

# Topic based resource

## Endangered Animals

## Background information

Biodiversity is the amazing variety of life on our planet Earth. From plankton to baboons, from oak trees to fungi, from bacteria to people – the range of life on Earth is incredible! It also applies to habitats or ecosystems – oceans, woodlands, ice caps and even cities. We all rely on biodiversity to survive. All species are interconnected in a big web-like natural system providing clean air, oxygen, water, food and shelter. A natural world full of biodiversity is vital.

We often talk of species richness as a measure of biodiversity. A healthy ecosystem is one rich in biodiversity. The Amazon rainforest is very species rich and is home to 10 million species! Humans are putting pressure on the Amazon and the planet in general more than ever before, using and consuming more and more resources. WWF's 'Living Planet' Report of 2018 has found an average 60% decline in global populations of mammal, fish, reptiles, amphibians and birds since 1970.

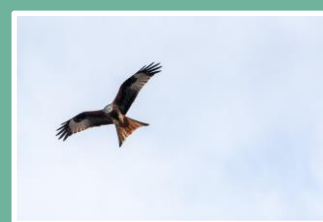
But what of the Welsh context? Conservationists and researchers from 70 organisations produced the 2019 State of Nature Report and although there are great news stories such as:



Woodland cover has increased  
4-fold since the early 1990's



The time devoted by  
volunteers to nature  
conservation has increased  
46% since 2000



The Red Kite has made an  
impressive return from being  
almost extinct

The underlying issue is that wildlife in Wales continues to decline and 17% of species are at risk of extinction. To highlight one, the butterfly numbers have reduced by over a half since 1976!

# Climate Perspective

Climate change causes a shift in climate patterns. Extreme weather and flooding impacts negatively on biodiversity so preserving planet Earth's biodiversity is essential.

Exploring endangered species or creating habitats, however small, within school grounds can have a positive impact on local biodiversity. Creating a meadow, pond, planting trees and leaving long areas of vegetation will encourage endangered Welsh wildlife. So let's get to it!

- No-one really knows just what other benefits may be lost when species become extinct or what impacts this will have on other species or habitats.
- Healthy natural ecosystems help control flooding, drought and soil erosion.
- The quality of our lives is greatly enriched by the natural environment.
- All species have as much moral right to exist as a human.

## Activity

### Biodiversity Activity

#### Background Information

Young people have a natural connection to wildlife and feel passionate about the animal kingdom. Creatures in Wales, the U.K. and the world are becoming endangered at an alarming rate.

This activity looks at some of the animals that are facing this issue and gives an opportunity to explore the role humans have in impacting on habitats.

It culminates in the creation of animal masks and placards encouraging the children to spread this important message and inspire positive change within the school.





**Key stage:** Aimed at upper KS2

**Global Goals:**

- 13 – Climate Change
- 14 – Life Below Water
- 15 – Life on Land

**Aims:**

- To take part in a school assembly/parade highlighting the issue of endangered animals and extinction across the world.

**Objectives:**

- To explore the issues that lead to an animal becoming endangered.
- Understanding that human impact on the animal kingdom is leading to this issue.
- To raise awareness of the issue across the whole school community and lead the discussion on positive actions to help.

**Resources:**

- Resource cards highlighting the chosen animal.
- Arts/crafts kit – pens/paints/cardboard/placard poles/elastic/string/scrap materials/instruments for parade if required.

# Endangered animals Across the Earth



## Activity

1. Have a whole class discussion around the following questions – “What are your favourite animals and why?” – “Are those animals endangered?” – “What causes animals to become endangered?” – “Are animals endangered by Climate Change”?
2. Split the class into groups of 5.
3. Introduce each group to an endangered animal resource card/mask.
4. Ask them to pick key points from the information that they feel important and that they would like to share with others.
5. Research the specific animal and threats to them further if required.
6. Challenge the group to make a mask and placard from scrap materials. The mask should be a representation of the animal. There are templates if required but encourage their own ideas.
7. Parade around the school or through assembly with masks on and placards held high to raise awareness.

## Extension Ideas:

- Further explore the issues facing the specific animals and action plan positive steps that will help the situation.
- Explore U.K. animals that are endangered through loss of habitat. Action plan to create specific habitats in school to support these creatures.
- Further develop the activity through expressive arts – storyboard how their animal has become endangered through the actions of humans. Develop these and perform them to a wider audience.

