ocean floor, cooling even more. The sinking water forms flows of extremely cold deep water that travel to warmer areas near the equator. As the water then warms, it begins to rise. Warmer water is then drawn back towards the poles to cool down and sink again. This process drives seawater around all of the world's oceans - and plays an important role in regulating the Earth's temperature!



## ICE SHEETS, ICE SHELVES, and SEA ICE – What's the difference?



### ICE SHEETS

Ice sheets are thick layers of ice that cover most of the Antarctic continent. They form from snowfall being compacted into ice over thousands of years. Unlike ice shelves or sea ice, ice sheets rest on land rather than on water. In some parts of Antarctica, ice sheets can reach up to 4.7km deep - that's 14.3 Auckland Sky Towers tall!

### ICE SHELVES

Ice shelves are extensions of ice sheets - where ice sheets meet the ocean and begin to float on water instead of resting on land. The Ross Ice Shelf, near Scott Base, covers an area almost twice the size of New Zealand!

### SEA ICE

Sea ice forms on the ocean's surface when water temperatures reach around  $-2^{\circ}\text{C}$  (the more salty water is, the colder it has to be to freeze!). As layers continue to form, sea ice can get several metres thick. In the winter, so much sea ice forms in the Southern Ocean that Antarctica doubles in size! In the summer, most of this sea ice melts.

# ICE SHEETS

## RESPONSE TO WARMING

Using satellite monitoring, scientists have found that Ice sheets in Antarctica are melting 6 times faster than they were only 30 years ago.

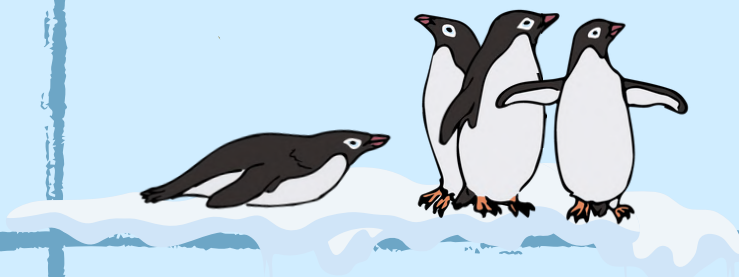
Melting ice on the underside of ice sheets can make them move faster towards the ocean. Passing by islands and rocky surfaces, they can fracture (crack) and weaken.

Melting water flowing downwards through the ice also leads to further melting and fracturing.

## IMPACT ON THE REST OF THE WORLD

Melting ice sheets contribute to sea level rise, where water is being added to the sea when before it was locked up on land. If all of Antarctica's ice sheets melted, the world's sea level would rise by around 60 metres!

Increasing sea level rise is a huge climate issue, causing more flooding, coastal erosion, and severe weather events around the world - likely to disrupt the lives of hundreds of millions of people.



# ICE SHELVES

Ice shelves, are very sensitive to changes in ocean temperatures. Warmer water can rapidly melt the undersides of ice shelves, thinning them, making them weaker, and allowing for more movement of the ice sheets behind them into the ocean.

With warming water temperatures, ice shelves are breaking apart more often, collapsing and disintegrating into the ocean.

Melting ice shelves don't directly cause sea level rise. The ice shelf is already sitting in the water, so when it melts, the water simply changes form - like melting ice cubes in a glass!

The loss of ice shelves is still very concerning though, as they prevent the ice sheets behind them from slipping into the ocean.

# SEA ICE

Using satellite images, Antarctic researchers have found that in some places, sea ice is melting more than usual, while in other parts of Antarctica it is increasing.

Melting sea ice is also a big problem! A reduction in sea ice reveals the dark surface of the water below which absorbs more of the sun's energy, heating the water and atmosphere even more!



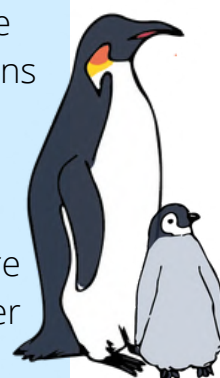
Antarctica is home to some truly incredible wildlife! Having adapted to life in the extreme cold, Antarctica's animal residents use insulating feathers, blubber and fur to keep warm. Despite these amazing adaptations, most animals in Antarctica are seasonal visitors, and do not stay for the winter as conditions are too harsh. Some of the most recognisable Antarctic animals are the many species of whales, penguins and seals which enjoy Antarctica's highly productive marine environment.



