

SUSTAINABLE PALM OIL – PROGRESSION FROM EARLY YEARS TO YEAR 6

Early Years – Reception

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Main Topic and Focus:	Knowledge and Understanding of the World	Communication and Language Literacy	Mathematics	Role play	Small World / Tuff Tray	Possible Trips & Community Links
	<p>Understanding the World - The Natural World In an introduction to where food comes from children will be given the opportunity to say what they already know. They will also be able to say what they would like to learn about where food comes from. This is to be used to explain about how the oil palm tree is used to make an oil which is in lots of different foods, as well as many different household products like cleaning soaps and liquids we can buy from shops. Children to learn about the different animals which live in rainforests such as birds, orangutans and insects. The class is to choose one rainforest animal affected by unsustainable palm oil production to learn and study about in more detail. Children to make a class rainforest and roleplay what it's like to be an animal in the rainforest. To enrich this experience children are to be shown animations, pictures and film clips about the oil palm tree. Understand why it is important to choose food and cleaning products from the shops which have the certified sustainable</p>	<p>Listening, Attention and Understanding</p> <ul style="list-style-type: none"> Listen to class teacher and video clips explaining which animals and plants live in rainforests and how they are being affected by their removal to make room for more palm tree plantations. Respond to and join in with group work and discussions. <p>Speaking -</p> <ul style="list-style-type: none"> Pretend to be a rainforest animal living in their habitat. Talking to other animals about how scared they are of the plantation farmers who have come to cut down their rainforest home to plant palm oil trees. Use newly learnt words about rainforest plants, palm trees and animals. Give own opinions on the effect of taking rainforest away to make more palm oil plantations has on the plants and animals. Make suggestions on how they can encourage others to shop with SPO awareness <p>Comprehension - use and understand recently introduced</p>	<p>Number -</p> <ul style="list-style-type: none"> Practise counting rainforest animals / insects / leaves / trees/ plants / palm oil fruit with one to one correspondence, saying one number name for each item. Count the number of fruits on a 5 frame (and later in the academic year, a 10 frame). Write number digits to represent different amounts. Make playdough / plasticine palm oil fruit branches with a given number from a teacher, placing them on a 5 or 10 frame, or on a number track. Practise subitising how many grouped fruits / trees / palm oil trees there are, without counting, including different patterns or arrangements like on a die or domino. <p>Some children to:</p> <ul style="list-style-type: none"> Explore even and odd quantities of rainforest insects Explore doubling with rainforest insects Explore distributing items equally, such as animal / insect spots / fruits or leaves. <p>Numerical Patterns -</p> <ul style="list-style-type: none"> Compare different sets of 	<p>Being Imaginative and Expressive - Children to recount stories about rainforest animals with their peers and teacher. Children to adapt a known version of a rainforest story. Children to make up their own version of a rainforest story. Children to sing and perform actions or dances to animal songs from Malaysia, Borneo or South America, or a song which they have made up as a class to well-known nursery rhyme melody.</p> <p>Roleplay being a Chester zoo ranger, recreating the rainforest tropical house (under repair), caring for the animals and plants within them. Giving ranger talks Roleplay a</p>	<p>Recreating a rainforest habitat</p> <p>Recreating Chester zoo's 'Islands', home for animals such as: Sumatran tigers, Malayan Tapir and Sun Bears. And 'The Realm of the Red Ape'; home to the zoo's Orangutans</p>	<p>Trip to Chester Zoo to see the animals who originate from the world's rainforest habitats.</p> <p>Ranger visit*</p> <p>External expertise could be used to work with children on areas such as: An artist specialising in 3D art and sculpture could run workshops creating three dimensional sculpted rainforests.</p> <p>A drama specialist could teach children a rainforest story (told through their involvement in drama). This story could be linked to the cutting down and burning of rainforest trees to make way for oil palm tree plantations. The drama specialist could work with the children to make up their own version.</p>



palm oil logo to help prevent the dying out of animals. Children to learn it is important humans do not cut down the rainforests to make way for oil palm trees, otherwise the animals who live there may have to move and it may also cause pollution and damage to our planet.

rainforest animal or plant (including palm oil tree) vocabulary

Word Reading - read words (looking at initial letter sounds) on rainforest plants and animals consistent with their phonic knowledge by sound-blending. Some children may: Read aloud simple phrases and sentences about rainforest plants or animals

Writing - write initial letters or begin to write animal or plant names, labels, notes and phrases about rainforest plants or animals: Phonetically write words, labels, simple phrases and sentences about a particular rainforest animal as part of a class study. Write simple phrases about rainforest plants or animals Some children may: Write simple phrases and sentences about promises to care for plants and animals by buying SPO products. Write simple phrases and sentences to encourage others to shop sustainably.

animals found in rainforests, saying which set has the most and working out which set has the least.