## Activity – Make an animal mask

### Animal Resource Card -Koala

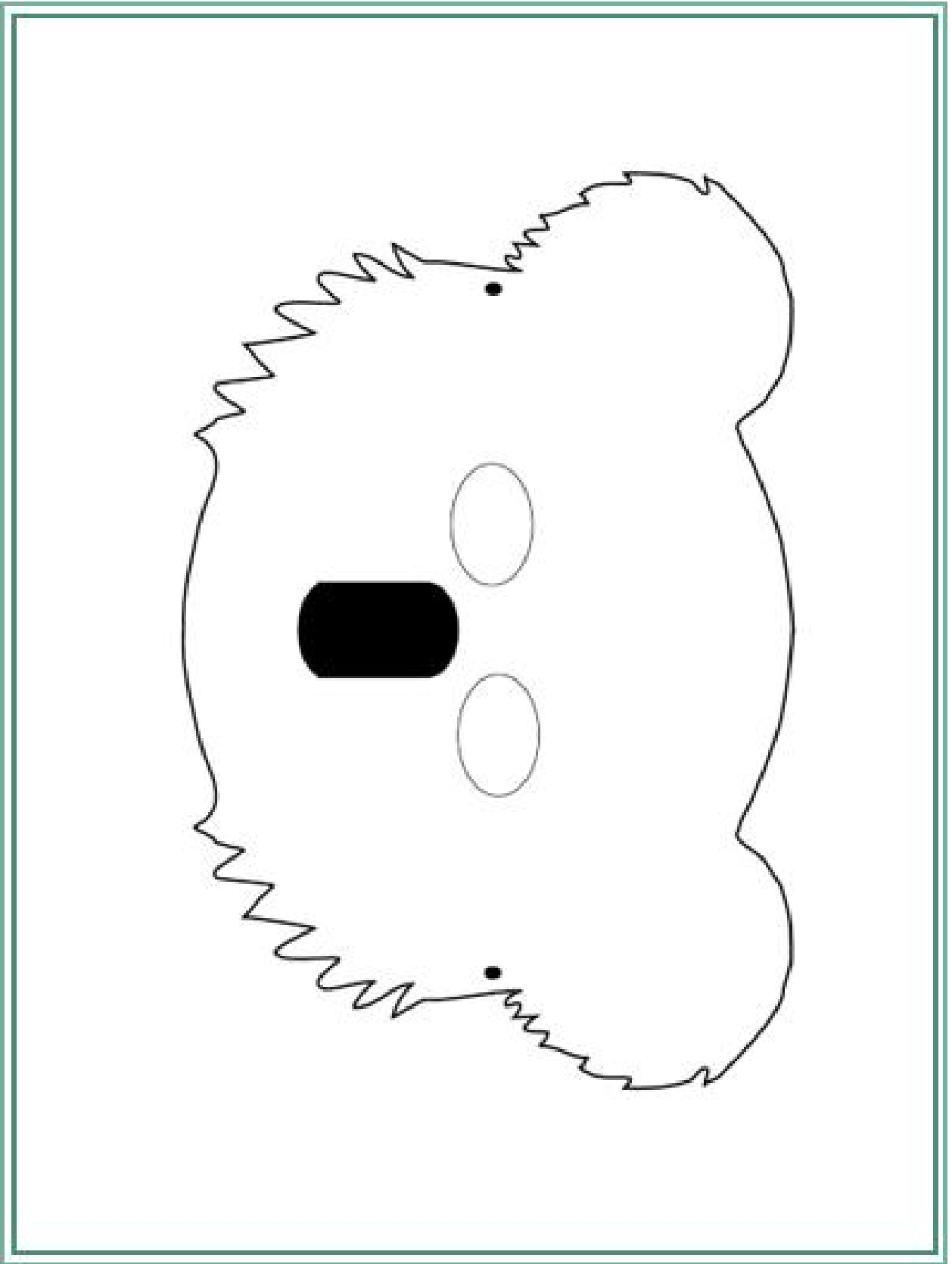
The Koala is Australia's most iconic fluffy marsupial, but it is becoming rarer because of global warming.

