

Taking Pride



# KS3 Science

## Literacy/Numeracy

### Write ON

### Think ON

Enw: \_\_\_\_\_

Athro/Arthrawes: \_\_\_\_\_

Dosbarth: \_\_\_\_\_

Endangered Species

Aim: To extract information from a news report and increase awareness about why animals become endangered.

Literacy & Numeracy Starter - Scrabble

Think of a key word linked to last lesson. How much is it worth on the scrabble board?

A <sub>1</sub>	B <sub>3</sub>	C <sub>3</sub>	D <sub>2</sub>		
E <sub>1</sub>	F <sub>4</sub>	G <sub>2</sub>	H <sub>4</sub>	I <sub>1</sub>	J <sub>8</sub>
K <sub>5</sub>	L <sub>1</sub>	M <sub>3</sub>	N <sub>1</sub>	O <sub>1</sub>	P <sub>3</sub>
Q <sub>10</sub>	R <sub>1</sub>	S <sub>1</sub>	T <sub>1</sub>	U <sub>1</sub>	V <sub>4</sub>
	W <sub>4</sub>	X <sub>8</sub>	Y <sub>4</sub>	Z <sub>10</sub>	

Which word can you create from our lessons, which would score the highest?

Can you create a keyword that is a multiple of 10?

Which word can you create from our lessons, which would score the lowest?

Can you create a keyword that is a square number? What about a prime number?

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Read the information on the next 2 pages about endangered species and answer the questions that follow.

# ENDANGERED SPECIES

It is estimated that there could be as many as 14 million species of plants and animals in the world, although only around 2 million have been officially recorded so far. More than 12,000 species of animals and plants now face extinction, due largely to human activities. Some will die out before they have even been discovered.



## WHY ARE SO MANY ANIMALS IN DANGER?

### Habitat destruction

**Tropical rainforests** are the world's richest natural habitats, housing more than two-thirds of all plant and animal species on earth. Sadly, the rainforests are being destroyed at an alarming rate – with more than half already gone – for timber, and cleared so that the land can be used to graze farmed animals or to provide housing for expanding human populations. If rainforests disappear, all the plants and animals living there will be lost forever.

Six species of great ape who live in the tropical rainforests – the eastern and western gorilla, chimpanzee, bonobo, Sumatran and Bornean orang-utan – now face extinction. This is due to habitat destruction, and hunting.

**Pandas** live in the bamboo forests of China, another habitat that is being destroyed to make way for a rapidly growing human population. The panda population has been reduced to 1500.

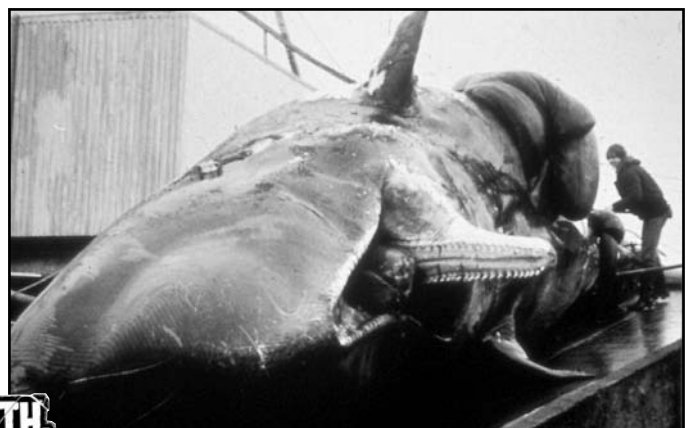
### Hunting and trapping

People kill animals for their fur (to make coats and rugs), for their bones and horn (to make medicine or ornaments), for their flesh, and, sometime, sadly, simply for the fun of it. Many animals are also trapped in the wild to supply the pet trade, or for use in circuses, zoos and aquaria. Others – in particular, primates – are captured and sold to research laboratories to be used in experiments.

