

B2: SUSTAINABILITY

Learning Objectives

- ✘ Know some specific examples of extinction in detail

Success Criteria

- ✘ Write a fact file about the endangered giant panda and answer questions

STARTER

- ✘ If you were given the power to change the world in one way for the better:

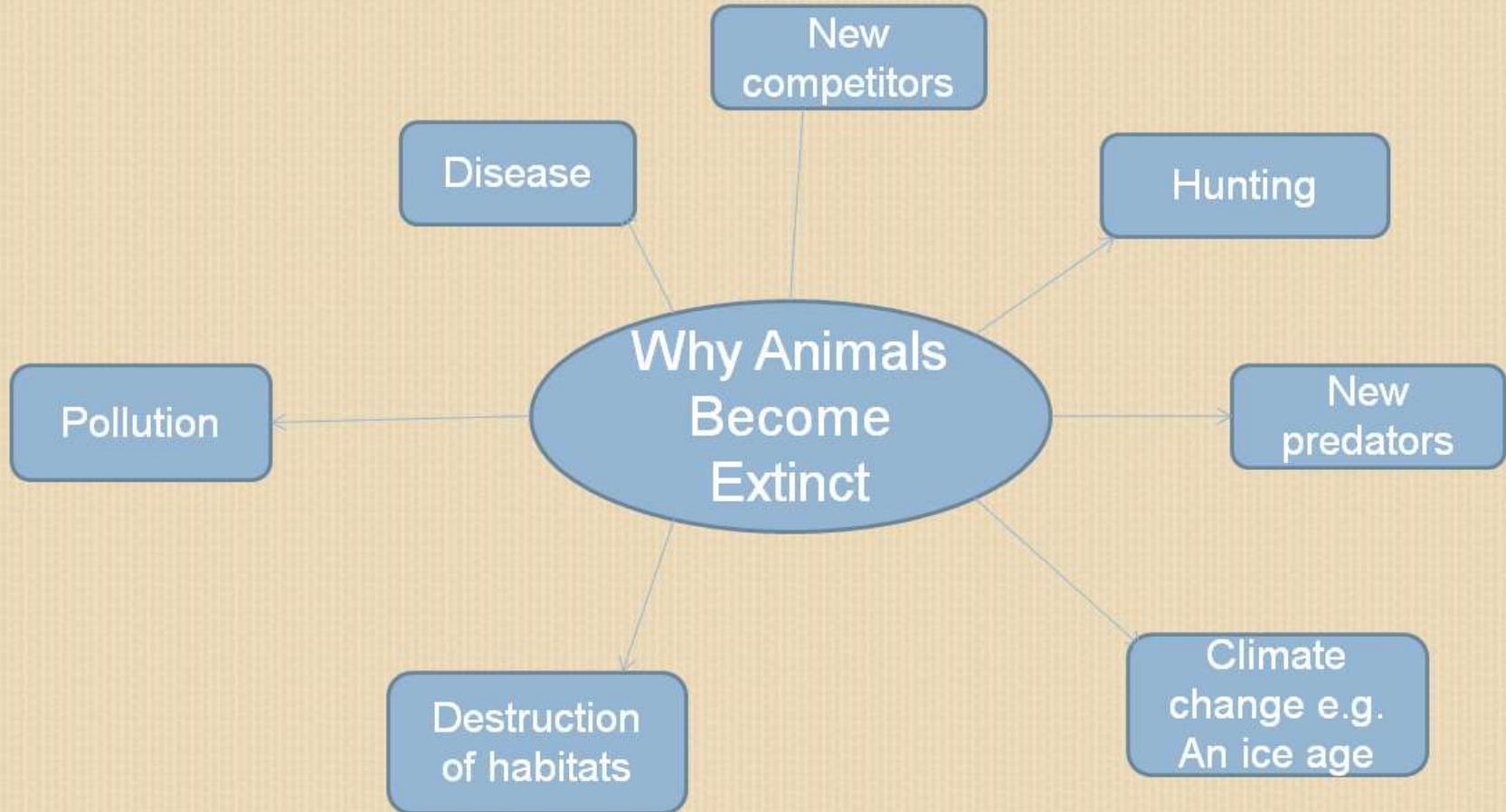


- 1) What would you do?
- 2) How would you do it?