Koalas have a special diet which consists only of eucalyptus leaves. Increasing carbon dioxide levels in the atmosphere are decreasing the nutritional value of these leaves, resulting in Koala malnutrition and starvation.

Changing weather patterns caused by climate change are also causing longer and more frequent droughts which in turn increase the numbers of bushfires. These bushfires kill millions of forest-dwelling animals like Koalas.

These weather and habitat changes will force more and more Koalas to descend from the trees in search of water and new homes, exposing them to the dangers of predators and road traffic.





## Animal Resource Card - Monarch Butterfly

Monarch Butterflies are famous for their impressive migrations of over 3,000 miles across North America to reach their southern over wintering grounds.

Like all butterflies, the Monarch is very sensitive to weather and climate. Climate change is altering weather patterns and causing the butterfly to lay their eggs at the wrong time of the year.

Also as the climate continues to warm, the butterfly's habitat is becoming drier and the 3000 mile migration even tougher.

The monarch caterpillar only eats one type of plant—milkweed. Increased Carbon Dioxide levels are making the plant too toxic for the monarch caterpillars to eat, causing many to starve and not turn into butterflies.

One study has shown that the population of monarch butterflies had dropped by over 80% in the last 20 years, with extinction a real possibility.





## Animal Resource Card – Orangutan

The world's orangutan population is dwindling. Found on only two islands – Sumatra and Borneo – orangutans are threatened by climate change.

Changing temperatures and rainfall patterns as a result of climate change affect where orangutans can find the tree fruits and leaves they eat. Orangutans are also less likely to have babies when food is scarce.

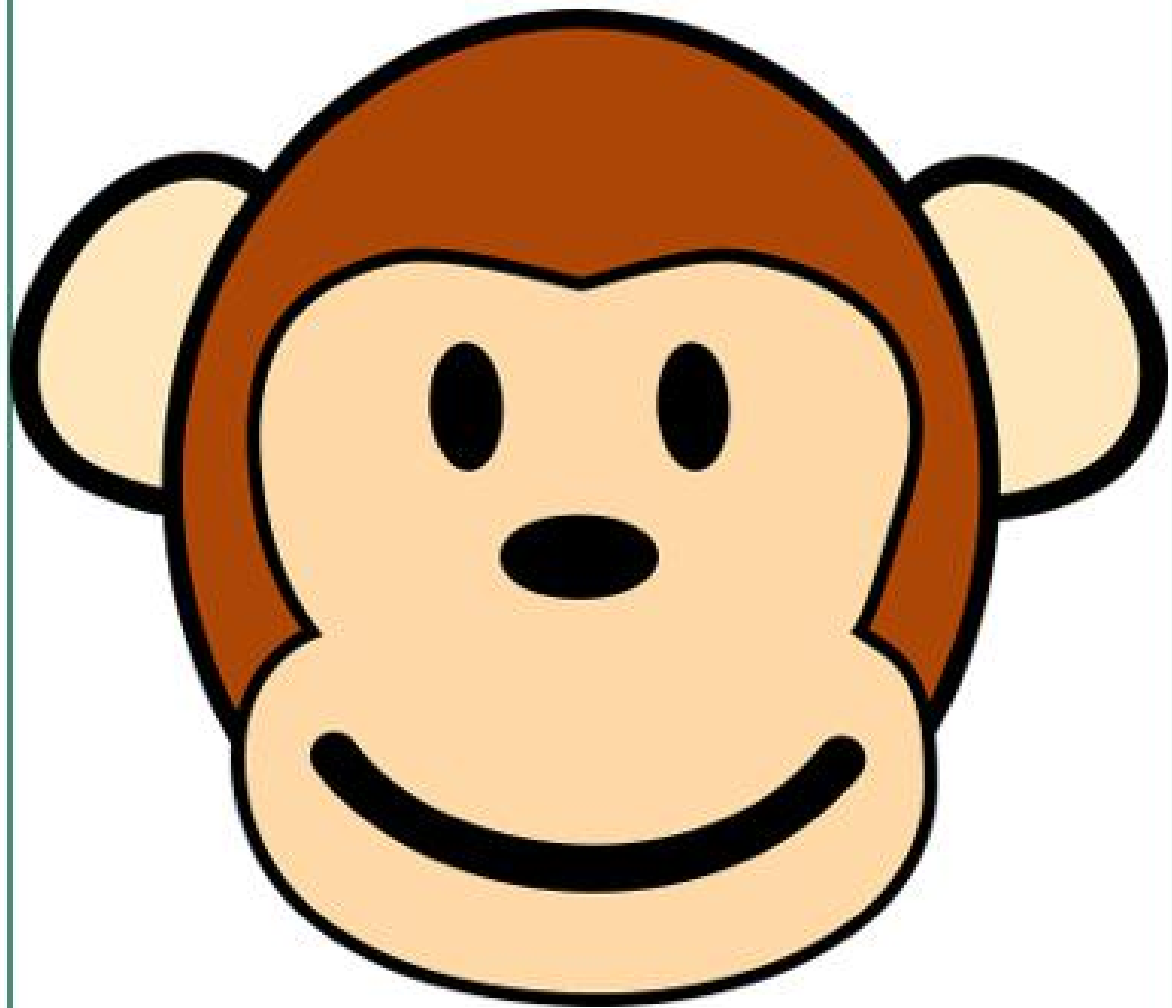
Roaming into new territory in search of food can also increase orangutan conflict – an estimated 2,500 orangutans in Borneo alone are killed each year.