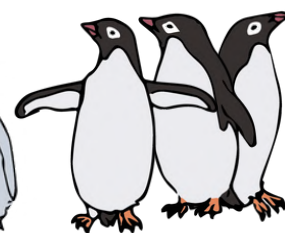
## Penguins

There are 5 main species of penguins in Antarctica: **emperor, king, Adélie, chinstrap** and **gentoo penguins**. **Emperor penguins** are the largest of these species, reaching up to 1.15 metres tall! Penguins have evolved many features that help them survive in Antarctica's harsh environments. Feathers and fat layers help to keep them warm, while their streamlined bodies help them to move at great speeds through the water to catch fish, squid, and krill. Penguins are mainly preyed upon by leopard seals, skuas, and some types of killer whales!

EMPEROR PENGUIN



ADÉLIE PENGUIN



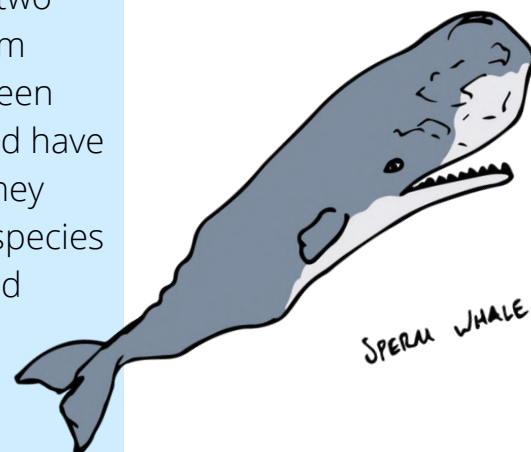
## Whales

Many different species of whale can be found in Antarctic waters. **Blue, southern right, sei, humpback, minke, orca** and **sperm** whales all take advantage of the high productivity of the Southern Ocean. Whales are mammals, meaning they all breathe air, are warm-blooded and give birth to live young. The immense size of whales, and their layers of blubber are what allows them to retain heat and survive in the coldest seas on Earth! All whale species belong to one of two groups: toothed or baleen. Toothed whales (like orcas and sperm whales) mainly eat fishes and squid, using their sharp teeth. Baleen whales (like the blue whale, humpbacks and right whales) instead have baleen plates (made of keratin, like fingernails and hair) which they use to trap food by passing water through their bristles. These species of whale don't spend all of their time in the Antarctic, and instead migrate south in the summer to take advantage of the massive amounts of krill, which feed on vast phytoplankton blooms.

HUMPBACK WHALE



SPERM WHALE





## Seals

There are six species of seal found in Antarctica: **Weddell, southern fur, southern elephant, Ross, crabeater** and **leopard seals**. **Antarctic fur seals** are the smallest species of Antarctic seal, while **elephant seals** are the largest - some males reach up to 3,700kg! **Crabeater seals** are the most common species of seal in the world (with a population of around 15 million!) and eat mainly krill. While most seals stick to fish, krill and squid, **leopard seals** are fearsome predators, also dining on penguins and other seals. **Weddell seals** are found further south than any other mammal, and are by far the cutest-looking Antarctic seal!



# CRITTER CREATOR

Now it's time to create your own Antarctic animal! Wildlife in Antarctica have evolved many special adaptations so they can survive in one of the most harsh environments on the planet - what adaptations will you add to yours? You might like to use some of the suggestions below and do some more research. Draw and label features of your creature in the space below or on a separate page!

CRUSTACEAN

FLIPPER

BLUBBER

WHAT DO THEY EAT?

FISH

FEATHERS

MIGRATION

HOW DO THEY STAY WARM?

MAMMAL

FUR

FLYING

HOW DO THEY MOVE AROUND?

BIRD

SCALES

SWIMMING

HOW DO THEY INTERACT WITH OTHER ANIMALS?



# ANTARCTIC FOOD WEB

## Licence to Krill

Most Antarctic species are very dependent on one tiny creature for survival: **Krill!** Krill are small shrimp-like marine crustaceans and rest near the bottom of the food chain, consuming phytoplankton and zooplankton (tiny organisms floating freely in the water). Krill make up a large part of the diet for most penguins, seals, whales, fish and seabirds in Antarctica, which makes them incredibly important to the entire Antarctic ecosystem!

