





## KS3 Threatened Species Trail

This resource pack consists of both the Teacher Guide (p.3 and 4) and the Student Booklet (p.5 and 6) for the Threatened Species Trail. When you have printed the Student Booklet pages, fold in half to make A5 booklets.

We recommend you look through the whole pack before you start, so you know what information to look for at each sign.

## Curriculum Links

### SCIENCE

#### **Interactions and interdependencies**

Relationships in an ecosystem

- how organisms affect, and are affected by, their environment, including the accumulation of toxic materials.

#### **Genetics and evolution**

Inheritance, chromosomes, DNA and genes

- changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction
- the importance of maintaining biodiversity and the use of gene banks to preserve hereditary material.

### GEOGRAPHY

**Human and physical geography**



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- Information
- Toilets/disabled & baby change Facilities at Giraffe's: Feb - Oct.
- Changing Places facility (Radax key required)
- Water filling station
- Café Graze - Open all year
- BBQ - Seasonal
- Coffee Corner - Open all year
- Bush Tucker Bites - Seasonal
- Outdoor picnic areas
- Seasonal refreshments
- Ice cream - Seasonal
- Under cover area
- Adventure playgrounds
- First Aid Emergency? Call: 01962 777983

\*Open for special events and private bookings  
\*Open for pre-booked education groups or special events

Information subject to change. 08/21.

## Trail Animals

- Humboldt penguin
- Southern white rhino
- Clouded leopard
- Grevy's zebra
- Cotton-top tamarin
- Partula snails
- Scimitar-horned oryx
- Pygmy hippo



Marwell Wildlife

## KS3 Threatened Species Trail TEACHER GUIDE

The Threatened Species Trail takes you and your pupils around the zoo, focusing on specific animals. You will discover more about some of the threats affecting these animals in the wild and the conservation work that is being done to protect them.



As you go round the trail, your pupils can fill in the accompanying KS3 pupil booklet using the information on the Threatened Species Trail signs.

Please encourage your pupils to look through the whole booklet before you start, so they know what information to look for at each sign.



# Sign layout

The Threatened Species Trail signs look like the one below:

Problems on the left of the sign.

Solutions are on the right of the sign.

## Partula snails - a threatened group of species

### Problems?

#### Invasive species

Carnivorous snails were introduced to the Polynesian islands as a biological control to remove a pest species of snail.

However, these carnivorous snails instead chose to prey upon the smaller partula snails.

This has caused the extinction of some and dramatically reduced the population of many other partula species.

#### Habitat loss

Agriculture and development have led to habitat loss for these snail species.



### What is being done?

#### Captive breeding

Several partula snail species are part of international captive breeding programmes. Eight partula species are being bred at Marwell.

#### Monitoring

Marwell contributes funds towards the International Partula Conservation Programme. As part of this programme, wild populations are being monitored closely and reserves created.

#### Reintroductions

Reserves are being created with the plan of re-introducing captive-bred partula snails into their former range. It is hoped that snails from Marwell will be released into one of these reserves in the future.



The letter for the mystery word is found here.



The small icons can direct you to the correct part of the sign for that question.

The majority of partula species you can see at Marwell are extinct in the wild. The green numbers below show the total number of partula species found in each category.



The IUCN Red List of Threatened Species™ scale is found here and shows you the current status of the species (in red).

The mystery word is:

E C O S Y S T E M S

# Answers

- 1 = Political instability 2 = Competition 3 = Habitat loss   
 4 = Invasive species 5 = Hunting 6 = Overfishing   
 7 = Small range 8 = Loss of prey 9 = Pet trade



Buying sustainable seafood reduces the threat of overfishing so that **Humboldt penguins** have enough to eat.



**Grevy's zebra** benefit from protected areas in Kenya and Ethiopia.



Hunting, logging and forest clearing are all illegal in the protected rainforest where **Sulawesi crested macaques** live.



**Rhino** horn has no medicinal properties. Sharing this message will reduce demand for rhino horn.



Marwell Zoo celebrated the birth of its first **giant anteater** pup in November 2013.

	LC	NT	VU	EN	CR	EW
Humboldt penguin			✓			
Grevy's zebra			✓			
Clouded leopard			✓			
Scimitar-horned oryx						✓
Cotton-top tamarin					✓	
Partula snails						✓
Southern white rhino		✓				
Pygmy hippo				✓		

Ideas for how **you** can help save threatened species include: recycling, saving electricity, buying sustainably, not littering, feeding wild birds and reducing pollution.

# Clouded Leopard

## Problems?

### Hunting

The clouded leopard is hunted for the illegal wildlife trade. Large numbers of skins have been seen in market surveys and there is also trade in bones for medicine, meat for exotic dishes and live animals for the pet trade in several areas including the infamous Tachilek market along the Thai-Myanmar border. Although the clouded leopard is classed as vulnerable on the IUCN register, it is now believed to be extinct in the wild in Vietnam.