Orangutans spend 90% of their lives in trees. Cutting down tropical forests for palm oil plantations and illegal logging destroys critical habitat and releases carbon stored in trees, contributing to climate change.

Climate Change is linked to longer dry seasons which increases the threat of fires. Forest fires destroy habitat and contributes to their declining numbers.

In Borneo, orangutan numbers have fallen by 60% since 1950 and if we don't act soon, extinction is a strong possibility.





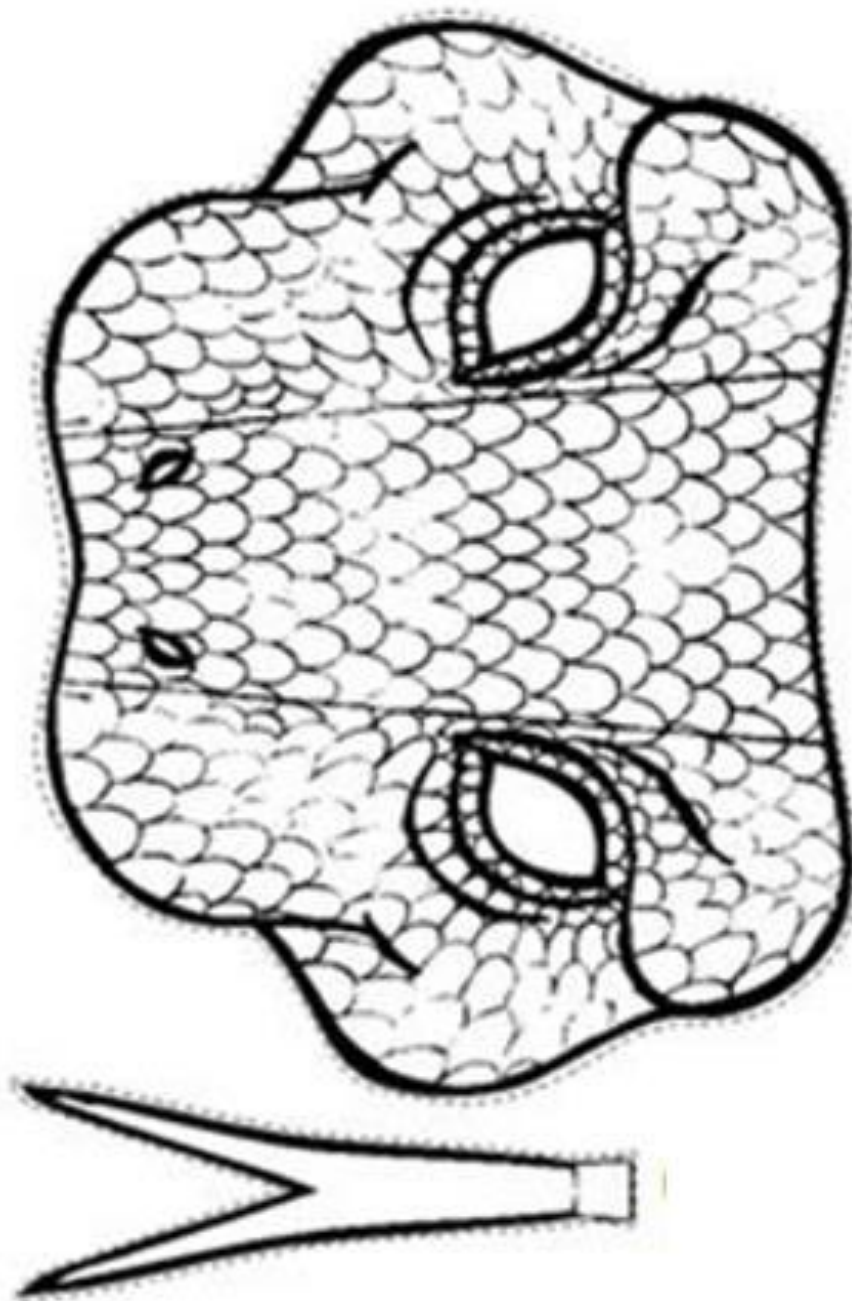
## Animal Resource Card - Marine Iguana

The **Marine Iguana**, also known as the **Sea Iguana**, is a species of Iguana found only on the Galapagos Islands (Ecuador) that has the ability, unique among modern lizards, to forage in the sea, making it a marine reptile. This iguana feeds almost exclusively on algae found in the sea, and large males dive to find this food.