## Food Webs

Food webs help to show the feeding relationships between organisms in a specific ecosystem. This simplified food web helps to show how important krill are to the Antarctic ecosystem. ❄️ 9

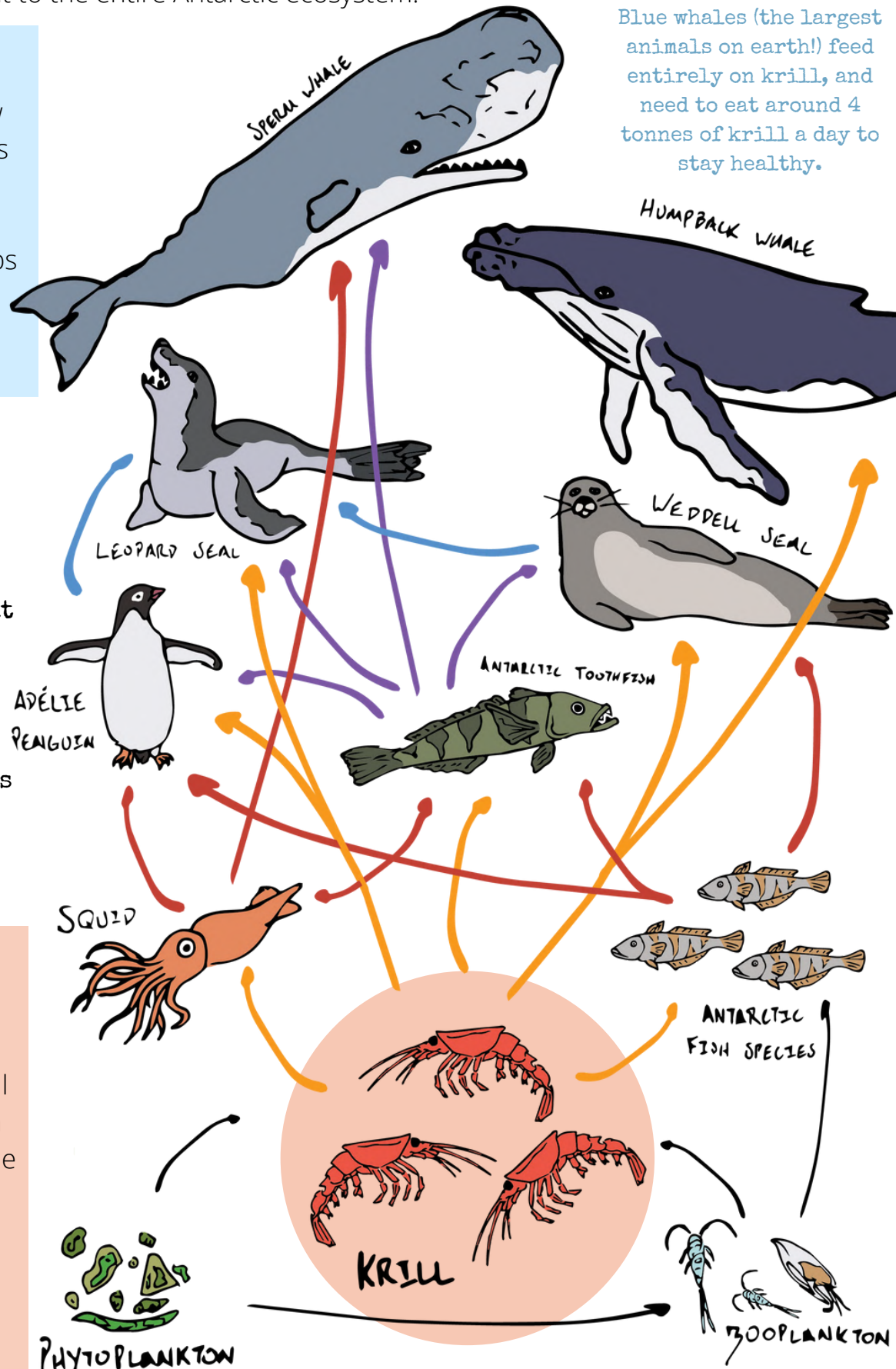
How many connections between krill and other organisms can you find?

How many organisms eat something else that eats krill?