- Continue a repeating pattern started by their class teacher (using images or mini models): [such as: bird, orangutan, bird, orangutan]... or [green palm leaf, red fruit, red fruit, green palm leaf, red fruit, red fruit].
- Answer questions such as: 'How many fruits does this branch have?' 'How you know?' 'Prove it' (children to count them out, placing them on to a manipulative such as within the holes of a Numicon, on sections of a number track or alongside a number line to check or prove it).

sustainable shop, selling only soaps, biscuits, chocolates (such Ferro Roche) and crisps with the certified SPO logo.

A music and dance specialist could lead a workshop on singing and performing rainforest dances, typical of dances performed in Indonesia.



SUSTAINABLE PALM OIL – PROGRESSION FROM EARLY YEARS TO YEAR 6

Sustainable Palm Oil – Year 1

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Main Topic and Focus:	Geography	English	Mathematics	Creative links Art & Design Music & Dance	Suggested Trips & Community Links
<p>Plant study - Compare common wild and garden plants with less common plants found in the rainforest, such as the world's largest flower: Rafflesia.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees in the UK and rainforests of the world (including the oil palm tree, planted in their place).</p> <p>Animal habitat study - Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals (plus the endangered Sumatran tiger from the rainforest).</p>	<p>Identify the four countries England, Scotland, Wales and Northern Ireland which make up the United Kingdom. Identify the capital cities of the United Kingdom and its surrounding seas.</p> <p>Identify the City of Chester on a map (the first SPO City in the UK) and mark their own home town on it to compare where they live in relation to Chester.</p> <p>Learn where the directions North, East, South and West are in relation to their school grounds.</p> <p>Identify the key physical features of their local area and compare them to those in the rainforests of Sumatra in Indonesia.</p> <p>Locate the United Kingdom and Indonesia on a globe.</p> <p>Identify seasonal and daily weather patterns in the UK and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles. Compare and contrast the seasonal climate in the UK to that of Sumatra.</p>	<p>Use phonic decoding skills to decipher new or unfamiliar words, such as the names of animals and plants they may come across during their SPO work.</p> <p>Listen to rainforest stories and act them out through their own roleplay.</p> <p>Lists, label or captions of collections of rainforest animals.</p> <p>Write mini factual information notebooks on rainforest plants and an endangered rainforest animal, including title pages, labels and captions.</p> <p>Recount - of sustainable palm oil shopping.</p> <p>Instructions for their own sustainable palm oil recipe.</p> <p>Letter writing to shop owners to encourage them to stock sustainable palm oil products.</p> <p>Poetry encouraging shopping in a sustainable way.</p> <p>Non-fiction writing of a short promise about something they personally promise to do which</p>	<p>Make simple class charts and pictograms on the different types of animals which live in rainforests. Write number facts about the chart and pictogram.</p> <p>Find out simple numerical facts about endangered rainforest animals (such as how long they typically live for).</p> <p>Make 3 different rainforest animals, comparing, ordering and problem solving with them</p> <p>Sort food and soap products from the shops into separate SPO and non SPO groups.</p> <p>Find out the weekly food consumption of their endangered rainforest animal at Chester Zoo. Weighing the equivalent of this out in non-standard units of measure.</p>	<p>Art & Design Create artwork of animals which live in rainforests. Suggested media: Paint: Using thick and thin paint brushes to create effect. Pencil and crayon: creating depth, shape and space. Textile weaving: Layering up different vegetation and different textiles for textures and shading. Collage: Cutting, ripping and tearing of paper, tissue and card 3D models: adding depth, width and height. Printing: Designing and printing with vegetables and fruit, to create the desired rainforest animal patterns.</p> <p>Music Children to listen to the sounds that can be heard in the rainforest (such as birds, insects)</p>	<p>Trip to Chester Zoo to see the range of animals and plants who originate from the world's rainforest habitats.</p> <p>Ranger visit*</p> <p>External expertise could be used to work with children:</p> <p>A dance specialist could work with children to create their own dance; inspired by an animals' desire to stay in their natural rainforest habitat.</p> <p>An artist could run a workshop on textile weaving; to work with children to use different textures and shades of textile to create layered rainforest vegetation. This could make up part of a main display where children's other palm oil project work is displayed.</p> <p>A DT specialist could work with groups of children, to help them</p>

will help prevent the extinction of rainforest animals, or one way in which they can help lead a more sustainable life.

Information poster on a how to know when they are buying sustainable palm oil products.

Reading - comprehension tasks of factual information related to rainforests. Ask children questions to test reading skills i.e. comprehension and retrieval.

N.B. Note It is not a year 1 national curriculum requirement to study rainforest plants and trees but to be familiar with the structure of trees and plants.

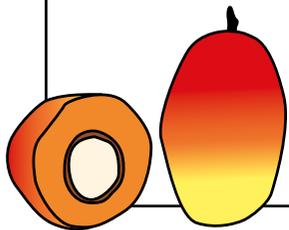
and orangutans), exploring with their own voices to create animal noises/calls. Children to create animal sound chants with different timbre dimensions (long / short sounds and different pitch) by using their voices and instruments. Children to work individually, in pairs and small groups. Performing, reviewing and evaluating their sounds and that of others.