Warming oceans cause an array of problems for aquatic and marine animals like the marine iguana. The rising ocean temperatures, caused by climate change, have been killing the algae on which the iguana feed, causing many of these lizards to starve.

Elevating sea and air temperatures also contribute to these coastal iguanas' vulnerable status. Warmer weather can interfere with their ability to regulate body temperature, and it can impact their beach-nesting and egg development.





## Animal Resource Card - Bee

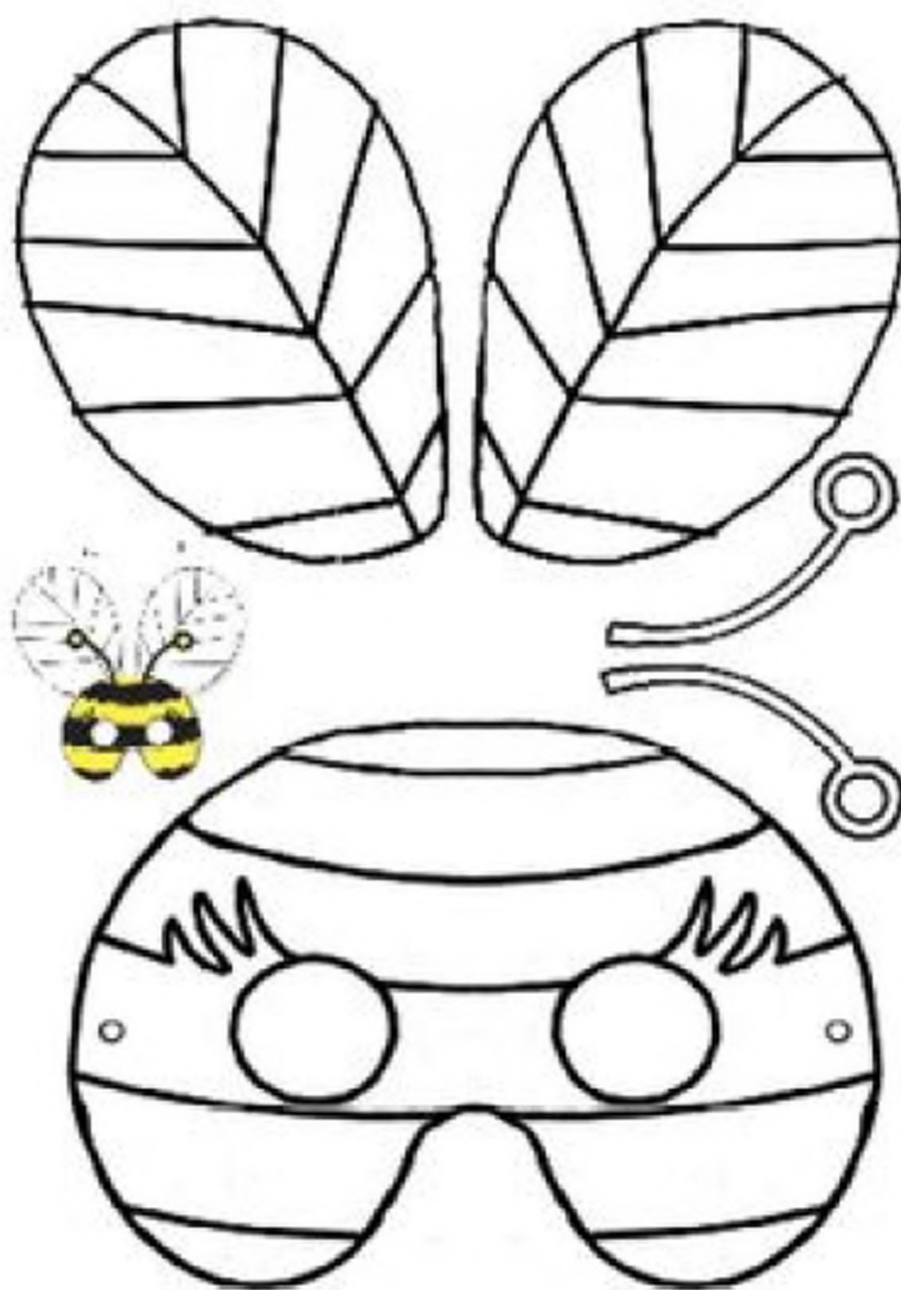
Believe it or not, there are over 250 species of bees in the UK and only one of these is the honey bee. There are 25 species of bumblebee and the rest are solitary bees.