**The Tiger** is just one of many species of wild cat now facing extinction because of hunting and habitat loss.

At the beginning of the 20th century, there were more than 100,000 tigers. Today, it is estimated that between 5000 and 7000 tigers remain in the wild. Three of the eight sub-species (the Bali, Caspian and Javanese) are already extinct. In the past, tigers were hunted for their skins (to make coats and rugs) and for sport. Today, tigers are still being killed for traditional Asian medicine. Virtually all of their body parts, including bones, eyes and whiskers, are used. Many Asian countries have recently signed up to the conservation agreement known as CITES (see *box overleaf*) and have agreed to ban the trade in tiger parts. Enforcing the law, however, is difficult and costly, while the profits made from the illegal trade are so great that some people feel it is worth the risk.

**Whales** have been ruthlessly hunted for centuries and, as a result, several species – including the giant blue whale – have been driven to the brink of extinction. This prompted the International Whaling Commission (IWC) to impose a moratorium (ban) on all commercial whaling in 1985. Norway, Japan and Iceland have continued to kill some species of whales (see *Whale and Dolphin factsheet*).





**Rhinos** have roamed the earth for more than 40 million years, but after only a few centuries of intensive hunting they are now severely threatened. The world population of all five species is fewer than 15,000 animals.

Rhinos are killed for their horn, which is ground up and used in

traditional Asian medicine. This slaughter continues despite a CITES ban on the trade.

**African elephants**, the world's largest land animals, have also suffered a catastrophic decline. A century ago there were 10 million animals, 20 years ago there were one million, but today there are only about 300,000 African elephants left. Most were killed for their ivory tusks, which are made into trivial trinkets and jewellery. In 1990, CITES banned the sale and trade in ivory and other elephant products but many elephants are still illegally shot by poachers.



## **CITES** (The Convention on International Trade in Endangered Species)

CITES is a United Nations agreement that protects endangered species by regulating or banning their trade. Unfortunately, not all countries belong to CITES, and enforcement efforts vary among those that have signed up. Even when someone is prosecuted, the punishments are usually trivial – ranging from minimal fines to short jail sentences, and are therefore little deterrent.

Wildlife trafficking is one of the major forms of smuggling in the world, along with drugs and weapons.

### **Pollution**

Rivers, seas and lakes are being poisoned with sewage, oil and toxic chemicals from industry. Human refuse also pollutes the environment and kills wildlife. Crops are sprayed with chemicals to kill bugs and insects, which in turn harm the animals who feed on them. Global warming and climate change caused by, amongst other factors, air pollution, also threatens lots of species with extinction.

In 2004, researchers identified 146 dead zones around the world's coastlines, areas where the dissolved oxygen levels are so low that no marine life can be sustained.

The animals who live in the oceans, particularly those at the top of the food chain, absorb these poisonous chemicals (including pesticides and industrial waste). For example, the bodies of seals, whales and dolphins and even Arctic polar bears have been found to contain high levels of toxic chemicals, which damage their ability to reproduce.

### **Why does it matter?**

Some people say that we should conserve animals and plants because they might be useful to us in the future. It is also argued that, in the long term, our own survival may depend on maintaining the planet's ecosystems. This means preserving other species and maintaining the planet's biodiversity – or variety of life.

Animal Aid believe quite simply that we have a responsibility to protect animals for their own sake and especially those species which are at risk because of our actions.

### **Solutions**

**Conserve** the world's natural habitats. Keeping alive endangered species in zoos is not a solution, because it becomes enormously difficult and expensive to repatriate them to their natural habitat. If we carry on polluting and destroying these habitats, repatriation becomes literally impossible. Only through protection of their habitats will wild animals survive.

**Ban** the international trade in products made from endangered species and enforce the laws that already exist to protect wildlife.