Dance

Children to create their own dance consisting of a sequence of simple controlled moves. The dance will be inspired by an animals' desire to stay in their natural rainforest habitat.

design, make and evaluate a camouflaged conservationist vehicle from junk model items.

An education **music specialist** could lead a workshop on the creation of rainforest animal chants with different inter related dimensions (such as long / short sounds and different pitch). This could be recorded either on video and audio and used as part of a collation of palm oil project work to share with parents and the community.



SUSTAINABLE PALM OIL – PROGRESSION FROM EARLY YEARS TO YEAR 6

Sustainable Palm Oil – Year 2

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Main Topic and Science Focus:	Geography	English	Mathematics	Creative links Art & Design Music & Dance	Suggested Trips & Community Links
<p>Living things and their habitats - Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants. They will learn about how the rainforest habitat of endangered animals including the Sumatran elephant are being destroyed by the unsustainable oil palm tree plantation industry and how these animals are going in search of a new place to live and source food. Compare animals in a local woodland habitat (including micro habitats), with animals found in less familiar habitats, such as the seashore, in the ocean and in the rainforests of Sumatra, Indonesia.</p>	<p>Use world maps, atlases and globes to identify the UK and its countries, the world's seven continents and five oceans. Use the atlas to locate Sumatra in Indonesia.</p> <p>Locate on a map and globe where the United Kingdom is in relation to Indonesia and the surrounding seas. Identify which of the world's seven continents the UK and Indonesia are within.</p> <p>Compare their local surroundings (including the nearest forest), to the rainforests of Sumatra; the natural habitat of the Sumatran elephant. Children will identify key physical and human features in each of the different habitats.</p> <p>Can the children plot a journey line from the UK to Sumatra in Indonesia? Over which countries and oceans would they need to travel?</p> <p>Look at the effects of the weather on themselves and their surroundings (such as to plants and animals) - This is to be recorded termly. Children to compare local rainfall to that in a rainforest in Sumatra, Indonesia.</p>	<p>Explanation text, containing answers to key questions such as: What is palm oil? Where does the oil palm tree grow? Which part of the oil palm tree produces palm oil? What are the bad and good points about palm oil? What is sustainably produced palm oil? How can consumers help make a difference when they shop?</p> <p>Information texts about why it is important to do Chester zoo's SPO challenge; shop for products which contain certified SPO.</p> <p>Poetry about sustainable palm oil; inspired by: singing 'The Sustainable Palm Oil Conga' and unpicking its song lyrics; watching videos explaining the importance of sustainable palm oil production and from reading poetry from Chester Zoo's recommended conservation books list.</p> <p>Non-fiction information texts on the production of palm oil and the importance of SPO production.</p> <p>Instructions on how to shop in a sustainable way.</p> <p>Non-chronological report about the journey from a oil palm tree to our homes after gathering information</p>	<p>Present data on SPO products using pictograms, tally charts, block diagrams or simple tables.</p> <p>Survey parents about their knowledge of SPO products. Construct simple block diagrams or simple tables to present the data and findings.</p> <p>Rainforest animal study, choosing and using appropriate standard units to estimate and measure to make a scaled 2D paper outline.</p> <p>Compare and order different rainforest animal length and mass and record the results using >, < and =</p> <p>Plant study, choosing and using appropriate standard units to measure (length/height (m/cm); mass (kg/g) to make a scaled 3D plant or tree.</p> <p>Rainfall study in school grounds using measuring vessels and recording in litres / ml. Comparing this to data online for typical rainforest rainfall.</p>	<p>Art & Design - Drawing and painting Children to experiment in their sketch books using hard or soft pencil (such as 4B, HB and 4H) and thick and thin brushes to create the range of colour shades and lines seen in rainforest plants to create light and dark in their drawings and paint work of different leaf shapes. Children to use a view finder to help them focus in on an area of the plant or animal before they draw it.</p> <p>Computing Children to use technology such as tablets and cameras to support them make and adapt images of rainforest or oil palm trees. Children to use the brush, fill, spray and pen tools to create line, pattern, shape, colour and texture.</p>	<p>Trip to Chester zoo to see the animals and plants who originate from the world's rainforests.</p> <p>Ranger visit*</p> <p>Visit Chester Zoo's Nature Reserve</p> <p>Visit the variety of different gardens at Chester Zoo</p> <p>External expertise could be used to work with children:</p> <p>A dance specialist (possibly the same one who works with year 1 children) could work with children to create dances inspired by studying movements of rainforest animals affected by unsustainable palm oil production.</p> <p>An artist specialising in pencil drawing and painting workshops for children could teach children how to use a range of colour shades to create light, dark and line</p>

Animals including humans -

Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Learn that some endangered rainforests animals are having their habitat taken away from them and are in danger of extinction because of the growing palm oil demand in the world.

from various sources.