**YOU WILL HAVE THE END OF MODULE TEST
NEXT MONDAY – FIRST LESSON**

**GO TO WWW.BIOTEACHER.WEEBLY.COM
FOR LESSON PRESENTATIONS**

- × What were the causes of extinction we learned about in the last lesson?



CHATHAM ISLAND BLACK ROBIN

- × Lives on island near NZ
- × Only 7 left in 1976
- × Cats took over the island and the birds could not escape the predators
- × Conservation programme was set up – other birds used as foster parents for the chicks
- × There are now 250 birds – all descendents of 1 breeding pair



In pairs, discuss what problems may arise from this 'solution'.

CHATHAM ISLAND BLACK ROBIN - PROBLEMS

- ✘ Island habitat is **too small** – so birds are having to be moved to other islands
- ✘ All from one set of parents – **very little genetic variation**. This means the bird population will be vulnerable to environmental changes or diseases
- ✘ Problem for other birds on the island as there is now more **competition**



What could you do about the issue of extinction of certain species?

- × Spend 2 minutes thinking and discuss your answers with your neighbour.

- × Join an organization : there are many groups working on conservation activities – e.g. WWF. You can donate money that goes to helping and receive information on progress and other things you can do to help.
- × Find out if there are any endangered species in the local area
- × Lobby (complain to and publicise) companies that carry out activities that risk endangered species
- × Make Your voice heard
 - + Write a letter to an MP
 - + Tell your family, friends and work mates about threatened species and how they can help them.
 - + Start a group dedicated to protecting a threatened plant or animal in your area
- × Write articles or letters about threatened species to the Leicester Mercury.

SAVING ANIMALS FROM EXTINCTION – GIANT PANDA CASE STUDY

- ✘ Read the information on the sheet
- ✘ In your books, create a short fact box about the Giant Panda
- ✘ You must include:
 - + Basic info (where it lives, diet, how many left)
 - + Why is it endangered?
 - + What is being done to try and save the Panda?
 - + Why should we save the Panda?
- ✘ When you are finished, answer Q 1, 2, 3 (Foundation) and 6, 7, 8 (Higher) on page 85 of text book





The **Western Gorilla (*Gorilla gorilla*)** was uplisted from **Endangered to Critically Endangered** in 2007 after the Western Lowland Gorilla (*G. g. gorilla*) subspecies, suffered a population decline of more than 60% since the early 1980s. Hunting and deaths caused by Ebola were the main causes of this decline and both these threats continue to affect the Western Lowland Gorilla population.

Disease



Sumatran Orangutan (*Pongo abelii*) is listed as **Critically Endangered**. Endemic to the island of Sumatra in Indonesia, this ape has suffered a population decline of more than 80% over the last 75 years. The species is seriously threatened by logging (both legal and illegal), wholesale conversion of forest to agricultural land, and oil palm plantations, and fragmentation by roads.

Human activity:
logging



The **Polar Bear (*Ursus maritimus*)** is classed as **Vulnerable**. Recent modelling of the trends for sea ice extent, thickness and timing of coverage predicts dramatic reductions in sea ice coverage over the next 50 to 100 years due to global climate change. It is suspected that there will be a population reduction of at least 30% over the next 45 years as a result of this habitat loss and declining habitat quality

Loss of ice -
habitat



Atelopus varius is a **Critically Endangered harlequin toad** that was once abundant in Costa Rica and western Panama. Declines began at Monteverde in 1988, and by 1996 it was believed to be extinct in Costa Rica. The cause of its decline is possibly a result of the fungal disease, chytridiomycosis.

Disease

PLENARY

- ✘ In your books – list the main causes of species extinction and an example next to each one
- ✘ Write down 3 reasons why species extinction can be a problem to humans