**Educate** people to help stop the trade in animal products.

**Stop** polluting the environment with poisonous wastes.

## **WHAT YOU CAN DO!**

- **Educate others about the plight of endangered species, and, if you go abroad, don't buy products made from them.**
- **Contact the British Trust for Conservation Volunteers ([www.btcv.org](http://www.btcv.org)) and help manage local nature reserves.**
- **Write to your MP (to find your MP, visit [www.locata.co.uk/commons](http://www.locata.co.uk/commons)) and ask them to support legislation to protect natural habitats.**
- **Avoid polluting packaging, and don't buy products made from tropical hardwood. Always look for the 'FSC' symbol to ensure that wood is from a sustainable source.**
- **Join Animal Aid's youth group Youth4animals, and help campaign to save endangered species.**

## Questions

1. How many species of animals and plants face extinction
2. Where are 2/3 of all plant and animal species found?
3. Why are rainforests being destroyed?
4. How many tigers are estimated to be remaining in the wild?
5. List 3 reason why tiger populations are in decline.
6. What does the term moratorium mean?
7. For how long have rhinos been on the earth?
8. Why are rhinos being hunted?
9. What does CITES stand for?
10. What is the role of CITES?
  
11. How does pollution cause the death of animals like seals, polar bears, whales and dolphins.
  
12. List the 4 solutions mentioned in the article which could help save endangered species.

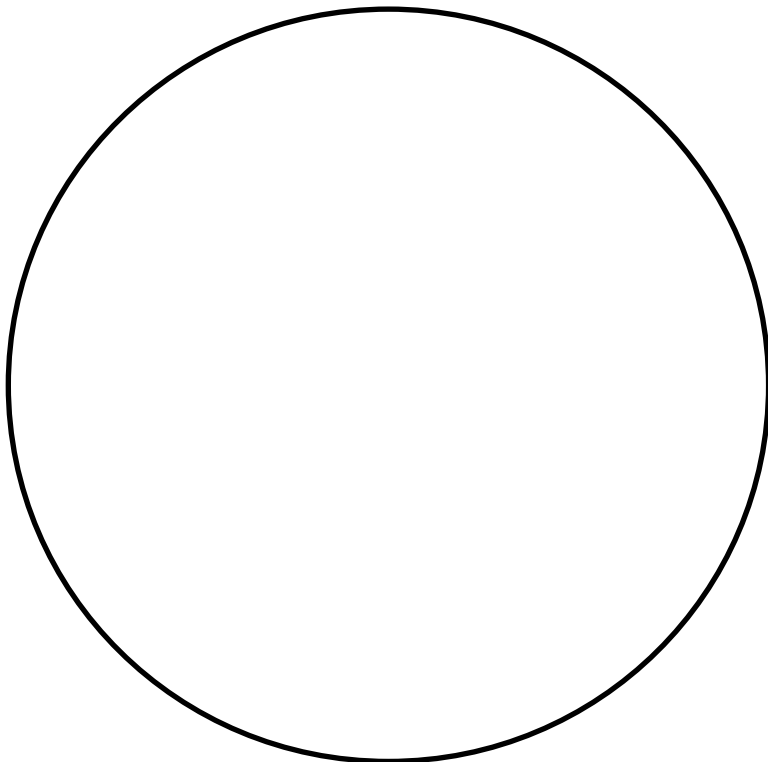
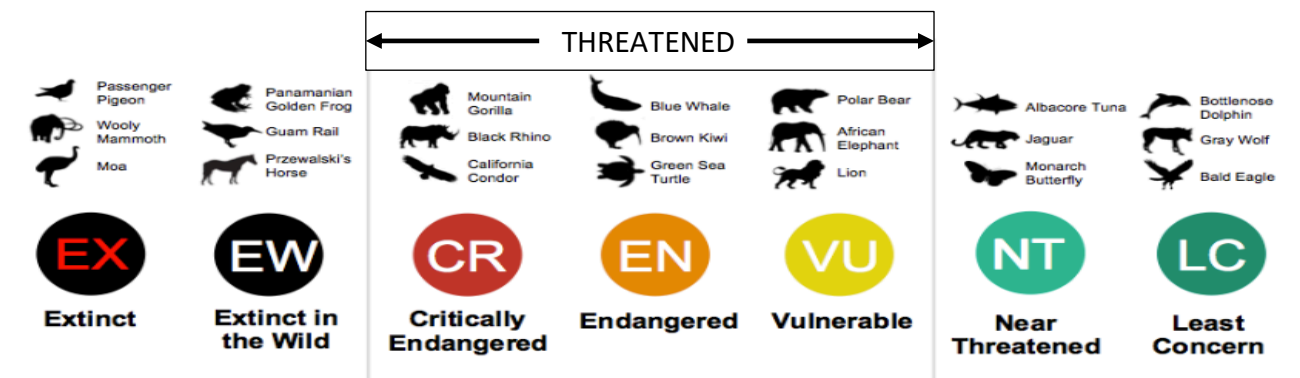
Create a poster which could be used in a public education campaign to save endangered species from extinction.

