



Key Stage 3 & Key Stage 4

## Investigating Sustainability

Understanding how we can all protect our natural resources

Name.....

Zoological Society London

[www.zsl.org](http://www.zsl.org)



## What is Sustainability?

Read the following text and answer the questions that follow:

**“Sustainable = able to be maintained  
at a certain rate or level”**

If something is sustainable it means that it can, in theory, go on forever (or at least a very long time) at the same level. When we talk about ‘living sustainably’ it means that we live in a way that meets our needs (such as having enough food to eat, building homes, creating roads etc.) WITHOUT compromising the environment, or the ability of people in the future to meet their needs.

As well as being maintainable, sustainable methods must take into account all three of the following criteria:

1. environmental protection: it improves, or at the least does not harm, the environment
2. social welfare: it benefits people
3. economic development: it saves or makes money

For example, cutting down ancient rainforest trees for timber is not considered sustainable because it harms the environment: rainforests are extremely important for controlling our weather, giving us clean air to breathe, and providing a home for countless species. Removing them would have a very negative impact on the global environment and also therefore us and people in the future.

However, planting trees in a suitable area to harvest them for wood, then planting new trees to replace them could be considered sustainable, because, there is then a continual supply of trees to use, and there is much less impact on the environment.

*In your own words, describe what “sustainable” means:*

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*Why is living sustainably important to...*

*a) You?*

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*b) People in the future?*

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*c) Animals?*

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*Only one of the following projects COULD be considered sustainable, which is it?*

Cutting down rainforest trees for timber

Installing solar panels on houses

Clearing ancient woodland to build houses

Creating more landfill sites to store waste

Constantly fishing in one area and taking as many fish as possible

Burning fossil fuels to create electricity

*Why is this project sustainable?*

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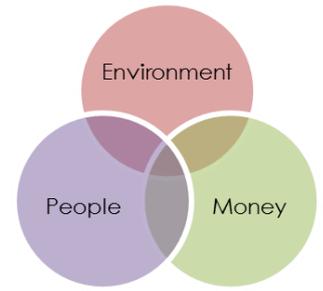
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## The Forest Stewardship Council



The Forest Stewardship Council (FSC) is a non-governmental organisation (NGO) which works to promote responsible management of forests. FSC runs a global forest certification system which allows consumers to identify, purchase and use timber and forest products produced from well-managed forests.

FSC's “tick tree” logo (above) is used on product labels to indicate whether products are certified under the FSC system. When you see the FSC logo on timber and other wood products, such as paper, it means that the product is made from sustainably grown trees, and its production has not contributed to the destruction of the world’s forests.

***Complete the table below, by researching FSC and identifying the ways in which they fit the three criteria for a sustainable company: environmental protection, social welfare and economic development.***

<p><b><u>Environmental Protection</u></b></p> <p>How their work helps protect the environment</p>	
<p><b><u>Social Welfare</u></b></p> <p>How their work helps to benefit people</p>	
<p><b><u>Economic Development</u></b></p> <p>How their work supports economies</p>	

## Sustainability at ZSL

The Zoological Society London (ZSL) is one of the world's leading conservation organisations, working in many areas around the globe to help animals and people to exist together. We also practice what we preach back at home, by trying to minimise the negative impacts of our zoos and activities on the environment as much as possible. We received two awards in recognition for our work on sustainability in 2013. Below are details of two ways we try to be more sustainable.

**Think about these two environmental issues and fill in the gaps in the table.**

		<u>WASTE REDUCTION</u>	<u>WATER USAGE REDUCTION</u>
		Only 2% of waste from ZSL zoos goes to landfill	ZSL London Zoo has halved water use over the last 10 years
<b>How does this make ZSL a more sustainable charity?</b>	<b>Environmental Protection</b> How will this help the environment?		
	<b>Social Welfare</b> How will this help people?		
	<b>Economic Development</b> How will this save the charity money?	Waste which goes to landfill incurs a tax of £80 per tonne. The less waste going to landfill means that ZSL pay a lower amount of landfill tax.	
<b>How has ZSL has been able to meet and maintain these achievements?</b>		Landfill diversion: ZSL recycles, reuses or composts 98% of waste - for example by: installing recycling bins for staff and visitors. recycling materials to build new	
<b>What could you do at home to be more sustainable like the ZSL zoos?</b>		1.  2.	1. Have showers instead of baths.  2.

## Sustainable Enclosure Design

Many of our animal exhibits are built and run in ways that make them much less wasteful, minimising their environmental impact and their cost.