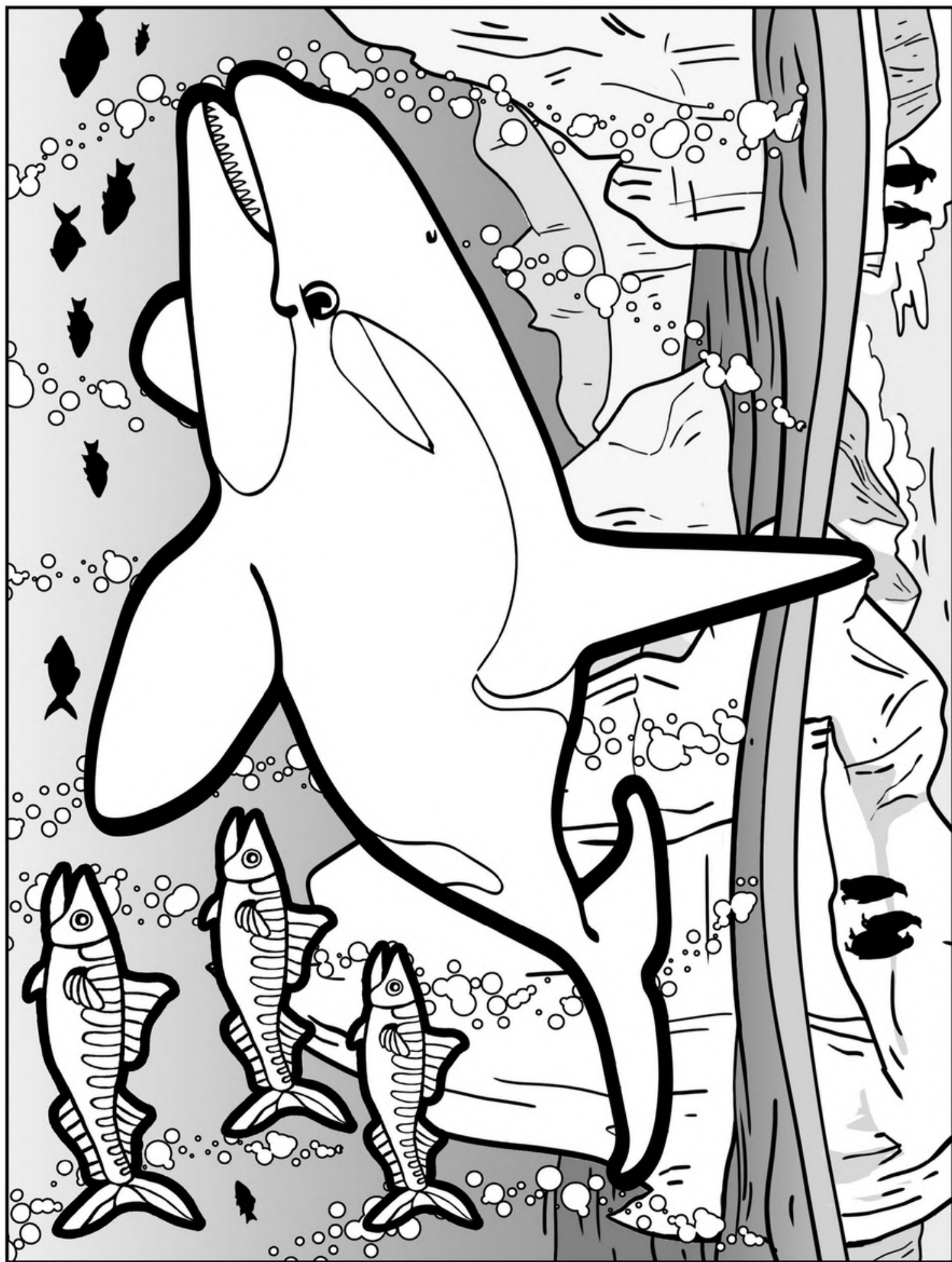
Where might an orca whale be placed in this food web? (You might have to do some research!)

## Crabby Climate

Scientists are very interested in the impact of climate change on krill populations. Krill feed on algae and plankton on the underside of sea ice. A reduction in sea ice due to warming has already seen a decline in krill populations.