**Endangered Species Fact File**

Aim: To carry out research about an endangered animal and record relevant facts.

**STARTER: Numeracy Task**

Below is global data about the proportion of species known to exist in different threat categories. Draw a pie chart graph to illustrate the data. Use the key below and colour code the pie chart.



Status	Percentage %	Key
data deficient	14	
LC	40	
NT	8	
VU	19	
EN	10	
CR	7	
EX or EW	2	

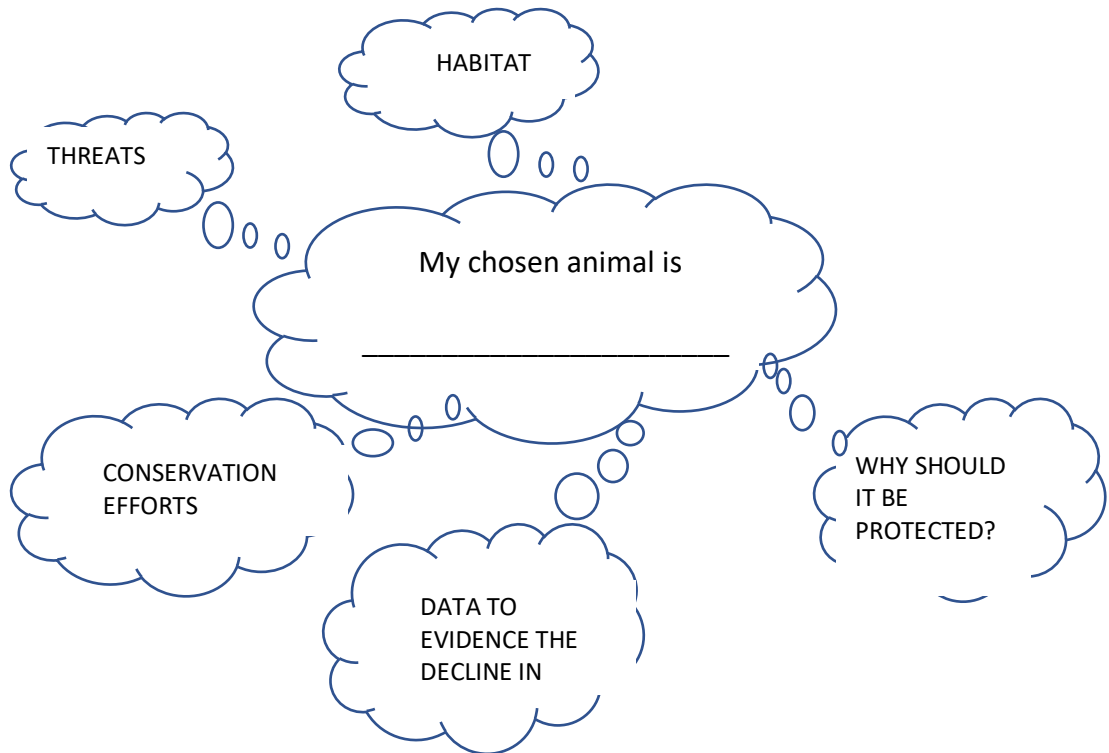
1. In total, what percentage of species are threatened?

