

A TROPICAL RAINFOREST

A Topic Outline Glasgow City Council P7

August 2007

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Storyline	Key Questions	Pupil Activity	Class Organisation	Materials	Outcome
1. The Scientific Expedition to a Rainforest	<p>What does the advert mean and what should we do about it? What do you know about the tropical rainforest?</p>	<p>Children listen as teacher reads</p> <p>a) Small group brainstorm to produce responses to the advert and their group knowledge about rainforests Or Teacher leads class brainstorm</p>	<p>Read the advert to the class to introduce the topic. Groups of 5/6 or whole class group. Give them copies of the advert- either group or individual</p>	<p>Advert</p> <p>Flip-chart and/or scrap paper and pencils for notes</p>	<p>Discussion</p>
<p>In what parts of the world are there such rainforests? (Teacher influence?) Teacher may want to direct the continent to be studied or may allow the pupils to choose from Africa, South America or South East Asia.</p>		<p>b) Pupils to consult reference material to ascertain terrain, conditions and location. c) Consult world map and mark up a blank d) Agree on which rainforest the class will visit e) Write letters of application f) Evaluate the applications and decide on the destination</p>	<p>Individuals and groups</p> <p>Research in pairs Work in groups</p> <p>Class /groups/ individual</p> <p>Individual Structures? Peer assessment</p>	<p>Access to Internet Reference books on rainforest Blank world maps</p>	<p>Reference skills Information gathering Location of rainforests in the world</p> <p>Functional writing Decision making</p>

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2. The Team and the equipment	Which experts do you think will be needed for this expedition?	<p>a) Refer to conditions in the advert</p> <p>b) What knowledge, skills, attitudes and dispositions will they require?</p> <p>c) Sort into groups of experts</p> <p>d) Each group to make an A4 2D figure of an expert in their work wear and each child to make themselves as a volunteer for the expedition</p> <p>e) Biographies-experts</p>	<p>Discussion using the advert for information and evidence</p> <p>Group discussions to come up with experts (May need help with that or give them an extract with some information)</p> <p>Put the class in these expert groups</p> <p>Possible Experts Botanist Biologist Ecologist Herpetologist Meteorologist Ornithologist Anthropologist Lepidopterist Primatologist Medical Doctor</p> <p>Group work to write</p>	<p>Flipchart and marker pens</p> <p>Paper, fabric, pens etc</p>	<p>Presentations and sharing of expertise They need to know about each others special skills</p> <p>Reach consensus</p>

	<p>What will we need to take?</p>	<p>f) Other writing activities or talking /listening games.</p> <p>g) Discuss the supplies they will need to take and why?</p> <p>h) Talk about the kind of clothing they might want to take.</p> <p>i) Discuss a luxury they might want to have on the expedition</p> <p>j) Make X-ray pictures of their expert equipment in packing cases and /or personal rucksacks.</p>	<p>about the experts. These groups will now work together and share their knowledge and research with other groups</p>	<p>Use resource material to find out about this equipment</p> <p>Paper/construction material from junk</p> <p>Paper, paint etc</p>	<p>Knowledge of the scientific skills involved in studying different aspects of rainforest</p>
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3. The Journey	<p>What is the best route?</p> <p>How will we get there?</p>	<p>a) From a map they can work out a main points route and plot it on a map or globe.</p> <p>b) Using travel brochures / internet etc they can make a flowchart to sort out the travel arrangements</p>	<p>Group</p> <p>Group or pairs</p>	<p>Map or blank globe</p> <p>Travel brochures Airline timetables internet</p>	<p>Mapping Skills Information Gathering Collating and recording</p>
4. The Challenges	<p>Introduce the 5 challenges.</p>	<p>a). See individual challenges for the learning outcomes to be researched and the criteria required for the presentation.</p>	<p>Pupils work in their expert groups. Each group has a copy of the challenge. Teacher will need to allocate appropriate time for these challenges.</p>	<ol style="list-style-type: none"> 1. Botanists 2. Meteorologists 3. Environmentalists 4. Zoologists 5. Anthropologists <p>to research the specialist knowledge</p>	<p>Sharing of information before we arrive in the rainforest.</p>