### Habitat loss

The preferred habitat of dense evergreen tropical rainforest has decreased numbers due to ongoing deforestation in countries such as Myanmar and Cambodia, this is also compounded by the reduction of habitat quality.



## What is being done?

### Protected by law

Clouded leopards are protected by CITES, an international agreement signed by nearly every country in the world. CITES controls the trade in animals, plants and their products.

### Reducing hunting

National legislation to ban hunting is now applicable to Bangladesh, Cambodia, China, India, Malaysia, Myanmar, Nepal, Thailand and Vietnam.

### Monitoring

Camera trapping surveys to document distribution and research to improve understanding and support of the species.



The status of how threatened an animal or plant species is comes from the IUCN Red List of Threatened Species™. You can find the status on this scale on the trail signs:



# KS3 Threatened Species Trail

For each animal on the Threatened Species trail, tick what their current status is:



NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EW	EX

	LC	NT	VU	EN	CR	EW
Humboldt penguin						
Grevy's zebra						
Clouded leopard						
Scimitar-horned oryx						
Cotton-top tamarin						
Partula snails						
Southern white rhino						
Pygmy hippo						



What can you do to help save threatened species?

Write your ideas in this box.












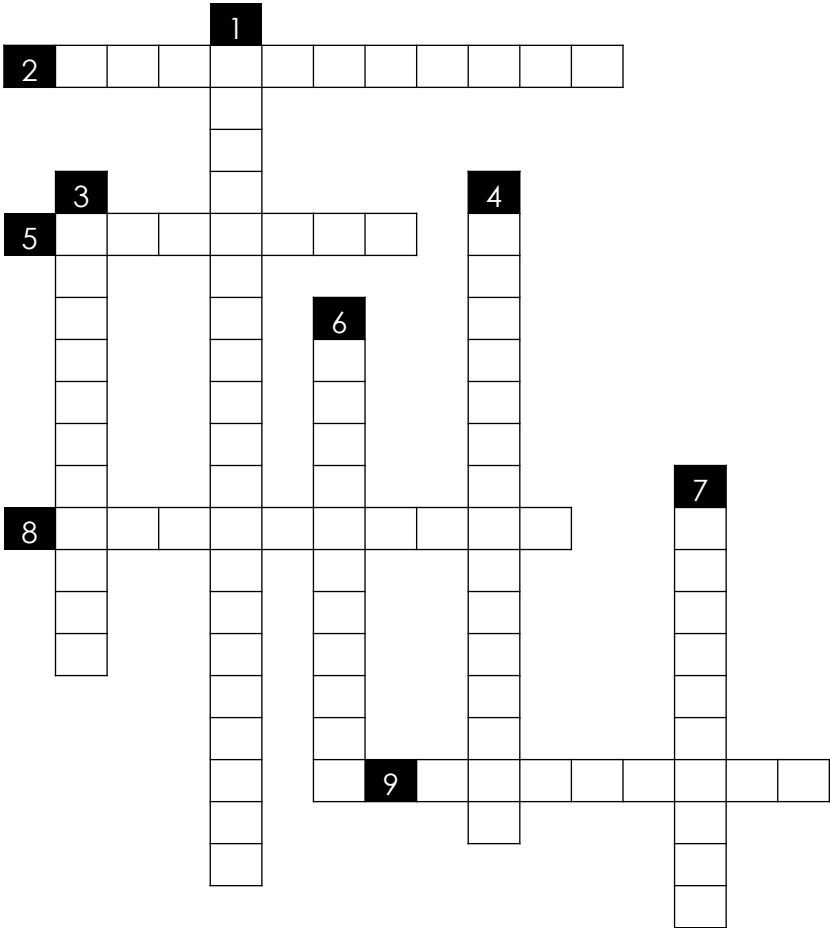
Collect a letter from each Threatened Species sign around the zoo to spell out our **mystery word**...

2	C	4	3	1	S	6	5	7	8
---	---	---	---	---	---	---	---	---	---

# Problems?

As you follow the Threatened Species Trail, record in the crossword below some of the problems that animals in the wild might have. Use the icons on the signs to help you.

- 1 = 
- 2 = 
- 3 = 
- 4 = 
- 5 = 
- 6 = 
- 7 = 
- 8 = 
- 9 = 



# What is being done?

Lots of different organisations, charities, and communities (including Marwell!) are now working together to help protect threatened species like the ones on this trail. Use the information on the signs to answer the following questions.



How does buying sustainable seafood help the **Humboldt penguins**?

\_\_\_\_\_



In which two countries do **Grevy's zebra** benefit from protected areas?

\_\_\_\_\_



What does CITES control the trade of whilst helping the work being done globally with **Scimitar-horned oryx**?

\_\_\_\_\_



What message is being shared about rhino horn and how will this help **southern white rhinos**?

\_\_\_\_\_

\_\_\_\_\_



Name two things being done to conserve the **Pygmy hippo**?

\_\_\_\_\_