

EXPLORE!

Welcome to WWF Explore, a free poster resource for youth groups and young people. Each issue features one key species with news, fascinating facts and great activities to help your group members earn a special badge. This edition looks at penguins – with a special focus on the Adèle, their frozen homes and how you can help safeguard their future.

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CALLING BUDDING GREEN CHAMPIONS!

Green Ambassadors for Youth – or GA4Y – is a fantastic programme to help 5-14s take the lead on green issues in their groups and their community. Our friendly Green Ambassador team – Leafy, Wheel, Switch, Crush, Smith and Tap – will help them get informed, get involved and get sharing on six topical green issues. Designed with the help of over 100 leaders, it offers six themed activity sets, a suite of posters to help you plan your green journey, and a badge scheme to reward young people for their achievements.



Sign up at wwf.org.uk/greenambassadors4youth



All our resources are accompanied by a badge.
Find out more at wwf.org.uk/ygresources

DID YOU KNOW?

- Penguins stand on ice and snow for ages – but their feet don't freeze. They can keep them warm either by reducing blood flow to their feet in cold conditions, or through special 'heat exchangers' at the top of their legs which take heat from the blood flowing to their feet and use it to heat up the blood flowing back to their body.
- Some penguins spend 75% of their lives in the water – that's more than any other species of bird.
- Penguins are prolific poo-ers, which means that some colonies produce enough of the stuff to make the stains visible from space.
- Penguin feathers wear out and need replacing every year, but during moulting, penguins aren't waterproof and can't go to sea to feed. So before the moult, they gain an astonishing 50-70% in body weight to keep them going whilst the new feathers grow.
- Penguins sometimes slide on their bellies over the ice – just like tobogganing.

PENGUINS

Of the 17 different species of penguin, five live and breed in the Antarctic – Adèlie, gentoo, emperor, chinstrap

VITAL STATISTICS

Adèlies are small penguins, standing at 70cm tall. Compare that with a fully-grown emperor penguin, at well over 1 metre tall and weighing up to 40kg, the size of a large dog. It's hard to tell males and females apart, as they're pretty much the same size. The species is instantly recognisable by the white rings around their eyes. They can be quite long lived: one individual monitored by scientists reached the age of 21.

They're sociable animals, and live in colonies called rookeries, which are easily detected because they're so smelly. There are more than 5 million Adèlie penguins in the Antarctic, living in rookeries of many thousands.

FEEDING

Despite their size, Adèlie penguins are ruthless hunters, and have been compared to lions in their dogged determination to track down their prey. Their main prey is krill, and they can dive up to 175m to flush out the miniscule creatures to catch nearer the surface. They have amazing stamina - their hunting trips can last up to three days.

As well as hunting for their own food, Adèlie penguins are prey themselves to leopard seals and killer whales, but adult birds don't have many predators on land. Chicks, however, are vulnerable to attacks from giant petrels and skuas.



BREEDING

Adèlie penguins only breed on ice-free land, and return to the same nest with the same mate each year from the age of three. These nests are built out of the pebbles they find on dry land during spring, and there is fierce competition for the best sites - stealing pebbles from other birds' constructions is quite common.

Females lay one or two eggs weighing 100-125g, and the parents take turns sitting on them for up to 40 days. They do this when the eggs hatch too, taking turns to guard the nest or fish. The chicks are big enough to be left alone when they're three weeks old, and come together in crèches to stay warm and safe while both parents are collecting food.



WHAT'S THE THREAT...

Adèlie penguins may be charismatic. But they're also in danger and they're classified as "near threatened" by the IUCN

The main reason they're under threat is because the world's getting warmer - climate change is melting their icy habitat in the Antarctic. This area is a huge frozen, desert - although it's bitterly cold, it rarely rains.

One of the Adèlie's main food sources - krill - breeds and feeds under the Antarctic sea ice. A drop in the amount of this vital sea ice means there's been a long-term decline in krill in some areas. Coupled with the fact that krill is overfished by us humans, this may affect the amount of food available to the penguins.

As the Antarctic heats up, it's snowing more. Adèlie penguins only nest on bare, snow-free ground, so more snow, falling later in the season, means that there's less space to nest. Snowier conditions mean chicks are born later when krill supplies are at a seasonal low, so the chicks are harder to feed and may die.

Other penguin species, like gentoos, are better at coping with the changing conditions in Antarctica, so they're 'muscling out' Adèlie penguins.