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5. The Arrival in the forest & setting up a base camp	<p>What do you think the forest looks like?</p> <p>What kind of weather will they experience?</p> <p>Is there anything of value to other parts of the world in the rainforest?</p>	<p>a) Research extract and books to make the forest frieze</p> <p>b) Include a camp site in the frieze</p> <p>c) Move the figures into the camp site</p> <p>d) Check research</p> <p>e) Check research and add to the frieze</p>	<p>Big frieze everyone involved!</p> <p>Step 1 Trees plants trees creepers, leave a space for the camp and when placing items leave a section for only forest</p> <p>Every group to research in relation to their specialism</p>	<p>Textured papers, oil based crayons, paint, etc (colour mixing)</p> <p>Make own paper</p> <p>This material needs to be available to research</p>	<p>The structure of the rainforest and the characteristics of the vegetation growing there.</p> <p>Know the resources obtained from the rainforest</p>
6. Research the Forest Creatures.	<p>What different kinds of creatures do you think could live in the rainforest environment?</p> <p>Insects? Birds? Animals?</p> <p>Will the creatures be different in Africa, South America and South East Asia? Which continent should we choose to study?</p> <p>Where should the creatures be placed on our frieze?</p>	<p>k) Groups or class brainstorm ideas which are listed and discussed. Use the expert group to help with this</p> <p>l) Groups agree to create visuals of forest creatures.</p> <p>m) Creatures are placed on frieze.</p> <p>n) Pupils compile information sheets on the forest creatures.</p>	<p>Class or groups</p> <p>Relate to map</p> <p>Research to be done by the zoologists in pairs or as individuals</p> <p>Groups select different creatures</p> <p>Pair</p>	<p>Flip chart /writing paper</p> <p>Reference books etc</p> <p>On forest creatures</p> <p>Art materials for making creatures.</p> <p>Blue tack or drawing pins</p> <p>Writing paper /cards</p>	<p>Discussion</p> <p>Reference skills</p> <p>Creative artwork</p> <p>Development of frieze</p>

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7. Forest People	<p>Do people live in the forest?</p> <p>How do you think people could live in the forest – food, shelter, and clothing?</p> <p>Add their living quarters to the frieze</p>	<p>a) What do we know?</p> <p>b) Groups discuss and report their ideas to the class. Teacher can emphasize that the forest plants and creatures are the only resource – no modern technology!</p>	<p>Groups but, the anthropologists should help with this aspect?</p> <p>Make village Individuals working in a group</p>	<p>Flip chart to record ideas</p> <p>A variety of materials may be required for this episode and this is an opportunity for pupils to research tribes of forest dwellers and their way of life.</p>	<p>Discussion and imaginative thinking</p>
	<p>What would the forest people look like?</p>	<p>c) Each group creates – head and shoulder portraits or full figures of a family. Characters are named and displayed.</p>	<p>Class, individuals and groups.</p>	<p>Paper in suitable colours and textures, feathers, etc Art materials to make visuals.</p>	<p>Portraits of characters Further development of frieze picture</p>
	<p>What is the reaction of the local people to the expedition</p>	<p>d) Develop short improvisations</p>	<p>Put class in two's to explore these feelings. What are the language barriers? How will we get over these?</p>		<p>Functional writing Know that the rainforests are home to millions of different kinds of plants and animals as well as an indigenous population.</p>

<p>8. The arrival of the loggers</p>	<p>What do you think has happened here? (<i>Teacher has destroyed some of the trees in the forest only part of the frieze.</i>)</p> <p>Impact? Locally-plants animals people How will it affect the expedition? What is the loggers point of view? How will the situation be resolved? How will this affect us in Scotland? Does it matter?</p>	<p>a) Discussion of what might have happened. Was there any warning? Sights, sounds, feelings?</p> <p>Discussion of these issues</p> <p>Whole class should be involved but there will be tasks for individuals and groups. Teacher will suggest groupings depending on how incidents are to be explored. Opportunities for a variety of outcomes-drama, power point, newspaper articles, radio / TV interviews etc</p>	<p>Groups and class</p>	<p>Research to back up pupils' hypothesis about the destruction of the rainforest</p> <p>Information on de-forestation, effects of mining or other modern enterprise might be useful here.</p>	<p>Stories told in different ways Identify the changes affecting tropical rainforest areas and evaluate the impact of these.</p> <p>Understand the effects of forest clearances on the economy Know some of the methods used for conserving the rainforest.</p> <p>Problem Solving which could lead to various outcomes – letter writing, poster campaign, fund raising.</p>
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Storyline	Key Questions	Pupil Activity	Class Organisation	Materials	Outcome
9. The review	<p>What do you think we have learned by working with this storyline topic?</p> <p>Are there questions to which you would still like answers?</p> <p>What did you find enjoyable?</p> <p>Was there anything you did not enjoy?</p> <p>Should any changes be made?</p> <p>In what way has your view of the rainforest changed?</p> <p>How would you explain this to a visitor, at an assembly?</p>	<p>a) Class discuss what they think they have learned and list the questions that still remain.</p> <p>b) Individuals write up their personal evaluations.</p> <p>c) Information and reactions are shared.</p>	<p>Class</p> <p>Individuals</p> <p>Class</p>	<p>Flip-chart</p>	<p>The results of the review and the individual evaluations.</p> <p>GCC topic worksheets to confirm learning outcomes?</p>

www.amazoniaconservation.org

www.blueplanetbiomes.org

www.leslietaylor.net

www.junglephotos.com

www.amazonteam.org (video clips)

www.savebiogems.org



Please find enclosed some paper copies of material for the Rainforest Storyline.