Letter writing to cafe owners to encourage them to buy SPO products.

Recount of a real event - children writing about how they held a SPO information session for parents.

Non-fiction writing a **promise** about something they personally promise to do which will help prevent deforestation, pollution and the extinction of endangered rainforest animals.

Reading - Comprehension tasks related to CZ resources and other resources e.g. information texts on rainforest animals affected by deforestation. Ask children questions to test reading skills i.e. comprehension and retrieval.

3D Sculpture

Children to create their own 3D rainforest animal or plant sculptures. Sharing their ideas and artistic experiences.

Music

Children to listen to the sustainable palm oil conga song from Chester zoo's website & learn it by heart, performing it with enjoyment. Children to record their musical accompaniment notations as a pictorial graphical score.

Dance

Children to create dances with a sequence of controlled moves. Dances to be inspired by studying rainforest animal movements. Children to perform their dance to others, evaluating and improving their dance.

effects in their pencil drawing and paint work of rainforest plants and animals.

A **DT specialist** could work with groups of children, to help them design, make (cut, shape, join and finish) and evaluate an Indonesian tribal head dress or mask.

A musician could lead a workshop on supporting the children to create and record a pictorial graphical score of their own musical accompaniment to Chester Zoo's 'Sustainable Palm Oil Conga' song.



SUSTAINABLE PALM OIL – PROGRESSION FROM EARLY YEARS TO YEAR 6

Sustainable Palm Oil – Year 3

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Main Topic and Science Focus:	Geography	English	Mathematics	Creative links Art & Design Music & Dance	Suggested Trips & Community Links
<p>(Link to Conservation project and Conservation Knowledge Organiser/ ECM Knowledge Organiser for work in all year groups)</p> <p>Animals including humans - Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Make links to the rainforest animals e.g. Discuss the plight of orangutans who cannot survive on oil palm fruit – they need a diversity of plants to eat.</p> <p>Plants - Investigate the way in which water is transported within plants, linking this to rainforest plants or the oil palm tree.</p>	<p>Studying maps of the rainforest, the children should recognise how rainforests are found between the Tropics of Cancer and Capricorn, how locations near to the Equator are hotter than locations further away and how they remain hot throughout the year.</p> <p>The children should learn about the importance of the rainforest for biodiversity and the importance for life, including that of humans. (See Chester Zoo video: 'Why are rainforests important?') (See Science activities). Link to English and Science work on deforestation and its effect on the orangutan and the importance of sustainable farming, including wildlife corridors.</p> <p>The children can learn about the different features and layers of a rainforest. Explore rainforest features on aerial photographs. See Chester Zoo 'Rainforest in a box' activity that requires the children to make different boxes of materials (including natural materials) to represent the different rainforests around the world, their layers and example animals. Different groups can focus on different rainforests.</p>	<p>Report writing - a detailed report about an endangered animal affected by the unsustainable palm oil production in Borneo and Sumatra.</p> <p>Report writing - the rights of the animals to the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. (Facts can be obtained from CZ fact files)</p> <p>Retrieve information - on SPO from the factual information given by Chester Zoo, using dictionaries to check the meaning of words that they have read</p> <p>Poetry about an endangered rainforest animal</p> <p>Persuasion - design and write a poster persuading shopper to purchase SPO products. Posters to be displayed in local supermarkets</p> <p>Information texts On the production of unsustainable and sustainable palm oil – produced and illustrate by children for display. And/ or poster about endangered animals, including important facts and eye-catching illustrations.</p>	<p>Collect data on the amount of palm oil produced from a single palm fruit, children to estimate, measure, compare, add and subtract different volumes (ml/l).</p> <p>Differentiated work – focussing on finding fractions, by looking at a plan showing a hypothetical palm oil farm e.g. finding the fraction occupied by orangutans, fraction of open land etc.</p> <p>Measure arm spans. Who has the longest and shortest? How much longer is a male orangutan's arm span than a student's? Compare student heights with orangutan heights.</p> <p>Use orangutan and student arm length and height length data to create bar charts and tables.</p> <p>Children to complete tables at home of 20 products. They are to record the number of products with sustainable palm oil and those without. In school they can create pictograms to show their findings. (Children to be told which types of</p>	<p>Art & Design Collect in a sketchbook children's own sketches of a chosen rainforest plants or animal, as well as small printed paper clippings.</p> <p>Investigate visual and tactile qualities of a range of materials to create rainforest plant or animal art pieces: including different textured paper and card. Experiment with how ink wash, beryl marker pens and crayons can be used to create effect.</p> <p>Design and make a sculptured rainforest animal from 3D materials such as tape over a wire skeleton.</p> <p>Music Children to learn and perform the 'Truth to Power' by OneRepublic. Children to use instruments and</p>	<p>Visit a local supermarket (or virtually online)</p> <p>Visit Chester Zoo (or virtually on line)</p> <p>External expertise could be used to work with children:</p> <p>A literacy specialist or local reporter could lead a workshop on report writing about an endangered animal affected by the unsustainable palm oil production in the world's rainforests.</p> <p>A dance specialist could work with children to create, perform, evaluate and improve their own dance to songs with emotive lyrics, such as those in 'Truth to Power' by OneRepublic; using a range of movement patterns.</p> <p>An artist could run a workshop on 3D sculpture; working with children to</p>

The requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. Compare the amount of sunshine and rainfall between the UK and the rainforest in Borneo in South-East Asia – how does this affect plant production and growth? Recognise the importance of rainforests to life in general, for the production of oxygen.

Animals, including humans - Identify that humans and some other animals have skeletons and muscles for support, protection and movement. (Compare how similar human skeleton is to an orangutan).

Compare and contrast the Amazon or Central American rainforests with that of a forest in the UK e.g. Sherwood Forest, New Forest or Delamere Forest (near Chester). How is it used and managed compared to Amazon or Central American rainforest? Compare the life of people in the rainforest to the local area. What is different? What is similar? Look at recounts/ photographs/ Chester Zoo resources for information.

Draw a sketch map of the rainforest habitat in Chester Zoo, annotating the main features.

Use non-fiction books, stories, atlases, pictures/photos and internet to support investigation

products may contain palm oil - children to look at these).

Link to DT - children to measure out the ingredients needed, when following a recipe that uses sustainable palm oil products. Higher ability children could change the quantities to cater for a larger number of people.

their voices to sing from **memory** with **accurate pitch**.

Children to learn the importance of articulating song words to communicate the song to the audience, through writing their own class song about saving the animals of the rainforest.

Dance

Children to explore dance music videos, as seen in 'Truth to Power' by OneRepublic. Through the practising of moves, they will develop their flexibility, strength, technique, control and balance. Children to perform the dance, using a range of movement patterns. Children's performances are to be filmed by peers so they can compare their performance with previous ones and demonstrate improvement.

investigate visual and tactile qualities of different textured paper and card. Creating individual rainforest plant or animal pieces.

A **DT specialist** could work with groups of children, to help them to design and make a rainforest animal (affected by unsustainable PO production) with moving parts from card with pivots, a lever and slider.

An education **music specialist** could lead a workshop on the creation of their own class song about saving the animals of the rainforest.



SUSTAINABLE PALM OIL – PROGRESSION FROM EARLY YEARS TO YEAR 6

Sustainable Palm Oil – Year 4

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Main Topic and Science Focus:	Geography	English	Mathematics	Creative links Art & Design Music & Dance	Suggested Trips & Community Links
<p>Living things and their habitats - Explore the negative impact of humans on the environment through learning about the deforestation of rainforests in Borneo because of unsustainable palm oil plantations and comparing it to the positive impact when the plantations are sustainably farmed (linked to English persuasive writing and geography map work).</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things, making links to the reasons for deforestation.</p> <p>Explore how rainforests have been removed to make way for palm oil</p>	<p>Sketch their own simple sketch map from a bird's eye (aerial) view point of rainforest in Indonesia and/ or the Amazon, from an aerial photograph/ satellite image. Mark in major physical and human features e.g. rivers, deforested land.</p> <p>Create a simple sketch map of a rainforest from a bird's eye (aerial) view using a key.</p> <p>Begin to identify given places (and symbols) on a large and medium-scale OS map, junior atlas, online map and globe.</p> <p>Study the location of major cities and towns in the UK and contrast to a map of South America. Consider how these differ to other areas of the country, in particular the rainforest. Identify rainforest features on aerial photographs.</p> <p>Children to use various map sources/ aerial photos/ satellite images / pictures to locate mountain ranges, rivers and oceans in the UK. Compare to those In South America. Which of these features pass through the rainforest?</p> <p>What animals may be affected by</p>	<p>Retrieve information - explore different viewpoints when deciding whether to change to more sustainable farming. Retrieve information about SPO from the factual information given by Chester Zoo and other reliable sources. Conscience Alley activity: supermarket manager given different viewpoints for and against use of sustainable palm oil and/ or hot seating.</p> <p>Persuasive writing - to write persuasive sentences about sustainable palm oil. Learn about the dilemmas faced by plantation farmers who are faced with making wildlife corridors through their plantation to ensure animals reach food in surrounding rainforest (sustainable palm oil production) v farmers who focus only on deforestation for palm oil production. Reading reports/ letters.</p> <p>Write a persuasive letter to persuade a supermarket CEO to sell RSPO palm oil products.</p> <p>Explanation text - on what is PO, what is the effect of PO production on rainforest animals and the environment.</p>	<p>Make links from numerical SPO facts, recording this as multiplication number sentences and the related division facts.</p> <p>Solve addition and subtraction two-step problems in the context of rainforest wildlife (plants or animals).</p> <p>Interpret and present numerical discrete data gathered from SPO and rainforest research on bar charts e.g. comparison of the average life span of specific animals, comparison of numbers found in specific rainforests etc. Could plot how numbers of a specific species have declined or increased over a specific time period and plotted as a time graph. Create a pie chart to show how many litres of different oil types (palm, coconut, olive, soyabean, rapeseed and sunflower) can be created from 1 hectare of land.</p> <p>Solve comparison sum and difference problems about endangered rainforest animals, using information presented in</p>	<p>Art & Design Create Batik of their class rainforest animal. Inspired by those traditionally done in Malaysia.</p> <p>Practise skills of creating colour, pattern and texture in sketch book. Create a pencil drawing of their rainforest animal, using the effects of various colour, pattern and texture.</p> <p>Create a rainforest animal (or oil palm tree plantation) water colour painting for display, using different paint effects, such as: dancing, light-filled passages to richly coloured transparent darks, from cascading wet washes to staccato dry brush.</p> <p>Music Children to create their own class palm oil conga, taking</p>	<p>Visit a local supermarket (or virtually online)</p> <p>Visit Chester Zoo (or virtually on line, researching their projects abroad)</p> <p>External expertise could be used to work with children:</p> <p>A literacy specialist could lead a workshop on poetry about deforestation caused by unsustainable palm oil production.</p> <p>A dance specialist could work with children to create, perform, evaluate and improve their own rainforest dance telling the story of the plight of the animals living in the rainforest. From the beginning of living in harmony to the woes of deforestation, the removal of their home and pollution.</p> <p>An artist specialising in the traditional Malaysian</p>