... AND WHAT'S WWF DOING TO HELP?

We're helping to improve the way Antarctica is managed through the Antarctic Treaty and its Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). As well as tackling pirate fishing, we're working on a network of marine protected areas. This would not only help protect the region's wildlife but also help it cope better with climate change.

We're also helping shape the International Maritime Organisation's Polar Code, to make sure ships operate safely and responsibly in all polar waters.

As well as supporting the big picture, we help scientists studying Adèlies in Antarctica. They fit temporary tracking devices to some birds to find out where they eat and breed, highlighting any changes in behaviour possibly caused by climate change.

SO WHAT'S SO IMPORTANT ABOUT THE ANTARCTIC?

The Southern Ocean around Antarctica takes up about 10% of the Earth's surface and supports lots of the world's marine animals. In the summer, the constant sunlight helps phytoplankton grow - the tiny marine plants which bear the load of the ocean food chain.

The Antarctic also plays a vital role in keeping the climate stable. Just like Arctic sea ice, the Antarctic ice cap bounces some of the sun's rays away from us. And it plays a crucial role in regulating ocean currents, as the ice-cold water meets warmer water at its surface and drops to the depths.

Antarctica has shown scientists about the impact people are having on our natural world. It was there that the hole in the ozone layer was found in the 1980s, which showed how man-made chemicals had damaged the atmosphere.

And as well as helping us understand climate change now, there's a unique archive locked in Antarctica's thick ice sheet, which tells us about our planet's climate over the past million years.

ACTIVITIES

Think about climate change in the Antarctic and how to help penguins by trying out some of these games and activities...

PENGUIN QUIZ


Divide into teams and test each other on your top penguin knowledge. Use the information in this poster to aid your questions – look out for the unusual or interesting facts to fox your opponents! You could add penguin impersonations for fun.



HOW CAN YOU HELP?

Adopting Adèle penguins in a colony in Antarctica is a great way of helping us help these beautiful birds, and also the environment in which they live.

Your money goes towards improving the management of Antarctica's resources and safeguarding its wildlife. It can also help us set up a network of marine protected areas covering at least 10% of the 20 million km² Southern Ocean. We're also working to reduce illegal and unsustainable fishing practices, as well as raising awareness of the threats of climate change we all face. We'll also use your support to help fund other essential work around the world.

	<p>Why we are here To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.</p> <p>www.org.uk</p>
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ICE SHELF CHALLENGE

You can play this outdoors in a team or individually and at any time of the year, although it'll be quicker in the summer! Make up lots of ice-cubes in advance, colouring each tray differently with food colouring. The object of the game is to stop your team's pile of ice – or Antarctic ice shelf – from melting. Use whatever you can find – sticks, sand, mud, leaves or stones – to insulate your ice from the normal temperature. The winning ice shelf is the last one standing.

ADÈLIE NEST-NICKERS

Divide up a large group into penguin pairs. Each couple has to collect 20 small stones from a big pile to make a nest – gravel is fine, but this is a great game for a pebbly beach too. The trouble starts because each pair can steal from other nests, AND have their own stones taken by others. If both penguins are on the nest, no-one can take a stone, but then again, they can't steal anyone else's, so this is a game of quick-thinking strategy and fast sprinting. The winners are the penguins with the most stones on their nest after five minutes of frantic play. Squawking and pecking optional.

WRITE YOUR OWN POLAR CODE

In small groups, or with a partner, write your own Survival Manual for the polar regions. How do you think ships – and the companies operating them – should behave in the polar seas? Should there be a limit to the number of ships, or rules about what they're allowed to transport? Should there be special rules about how ships are designed? Do crews need special training? What should happen to their waste? What would happen if there was a big oil spill? What about tourists – should we discourage people from visiting these fragile areas? Compare notes with the rest of the group and discuss.

WHAT YOUR ADOPTION CAN DO:

- £10** – could help scientists find out the sex of one penguin.
- £36** (or £3 a month) – could buy transponders with unique IDs for tracking nine penguins during their whole life.
- £50** – could pay for calipers and rulers, used to measure penguin beaks and wings to find out a penguin's sex and age.
- £60** (or £5 a month) – could pay for aircraft time to get to remote penguin colonies to find out how they are.
- £80** – could contribute towards a VHF marine radio handset to keep field researchers safe.

[Go to \[www.org.uk/penguinadoption\]\(http://www.org.uk/penguinadoption\)](http://www.org.uk/penguinadoption)