2. 14% of species are termed data deficient. What does this mean?

3. Why do you think 8% of species are in the near threatened status?

### Internet Research Draft Plan

Before writing your report you need to complete research on an endangered animal of your choice. You must include reasons why the animal is endangered and any conservation strategies put in place to try and protect it. Use the Draft planning sheet on the next page to help gather your facts.



Write a list of the web sites / addresses you used

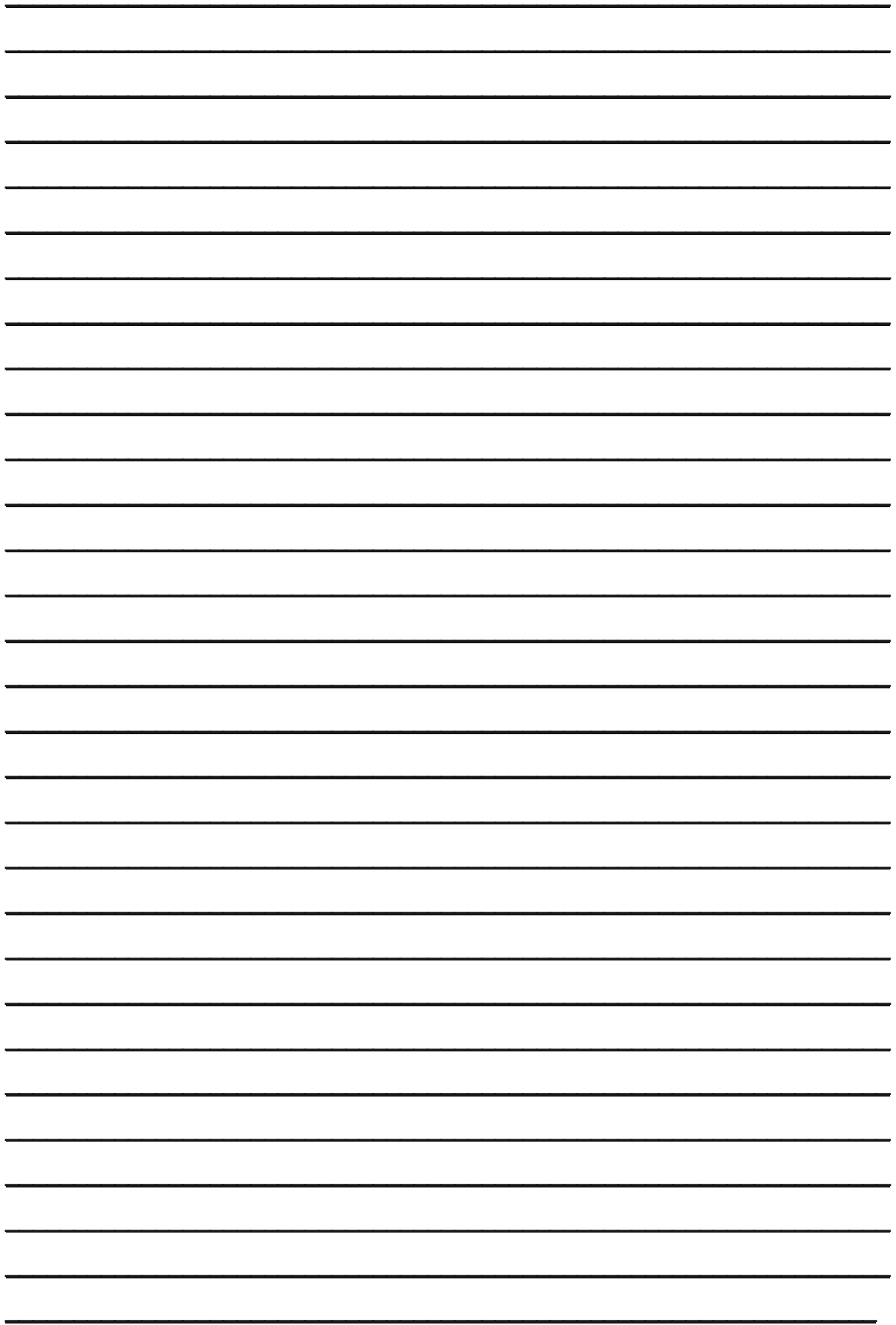
Evaluate the websites. Do you think they are reliable or biased? Explain your decision.