plantations. (Link to persuasive writing project work - English).

Recognise that living things can be grouped in a variety of ways, including categorising the animals of the rainforests: vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects.

deforestation (by humans) in chosen region e.g. Ecuador? Investigate the cause and consequence of deforestation in the region. See Chester Zoo videos: 'What does Chester Zoo do in the rainforest of Ecuador?' and 'What is deforestation?'

Compare to Science work, exploring the negative impact of man on the environment through the deforestation of the Borneo rainforest to create unsustainable palm oil. Relate to the fact that although 85% of palm oil production is produced in South-east Asia new restrictions there will probably increase palm oil plantations in Latin America.

Compare features from the Amazon and Indonesia by creating sketch maps in the local area of the school in the UK, including horizontal view sketch maps, with more detailed keys and using direct observations and measurements. Compare to local maps e.g. OS maps. Possibly use letter/no. co-ordinates to help others locate features.

Draw a simple map (with key) of the rainforest habitat at Chester zoo from a bird's eye view point.

The children can explore the animals and plants that live in e.g. Ecuador or Guatemala and compare to those that are found in the rainforest in Borneo and possibly Africa. Create a memory card game, matching the animal species with which rainforest it is found in the world.

The children can categorise the vertebrate animals in the rainforests into their specific groups (see Science activities).

Create **poster** about a specific product that contains SPO. Focus on presentation techniques e.g. exaggeration, alliteration etc.

Newspaper report writing - about the effect of deforestation on the animals

Poetry - about deforestation caused by unsustainable palm oil production

Chester Zoo's fact files (tables) e.g. compare the difference in lifespan of specific animals.

Describe positions of hypothetical factory buildings and palm oil plantations given on a 2-D grid as coordinates in the first quadrant.

Find the area of different parts of a hypothetical palm oil farm e.g. the area of the farm inhabited by orangutans, buildings etc. Area worked out by counting squares, but more able to calculate in cm².

inspiration from the Chester Zoo palm oil conga. Children to use tuned and untuned instruments, as well as their voices to mimic the sounds of the rainforests and animals who live there.

Dance

Children to create their own rainforest dance which tells a story of the plight of the animals living in the rainforest. From the beginning of living in harmony to the woes of deforestation, the removal of their home and pollution.

art of **Batik**, could teach children how to design and create their own Batik of a rainforest animal.

An **artist** specialising in **watercolour painting** could teach children how to use the effects of dancing, light-filled passages to richly coloured transparent darks, from cascading wet washes to staccato dry brush to paint a rainforest animal or oil palm tree plantation.

A DT specialist could work with groups of children to design, make and evaluate a 'pop up' rainforest using pneumatics.