*Research the ZSL London Zoo enclosures below, and match them up with the sustainable approach utilised at that exhibit.*



Penguin Beach

### REDUCING ENERGY USED

by including an insulating layer in the ceiling that UV light from the Sun can



Gorilla Kingdom

### REDUCING WATER USED

by installing a rain water harvesting system



Rainforest Life (Clare Rainforest)

### REDUCING GLOBAL HABITAT DESTRUCTION

By using sustainable materials such as FSC wood



Tiger Territory

### REDUCING CONCRETE USED IN CONSTRUCTION

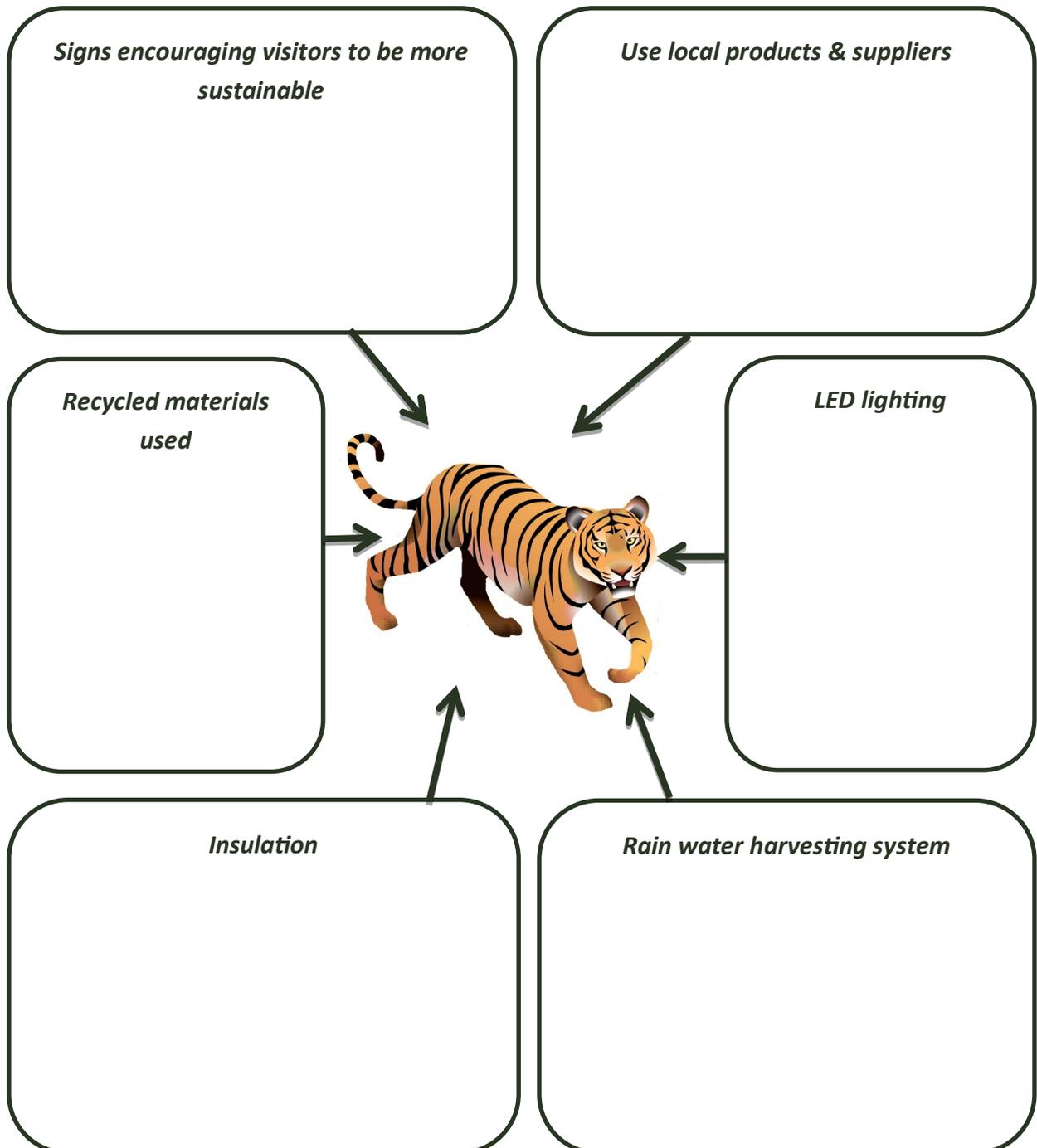
By reusing waste materials

## Sustainable Enclosure Design: Tiger Territory

Tiger Territory at London Zoo has many different features, which help it to be more sustainable.



**Think about each of the features of the enclosure's design below and explain why they could be considered sustainable.**





*Think about how you (and your school) can be more sustainable. Think about what you can do to challenge issues such as water usage, waste reduction, use of plastics, recycling etc.*

***Remember, to be sustainable it must incorporate environmental protection, benefits to people & economic benefits.***

**Write your ideas here:**