1. The poster was used to kick start the Storyline – you may wish to change the text when you have decided on the region you wish your pupils to explore.

2a and 2b are sheets with newspaper cuttings about the destruction of the South American Rainforest – you might use these to back up the poster appeal.

3. The news report about granddad and the anaconda should be kept back until you come to the incidents episode when it can be used as a model.

4. Includes two texts describing rainforests. Here you might also want to use a lovely book called 'the Great Kapok Tree' by Lynne Cherry (Voyager Books). She has also published 'the Shaman's Apprentice' which would be useful later on if you are exploring the medicinal use of rainforest plants.

5. Experts – you may prefer other 'ologists' or a limited number – or let your groups choose???? The accompanying challenge sheets give you a structure for research with key questions the pupils must answer – your choice should be linked to what you have in the way of suitable reference material or internet links. I suppose they could also be used as 'homework' but you will be the best judge of whether that is appropriate.

6. Learning Outcomes – I have a feeling that this sheet was compiled during 5 – 14 and may not link with CfE but I thought it could be helpful – especially when you are designing your evaluations.

This material was designed for use in Glasgow schools so in a sense Glasgow has ownership of it. Please ensure that Glasgow City Council Education and Storyline Scotland are appropriately acknowledged if you decide to use any of this package.



The Rainforest needs you!

Young people who are

fit and healthy

willing to work in a team

prepared to live under canvas

ready to research and report

are invited to apply for a place on an

EXPEDITION to research the

current condition of RAINFORESTS around

the world.

You will be assisting a team of expert scientists and taking part in adventurous and challenging tasks!

Please apply in writing to the Council for Global Conservation stating which rainforest area would be your first choice; which science is your greatest interest; why you want to take part; and which skills you have to offer.

Name _____

The Tropical Rainforest



On an outline map of the world do the following;

- use a ruler to draw the Equator.
- indicate the Tropics of Cancer and Capricorn with dotted lines.
- shade the areas of tropical rainforest green.
- label as many of the countries of tropical rainforest as you can.
- label their continents.
- name and label the largest of the tropical rainforests.

Challenge The Meteorologists

- Your challenge is to describe the temperature and weather of the Amazon forest and present your findings to the rest of the class in the first instance.
- What you need to find out

1. What do you think the temperature in the forest will be? How can you find out?
2. What do you think the temperature of the classroom will be at different times of the day? How can you find out?
3. Compare your temperature findings.
4. What is the weather like in the rainforest? How does that compare with our weather?

Criteria for the Research

- You have 6 days to complete this research, from (date) to (date)
- You must use the reference material supplied and the internet sites given.
- You must find at least one other source for your research and share this with the rest of the group.
- You must make notes about your research as evidence of the work you have carried out.
- Your group must decide on a plan of action to carry out the research and everyone must have a job to do.

Criteria for the Presentation

- Everyone in the class must be involved
- Your presentation must be no longer than 5 minutes
- You can present your information in any format (graph, database, power point, etc)
- The date for the presentation will be
- Your audience will be

Materials required

Challenge The Zoologists

- Your challenge is to describe the birds, insects, reptiles, and mammals of the Amazon rainforest and present your findings to the rest of the class in the first instance.
- What you need to find out

1. The names and diet of the wildlife 2. Where they live in the rainforest?

Criteria for the Research

- You have 6 days to complete this research, from (date) to (date)
- You must use the reference material supplied and the internet sites given.
- You must find at least one other source for your research and share this with the rest of the group.
- You must make notes about your research as evidence of the work you have carried out.
- Your group must decide on a plan of action to carry out the research and everyone must have a job to do.

Criteria for the Presentation

- Everyone in the class must be involved
- Your presentation must be no longer than 5 minutes
- You can present your information in any format (song, picture, article, database etc)
- The date for the presentation will be
- Your audience will be

Materials required

RAINFORESTS

What are rainforests?

Rainforests are made up of tall trees and many other plants, all growing thickly together. They cover huge areas of land. It is always hot and damp inside a rainforest so plants keep on growing all the year round. Rainforests are home to the greatest variety of plants and animals in the world. People live there too.

It is hot and gloomy inside a rainforest. Many forest trees are very tall and grow close together. Their leaves and branches act like an umbrella which blocks out the strong sunlight. This thick top layer of leaves and branches is called the canopy. Shorter trees and other plants grow under the canopy in between the taller trees.

The canopy is the top layer of the forest. It gets almost all the sunlight and rainfall.

The understorey is a place of shade. Very little sunlight reaches the plants that grow here. The forest floor is always covered with fallen leaves, flowers and twigs. Very little grows on the dark forest floor.