SUSTAINABLE PALM OIL – PROGRESSION FROM EARLY YEARS TO YEAR 6

Sustainable Palm Oil – Year 5

LEARN AT **CHESTERZOO**
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Main Topic and Science Focus:	Geography	English	Mathematics	Creative links Art & Design Music & Dance	Suggested Trips & Community Links
<p>Living things and their habitats - Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird (Comparing and contrasting UK animals with rainforest animals).</p> <p>Understand how reproduction occurs for amphibians and most insects. Learning about how metamorphosis differs between these groups and how most amphibian and insect reproduction is sexual reproduction. Looking at the similarities and differences between a rainforest animal and a UK animal.</p> <p>Describe the life process of reproduction in some plants and animals. Focusing on different types of reproduction,</p>	<p>Use four-figure grid references to locate human and physical geographical features of the rainforest on a drawn map of an area of rainforest. Use of legends.</p> <p>Draw a plan view map of a hypothetical rainforest with human and physical geographical features with some accuracy of scale and a legend.</p> <p>Use atlases with index and contents pages to find out about the world's rainforests. Use an atlas to find out about the weather patterns in the mountain regions and rainforests of South America and in Indonesia.</p> <p>Collect and record the measurements of rainfall in rainforest regions e.g. Ecuador and Borneo and compare to the UK. Compare and contrast the patterns of rainfall across the year.</p> <p>Identify given places on a map, comparing them with aerial photographs. Use an atlas to find Borneo in Malaysia and Ecuador in South America.</p> <p>Compare and contrast the regions of North and South America with the local area. The region of South</p>	<p>Debate - understanding roles and issues within a debate, based on the pros and cons of Palm Oil production. Seen from various viewpoints.</p> <p>Retrieve information - from fact files, videos and leaflets from CZ and other reliable sources on SPO and write a report about these findings and/ or use notes for debate scripts. Compare and contrast to South American palm oil plantations – see Geography.</p> <p>Debate - following on from understanding roles in a debate and retrieving information needed (see English 1 and 2), plan a debate speech.</p> <p>Instructional writing - for making a healthy lunch (containing SPO products)</p> <p>Poetry - about SPO from the point of view of either the animals, workers, producers or consumer</p> <p>Letter writing - to the press as a conservationist describing the effects of actions over times.</p> <p>Diary - of the thoughts, feelings and</p>	<p>Use data gathered from SPO research, children to read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</p> <p>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000, this will be from data gathered on SPO, given to them by their class teacher.</p> <p>Recognise and use reflection and translation, using images of their block prints (created in Art and Design).</p> <p>Draw a line of reflection parallel to the axes using images of block prints (created in Art and Design).</p> <p>Create an imaginary map of a rainforest animal's habitat on a 2-D grid and use coordinates in the first quadrant to give positions of the different things within its habitat.</p> <p>Translation of items on a map to different places e.g. movement of orangutans, trees,</p>	<p>Art & Design Create own design for a printing block which represents their chosen rainforest animal, this could either be a silhouette, foot print or typical animal markings.</p> <p>Record an observational drawing of their rainforest animal in their sketch book, using various skills learnt. Children to review the effect of these skills and revisit ideas and improve upon them</p> <p>Use wax resist and create a wash to see the effect. This can be used to illustrate their work in other subjects.</p> <p>Look at the work of Henri Rousseau. Experiment and build upon their knowledge of paint colour mixing to copy his style; to recreate their own</p>	<p>Chester Zoo, including the butterfly and reptile house.</p> <p>Free Chester Zoo Ranger visit</p> <p>External expertise could be used to work with children:</p> <p>A poet could guide and teach children through the process of writing poetry in rhyme about SPO from the point of view of either the animals, workers, producers or consumer.</p> <p>A dance specialist could work with children to explore traditional dance typical of that in southern Asia. They could teach them to perform this traditional dance using a range of movement patterns. Children could compare their performances with previous ones and demonstrate improvement.</p> <p>An artist could work with children to demonstrate</p>

including sexual and asexual reproduction in plants, and sexual reproduction in animals (including a rainforest plant and animal).

Observe and compare the life cycles of plants and animals in their local environment and find out how these plants and animals are similar to those found in the rainforests of Borneo. Focus on how animals and plants in Borneo are affected by deforestation from unsustainable palm oil production.

Animals including humans - Research the gestation periods of animals and comparing them with humans; by finding out and recording the length and mass of a baby as it grows. (See Mathematics)

America will be the rainforest. Study the types of settlements found in the rainforest.

Investigate cause and consequence of deforestation on the people and the plants and animals who live in South America and compare to Indonesia. Use information online to investigate the reasons for deforestation. Compare the different historical reasons for deforestation in South America. Discuss how it is thought the growth of palm oil is thought to possibly lead to more deforestation in the future, following on from more restrictions in South-East Asia. Use Google Earth to help with enquiry.

Compare and contrast how the local area has changed over the years with the same period of the rainforest. (See Geography website to look at locations in the UK in the past and use Google maps to compare how it looks now.) Use factual information e.g. on fact cards about life in the past and the present to predict what might happen to areas of the rainforest in the future. Compare to similar factual information about the UK

Compare maps of Borneo from different years between 1950 and 2020 to show the change in rainforest cover during this period, as a result of the deforestation for oil palm tree plantations. Compare to those in Ecuador.

actions of a rainforest animal from before and during unsustainable palm oil production.