World Map - Label the continents and indicate where your chosen animal lives.







RUBRICS – Writing to explain

LNF - Element	LNF - Aspects	Bronze	Silver	Gold	Platinum
Organising ideas and information	Meaning, purpose, readers	I have explained the topic with supporting reasons and examples. I have some sense of my audience.	I have written a full explanation, giving what, where, how and why with some cause and effect. I included a labelled diagram. My style partly suits my audience and purpose.	I have written a comprehensive explanation, adding details to clearly show cause and effect. I included a labelled diagram integrated into my text. My style mostly suits my audience and purpose.	I have written a comprehensive explanation, including pertinent details and have made some connections to other learning. I have integrated relevant data and organisational features eg. Flow chart, to enhance understanding. My style suits my purpose and targets my intended audience appropriately.
	Structure and organisation	My explanation opens with a full statement followed by a series of steps. I covered most main points. I included a diagram. I included a detailed closing statement.	My explanation opens with a precise statement which establishes context. I included a series of detailed steps covering all main points. I included a detailed closing statement.	My explanation opens with a precise statement which establishes context and purpose. I included paragraphed, detailed and logical steps, covering all points in a sequence. My conclusion is a brief summary of each of the main points.	My explanation has an effective opening, main body and conclusion which are linked logically and sequentially. My conclusion summarises key information, giving extra clarity to the reader.
Writing accurately	Language	I have used a variety of subject specific and formal/academic language.	I have used a variety of subject specific language and extended my use of formal/academic language.	I have accurately used a variety subject specific/technical and academic language.	I have accurately used a variety of subject specific/technical language and a broad range of academic language.
	Grammar Punctuation Spelling Handwriting	I have used different sentence structures, including complex sentences. My use of tense is sometimes correct. I have used a full range of punctuation to guide the reader in complex sentences I have spelt all high frequency and most words with complex regular patterns correctly. My handwriting is legible.	I have used a range of sentence structures to make meaning clear. <i>I have used some logical connectives.</i> My use of tense is mostly correct. I have used a range of punctuation accurately some of the time. I spelt all high frequency, most subject and some academic vocabulary correctly.	I have used a range of simple, compound and complex sentences to make meaning clear. I have used a range of logical connectives. My use of tense is consistently correct. I have used a full range of punctuation accurately most of the time. I spelt all high frequency, most subject and academic vocabulary correctly.	I have written with grammatical accuracy, varying the length and structure of sentences to create different effects. I have used a wide range of logical connectives e.g. 'therefore', 'however', 'on the contrary', 'nevertheless', 'on the other hand', 'alternatively'. My use of tense is effective. I have used a full range of punctuation consistently accurately. I have spelt all high frequency, subject, and academic vocabulary correctly. My handwriting is fluent and legible.

## Feedback Sheet



ASSESSED BY:      PEER                  SELF                  TEACHER  
(circle as appropriate)

SUCCESS CRITERIA	
I have written an introductory paragraph and defined the term endangered.	
I have described the animals habitat and explained why the animal is under threat.	
I have used data to support the claims.	
I have described some conservation efforts introduced to protect the animal and explained why it should be protected.	
I have used a range of connectives.	
I have used a range of subject specific language and spelt them correctly.	
I have drawn a sensible conclusion.	

WWW

EBI

CHALLENGE (to move forward)