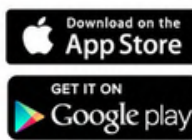




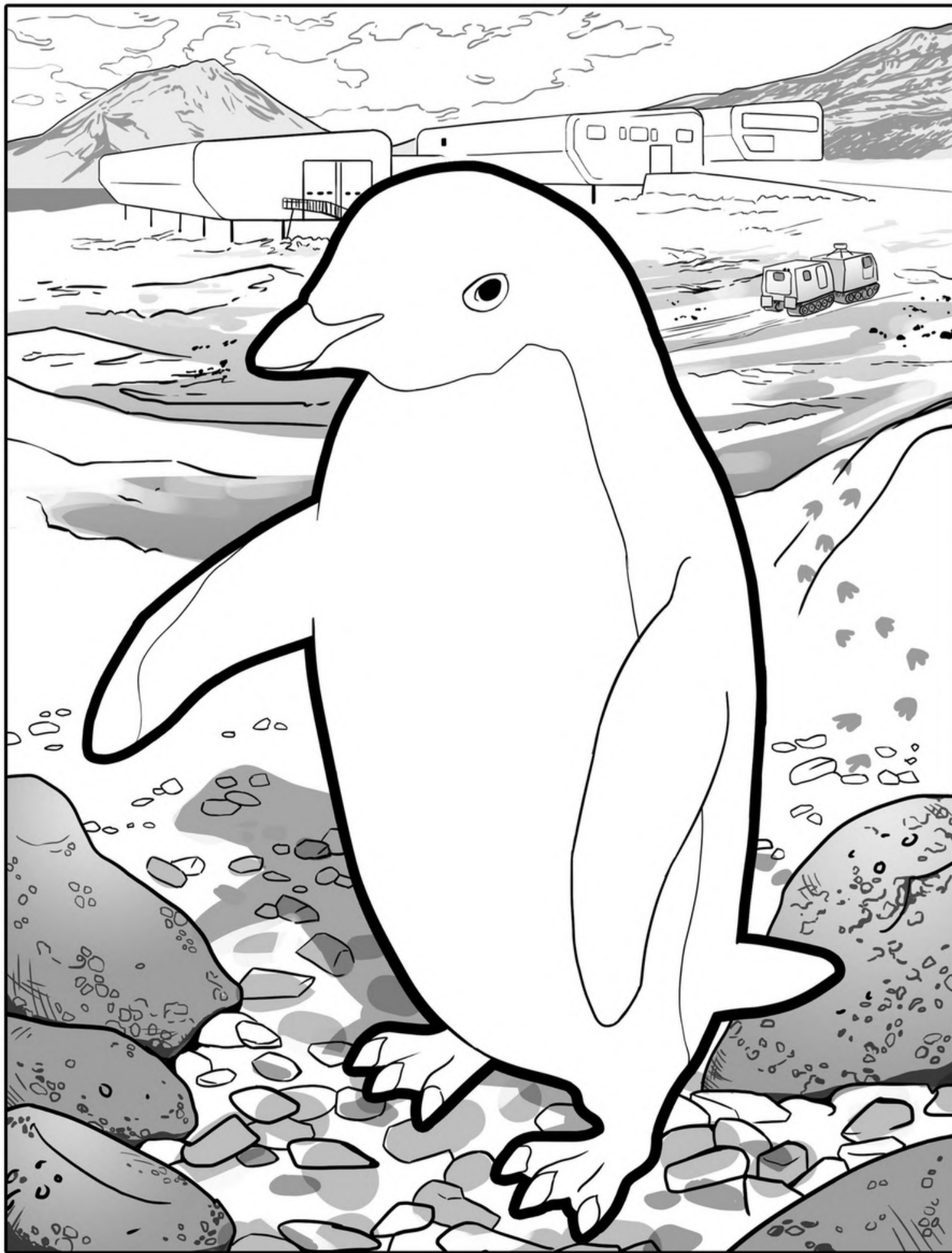


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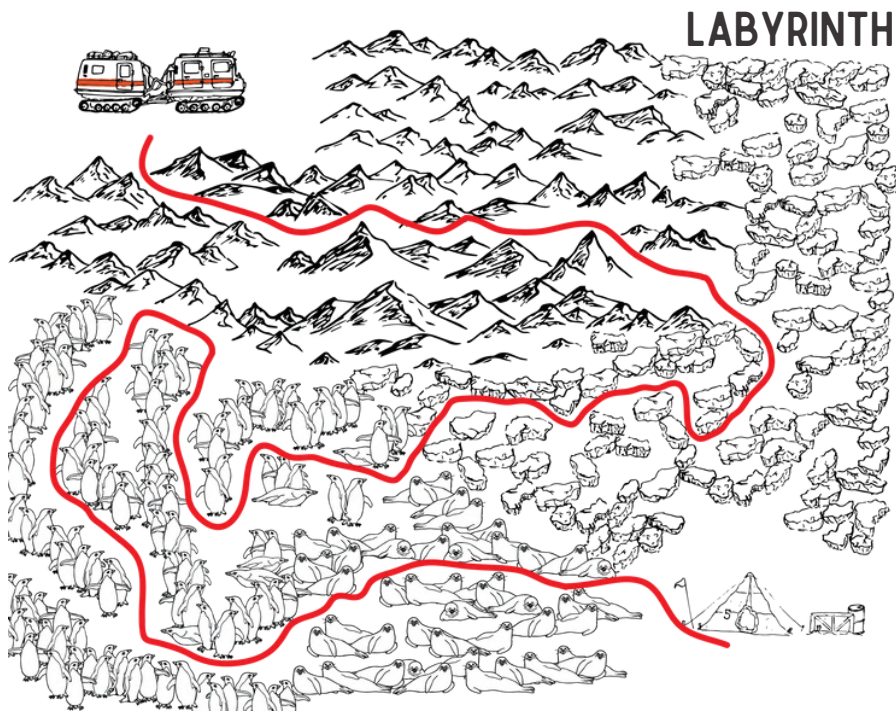


1. Colour the Picture
2. Download the 'Spectacular' App by QuiverVision
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## WORD SEARCH PARTY

E . . . . . H . R S L I D E . . .  
 E N E . S S F . A S E J . . . . .  
 M C E X S L C R P G N S A . . . . .  
 P O S R P K I I O E G O E C . . . . .  
 T N . U G E I P E Z N L W A K . . . . .  
 Y S . W P Y D D . N E G U S R E . . .  
 . T . A . P S I O . T N U N T C T . . .  
 . R . D . . L H T O . I . I D O H . . .  
 . U . D . . . I I I . . S . N S R . . .  
 . C . L . . . . E P O . . T . S . M . .  
 . T . E . . . . S . N . . S . . . . .  
 B A S E . . W A S T E . . . . .



## LABYRINTH

## FLAG SCRAMBLER

	ARGENTINA
	AUSTRALIA
	BELARUS
	BELGIUM
	BRAZIL
	BULGARIA
	CHILE
	CHINA
	CZECHIA
	ECUADOR
	FINLAND
	FRANCE
	GERMANY
	INDIA
	ITALY
	JAPAN
	NETHERLANDS
	NEW ZEALAND
	NORWAY
	PERU
	POLAND
	RUSSIA
	SOUTH AFRICA
	SOUTH KOREA
	SPAIN
	SWEDEN
	UKRAINE
	UNITED KINGDOM
	UNITED STATES
	URUGUAY

## MATCH THE ROOMS

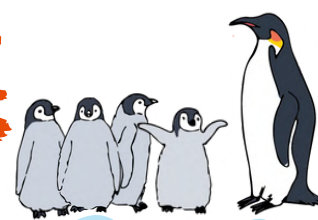
LIVING QUARTERS	So staff and researchers have a place to sleep