Text from 'Rainforests' by Joy Palmer (Watts Books, London, 1991)
ISBN 0 7496 2317 9

The path we followed was a typical bush path, about half a metre wide, that coiled and twisted among the trees like a dying snake. At first it led up an extremely steep hillside, through massive boulders, each topped with a patch of ferns and moss and started with the flowers of a tiny pink primrose-like plant. Here and there the great lianas coiled down from the trees, and lay across our path in strange shapes, curving and twisting like giant pythons. At the top of this steep incline the path flattened out, and an across the level forest floor between the giant tree-trunks. The interior of the forest is cool, and the light dim; it flickers through the dense fretwork of leaves, which gives it a curious underwater quality. The forest is not the tangled mass of undergrowth that you read about: it is composed of the enormous pillar-like trunks of the trees, set well apart, and interspersed with the thin undergrowth, the young saplings and low-growing plants that lurk in the half light.

The path wound and twisted its way through the giant trees and here and there along its length there was a rent in the foliage above, which let through a shaft of sunlight. In these patches of sun, warming themselves after the night's dew, sat a host of butterflies. They rose and flew round us as we walked, dipping and fluttering and wheeling in a sun-drunken condition. There were tiny white ones like fragile chips of snow, great clumsy ones whose wings shone like burnished copper, and others decked out in black, greens,

Learning Outcomes

UNIT: The Tropical Rainforest

Level D

Learning

Knowledge and Understanding Strands

- Using Maps.
- The Physical Environment.
- The Human Environment.
- Human-Physical Interactions.
- Developing Informed Attitudes.

Learning Outcomes

- By the end of the unit the pupils should be able to:
- Know that the tropical rainforests grow near the Equator between the Tropics of Cancer and Capricorn.
 - Locate these areas of study on a world map.
 - Know that the rainforests are home to millions of different kinds of plants and animals as well as an indigenous population.
 - Describe the structure of the rainforest and the characteristics of the vegetation growing there.
 - Describe the features of the rainforest climate.
 - Know the resources obtained from the rainforest.
 - Describe and explain the traditional cultivation method known as shifting cultivation.
 - Identify the changes affecting tropical rainforest areas and evaluate the impact of these.
 - Understand the effects of forest clearances on the economy.
 - Know some of the methods used for conserving the rainforest.

Skills

- Preparing for the task.
- Carrying out the task.
- Reviewing and reporting on the task.

Learning Outcomes

- By the end of the unit the pupils will have practised:
- Choosing a variety of straightforward sources from which relevant information might be collected.
 - Selecting and using appropriate enquiry methods and equipment to access, select and record relevant information.
 - Selecting and using appropriately straightforward techniques to process information in a variety of ways.
 - Making simple judgements about the reliability of information by reference to bias.
 - Presenting findings in an organised and appropriate manner.
 - Presenting conclusions and justifying these with reference to evidence.

Amazon destroyed, 'three times faster'

BRAZIL

THE Amazon is being deforested more than three times as fast as last year, Brazil says, in a sharp reversal after three years of declines in the deforestation rate.

Brazil's environment minister Carlos Minc said upcoming nationwide elections were partly to blame, with mayors in the Amazon region turning a blind eye to illegal logging in hopes of gaining votes.

Non-government environmentalists blame the global increase in food prices. Elections no doubt play a part, but "the tendency of deforestation rising is deeply related to the fact that food prices are going up", said Paulo Adario, who co-ordinates Greenpeace's Amazon campaign.

"When you have elections, the appetite of authorities to enforce laws is reduced. But the federal government has to step in and do its job."

Amazon destruction was 228% higher in August than in the same month a year ago, according to a report from Brazil's National Institute for Space Research.

About 300 square miles of the Amazon were destroyed last month, compared with 90 square miles in August 2007.-AP

THE HERALD WEDNESDAY OCTOBER 1, 2008

'Hero' grandad takes on anaconda

SAO PAULO: A 66-year-old Brazilian man wrestled with a 15ft anaconda for nearly half an hour to free his grandson from the snake's crushing death grip. Matheus Pereira de Araujo, eight, would probably be dead inside the 80lb snake if his grandfather had not come to his rescue, zoologists said.

Anacondas, the biggest snakes in the world, are non-venomous and kill prey by asphyxiation. Araujo was playing near a creek on his grandfather's farm in Cosmorama, 310 miles west of Sao Paulo, at the time of the attack.

"My grandfather is a hero - I was so afraid of dying," Matheus said.

Joaquim Pereira attacked it with stones and a machete and killed it, freeing the boy, who needed 21 stitches on his chest where the snake bit him.

"It was the most terrible scene that I've seen in my life," Pereira said. "It was totally coiled around him while he was screaming that he was dying."