All bees are vital for our food system and are considered to be the primary pollinators for crops in the UK, and without them, our food security is at risk.

Climate change disrupts the seasons; warmer, wetter winters and seasons that start at different times, as the climate warms. More erratic weather and unreliable seasons mean that bees find it harder to nest and feed.

On top of this, bees are suffering from a loss of habitat due to intensive farming and land-use change (including how we manage our gardens). We've lost 97% of our wildflower meadows in the UK, on which bees rely heavily.





# Animal Resource Card - Adelie Penguin

The Adélie Penguin, a well-established resident of Antarctica, is facing tough times due to climate change.

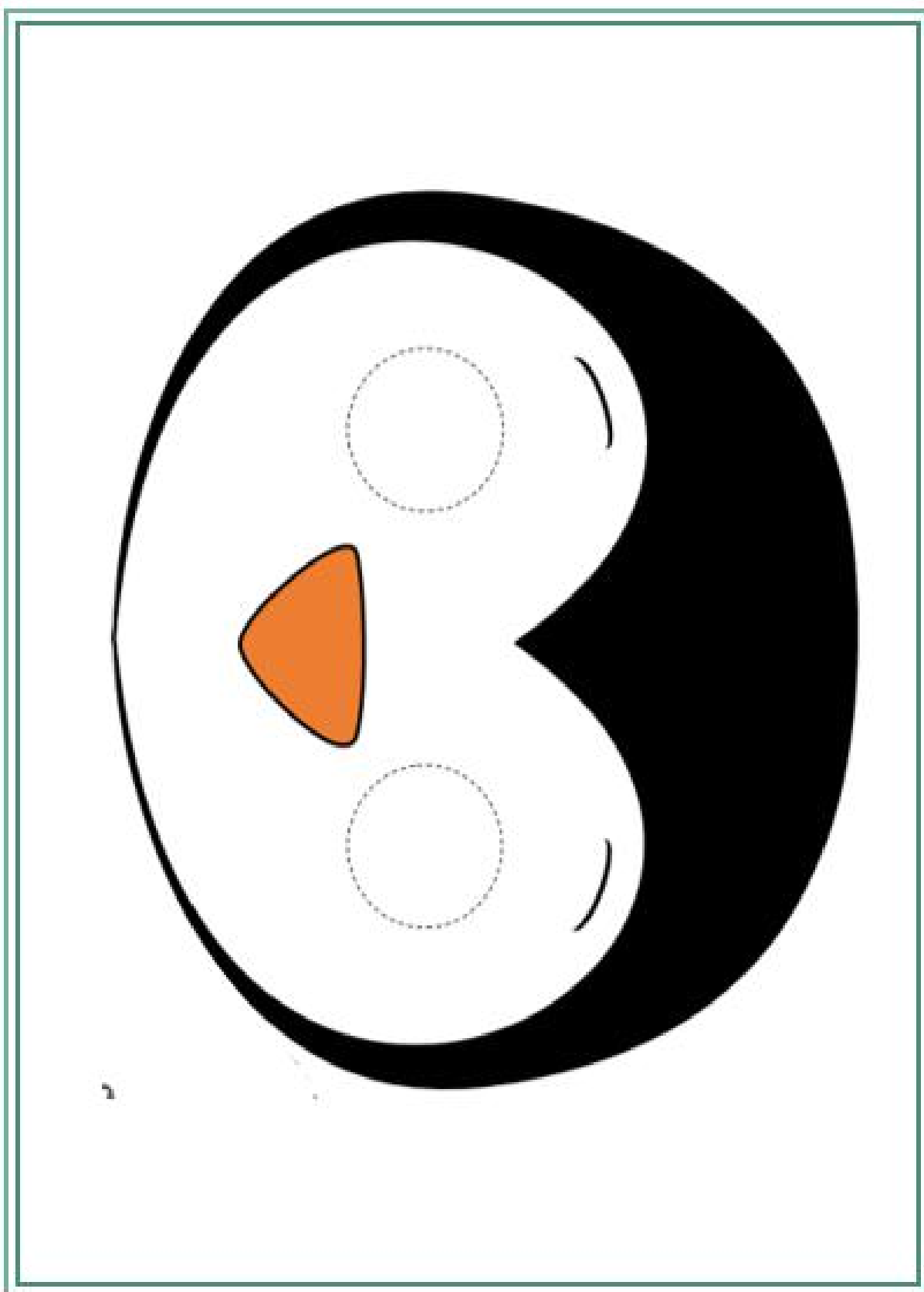
The birds are declining on the West Antarctic Peninsula, which is one of the most rapidly warming areas on Earth.

Along the West Antarctic Peninsula seas have become hotter in the past 40 years and winter air temperatures have also increased. Of the region's 674 glaciers, 600 are melting.

The Adélie Penguin's coastal nesting grounds are becoming increasingly unsuitable for chick survival, and the longer periods of warmer than usual ocean temperatures is decreasing the number of fish and krill — food the penguin relies on to survive.

The extra warmth also means extra rain, which floods or destroys penguin nests, drowns eggs, and causes chicks to literally freeze to death. The result: nearly every Adélie colony along the western peninsula is in decline.