SCIENCE LABS AND OFFICES	For scientists to manage and conduct research work
MEDICAL ROOM	To provide medical aid to sick or injured base crew
DINING AREA	To provide a place to eat
GENERATOR ROOM	To manage and generate electricity
WATER PLANT	To ensure a fresh water supply
VEHICLE WORKSHOP	For repairing base vehicles and equipment
LOCKER ROOM	To store and organise bulky outdoor clothes
CARGO AREA	To manage and store supplies
GYM	So base crew can exercise to stay fit and healthy
MOVIE ROOM	For entertainment and relaxation

## MATCH THE ROLES

CARGO HANDLING	Managing supplies and people arriving and leaving base
CARPENTER	Make repairs to the base, manage firefighting gear
CHEF	Plans and prepares meals for base crew
DOMESTIC	Cleaning base facilities
ELECTRICIAN	Taking care of all base electrics - heating, power, lights
FIELD SUPPORT STAFF	Deploying people and gear out into the field
MECHANIC	Repairing vehicles and equipment, training drivers
POWER ENGINEER	Manages power generation equipment
TECHNICAL SUPPORT	Manage experiments, record data and support scientists
TELECOMMUNICATIONS TECHNICIAN	Maintaining satellite links and radiocommunications
WATER ENGINEER	Maintains sewage treatment plant and water production



