

9Ad GENES AND EXTINCTION

1 Draw one line from each scientific term to its correct definition.

Scientific term

environment
environmental factor
physical factor
abiotic factor
biotic factor
environmental variation

Definition

changes caused by the surroundings
an organism's surroundings
another term for a physical factor
another term for an abiotic factor
a part of the surroundings that changes organisms
activities of other organisms

2 1500 years ago, giant flightless moa birds lived in New Zealand. They were prey for huge Haast's eagles. When humans arrived, they hunted the moa.

a Explain an adaptation that Haast's eagles might have had.

3. large wingspan to support its mass/size

b Suggest and explain a reason why Haast's eagles became extinct.

The humans killed the moas, and so the eagles had too little to eat.

3 Complete the sentences using words from the box. You may use each word once, more than once or not at all.

abiotic adaptations biotic camouflaged characteristics common
desert endangered environmental forest habitats inherited

Animals have _____ to help them survive in their _____.

These adaptations are _____ characteristics. For example, the fur of sand cats

matches the colour of the sand in a _____ habitat.

The cats are _____ as they hunt gerbils. If more rain fell and the desert

got greener, the sand cats would not be _____ and may start to become
in that area.

4 Give three resources that plants compete for.

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Animals have **characteristics** to help them survive in their **environmental** **habitats**.

These adaptations are **inherited** **characteristics**. For example, the fur of sand cats

matches the colour of the sand in a **desert** **habitat**.

The cats are **camouflaged** as they hunt gerbils. If more rain fell and the desert

got greener, the sand cats would not be **endangered** and may start to become

in that area.

4 Give three resources that plants compete for.

Carbon dioxide, light, space, nutrients, water.

9Ad PRESERVING BIODIVERSITY

1 Sundews are plants that are adapted to the wet, acidic conditions found in bogs. Most species have only very small roots because a lot of water is available. Explain why sundews may not continue to survive in an area where the average temperature starts to increase.

The increase in temperature would dry up the bog. The plants do not have enough roots to absorb enough water and so they would dry out.

SB 2 Predict an effect of global warming on the population of polar bears. Explain your reasoning.

The population will decrease. Ideas could include: the lack of snow means that they will not be so well camouflaged and so their prey will see them coming and they will not get enough to eat; the lack of sea ice means that there is less space for them to live and breed, putting them into competition with one another and meaning that supplies of food in the areas around land will become depleted more quickly by larger numbers bears; higher temperatures will mean that the bears overheat

3a What is biodiversity? **The number of different species in an area.**

b Give one reason for preserving biodiversity. **preserves ecosystems (since organisms depend on one another); preserves a source of undiscovered substances for human use; allows a habitat to recover faster if disaster strikes; preserves beauty for future generations.**

c Work in a group to list as many ways of preserving biodiversity as you can.

banning hunting certain animals; ban the trade in certain organisms; ban picking of certain plants; setting up nature reserves; using breeding programmes; saving tissues/gametes/seeds in gene banks.

4 What is a native species? Tick (✓) one box.

- A species that is only active at night.
- B A species that is eaten by people in a certain part of the world.
- C A species that is in danger of becoming extinct.
- D A species that is naturally found in one part of the world.

5 Wolves and foxes compete for the same prey. What type of competition is this? Tick (✓) one box.

- A inter-specific **competition happens between individuals of different species**
- B intra-specific **competition happens between individuals of same species**
- C counter-specific
- D inner-specific