## Curriculum links

### Purposes:

- Ethical, informed citizens of Wales and the world.

### AOLE's:

- Humanities

### What matters statements:

- Informed, self-aware citizens engage with the challenges and opportunities that face humanity and are able to take considered and ethical action.
- Our natural world is diverse and dynamic, influenced by processes and human action.

### AOLE's

- Science and Technology

### What matters statements:

- The world around us is full of living things which depend on each other for survival.

### AOLE's

- Expressive Arts

### What matters statements:

- Creating combines skills and knowledge drawing on the senses, inspiration and imagination.

## Resources from other organisations:

Wildlife Watch Activity Sheets – <https://www.wildlifewatch.org.uk/activity-sheets>

Young People's Trust for the Environment – <https://ypte.org.uk/learn>

World Wildlife Fund – <https://worldwildlife.org/initiatives/wildlife-conservation>

**Eco-Schools**



33-35 Heol yr Eglwys Gadeiriol, Caerdydd, CF11 9HB | 33-35 Cathedral Rd, Cardiff, CF11 9HB

☎ 029 2025 6767 🌐 [keepwalestidy.cymru](http://keepwalestidy.cymru) ✉ [info@keepwalestidy.cymru](mailto:info@keepwalestidy.cymru)

Cadwch Gymru'n Daclus yn gwmni wedi ei gyfyngu trwy warant. Rhif Cwmni: 4011164 Rhif Elusen: 1082058 Rhif TAW: 850 3958 13

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