# RESOURCES FOR TEACHERS



For more educational resources and activities, head to the Antarctic Education Hub: <https://www.antarcticanz.govt.nz/education-hub>

Match the numbered snowflakes throughout the book with the following for extra resources:

- ❄️ 1 Scott Base - Home on the Ice! [History | Antarctica New Zealand \(antarcticanz.govt.nz\)](https://www.antarcticanz.govt.nz/history)
- ❄️ 2 Tropical Paradise Antarctic research station temperature activity: <https://dle7mq055r7tid.cloudfront.net/images/Average-Daily-Temperatures-for-McMurdo-Station-Vostok-Station-and-Amundsen-Scott-Base-Google-Docs.pdf>
- ❄️ 3 The Yearly Shop - Reverse Osmosis: [Reverse osmosis Facts for Kids \(kiddle.co\)](http://kiddle.co) and [Osmosis Facts for Kids \(sciencing.com\)](http://sciencing.com)
- ❄️ 4 A Base of your own - Design a new Scott Base in Antarctica: [Design & Innovation | Antarctica New Zealand \(antarcticanz.govt.nz\)](https://www.antarcticanz.govt.nz/design-innovation) (Maths Level 3)
- ❄️ 5 Working in Antarctica - what to wear in Antarctica <https://vimeo.com/244148115>
- ❄️ 6 Science on the ice [Science | Antarctica New Zealand \(antarcticanz.govt.nz\)](https://www.antarcticanz.govt.nz/science)
- ❄️ 7 The greenhouse Effect [Greenhouse Effect \(climate-change-guide.com\)](http://climate-change-guide.com)
- ❄️ 8 Antarctic wildlife [Antarctica New Zealand \(antarcticanz.govt.nz\)](https://www.antarcticanz.govt.nz/wildlife)
- ❄️ 9 Food webs <https://www.antarcticanz.govt.nz/education/search>

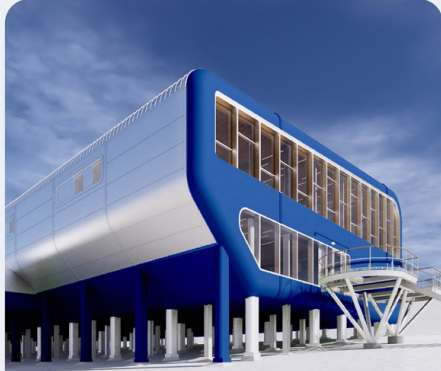
# REMEMBER TO HELP US CHOOSE THE COLOUR OF SCOTT BASE!

Make sure to vote for one  
of the three options at:

[http://www.colour  
scottbase.co.nz/](http://www.colour<br/>scottbase.co.nz/)



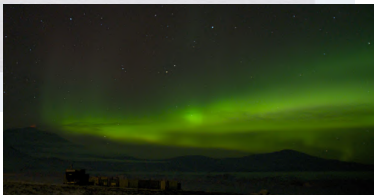
KIKORANGI BLUE



## WHY SO BLUE?

Kikorangi blue is the colour of the densest ice and the highest sky. It's a sparkling sapphire and the barrel of a wave. Blue is the fluke of a whale as it disappears into the deep and the plume of a tūi as it catches the light. Blue is the endless sky and the fathomless ocean joining Aotearoa and Antarctica. Kikorangi is the base of our flag, but is it the colour of our base? What is blue to you?

KĀKĀRIKI GREEN



## SHOULD WE KEEP IT GREEN?

Kākāriki is the richness of Aotearoa bush. It's pounamu glistening in the light and kākāpō plumage rustling in the undergrowth. It's thick summer grass under bare feet, endless rolling hills and a single fluttering fern frond. Green is life-giving algae under the sea ice and the dancing light show of the Southern Aurora. It's our current base, but is it our future? Do you give kākāriki the green light?

KARAKA ORANGE



## IS ORANGE THE NEW BASE?

Karaka is the underside of a kea on the wing, a crisp autumn leaf and the sweetness of an ice block on a summer's day. It's tangy round fruit, and boiling lava. Orange is an East Coast sunrise setting fire to the horizon. It's the nacreous clouds that dance over Mt. Erebus and our kiwi jackets on the ice, like the blushing cheek of an emperor penguin. Is orange your choice?