Reading - Comprehension tasks related to CZ resources and other resources e.g. animal fact files and non-chronological reports about Bornean orangutan. Pose questions to test reading skills i.e. understanding, retrieval, inference and prediction

buildings etc.

Calculation of area of different parts of hypothetical palm oil farm in cm².

Find out and record the length and mass of a baby as it grows over a period of months. Record as a time graph. Read and interpret information from the graph. (See Science).

Read and interpret graphs/ tables related to Science work, recording and comparing the gestation periods of humans with that of specific rainforest animals. (See Science).

piece of work.

Design and make clay jewellery similar to that worn by tribes people.

Design and make a rainforest animal with a painted design on.

Music

Children to explore traditional dance music sung and played by the tribe people affected by the production of palm oil in southern Asia. Children listen with attention to detail and recall sounds with increasing aural memory.

Dance

Children to explore traditional dance typical of that in southern Asia; through the practising of moves they will develop their flexibility, strength, technique, control and balance. Children to perform this traditional dance using a range of movement patterns. Children to compare their performances with previous ones and demonstrate improvement to achieve their personal best.

the block printing process and teach them the skills involved. They could work with children to create prints which represent their chosen rainforest animal.

An education **music specialist** could lead a workshop on traditional dance music sung and played by the tribe people affected by the production of palm oil in southern Asia. The end piece created by the children could be recorded either on video and audio and used as part of a collation of palm oil project work to share with parents and the community.



SUSTAINABLE PALM OIL – PROGRESSION FROM EARLY YEARS TO YEAR 6

Sustainable Palm Oil – Year 6

LEARN AT **CHESTERZOO**
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Main Topic and Science Focus:	Geography	English	Mathematics	Creative links Art & Design Music & Dance	Suggested Trips & Community Links
<p>Living things and their habitats - Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.</p> <p>Classify common animals (and some rainforest animals) using a classification key into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals).</p> <p>Give reasons for classifying plants and animals based on specific characteristics. Use a classification key to classify rainforest</p>	<p>Compare and contrast hypothetical sustainable and unsustainable oil palm plantations.</p> <p>Create a sketch map of a hypothetical sustainable oil palm plantation, including suitable buildings, the rainforest, plantations and wildlife corridors. Encourage annotations to explain e.g. the existence of wildlife corridors etc.</p> <p>Collect and record facts (unaided) from primary and secondary sources of evidence on in the different rainforest layers.</p> <p>Use 4 or 6 figure co-ordinates to mark in the rainforests of the world where deforestation is the most prevalent and find out what difference has it made to these environments. How has the rainforest affected the way the people live and work?</p> <p>Research the reasons for the setting of sustainability standards in Indonesia to curb the deforestation in these regions for Palm Oil. Find out about the increase in Palm Oil plantations in South America, the risks posed to this region and what the area needs to do to make certain that land is not lost to deforestation.</p>	<p>Retrieve information - researching information about sustainable palm oil from fact files, videos and leaflets on SPO and how a company becomes certified CSPO. Also, link the restrictions imposed in Indonesia on the palm oil industry with growth of Palm Oil production in South America – see Geography.</p> <p>Following the retrieval of information about becoming a CSPO discuss the issues related to the labelling of products so they are clearly labelled to indicate they contain sustainable palm oil.</p> <p>Letter writing - plan a persuasive, formal letter to local MPs about the importance of clear labelling of products containing palm oil and CSPO palm oil.</p> <p>Letter writing to local suppliers to ask them to only stock products which contain CSPO, giving reasons why.</p> <p>Plan and write a newspaper article about how they have had an impact on local suppliers to only stock products which contain SPO Report writing on the rainforests in the world.</p> <p>Non-chronological report on class</p>	<p>Read, write, order and compare numbers on the quantities of litres of palm oil which are typically transported to different countries (up to 10 000 000) and determine the value of each digit.</p> <p>Interpret and construct their own pie charts on SPO and use these to solve problems e.g. compare the numbers of specific animals in critically endangered group of animals with specific animals in the vulnerable group of animals. (See red list).</p> <p>Interpret and construct their own line graphs on SPO and use these to solve problems e.g. research how a specific animal species' numbers have declined over the past 10 years and show on their own line graph.</p> <p>Use data gathered on SPO to calculate and interpret the mean as an average.</p> <p>Calculate scales to accurately draw a plan for a sustainable PO factory (to a given scale).</p>	<p>Art & Design Use a range of art materials and media such as forest shades of ink, tissue paper and oil pastels to recreate the changing rainforest coverage of the continents of Indonesia and Malaysia (see History).</p> <p>Look at works of art depicting rainforest shades, depth and mystery.</p> <p>Re-create own drawings/ paintings based on the chosen style.</p> <p>Practice the technique of quilling and create a group forest collage using the technique.</p> <p>Design, make and evaluate a clay rainforest animal with a painted design on.</p> <p>Music Children to learn and</p>	<p>Visit Chester Zoo's many animal habitats and gardens.</p> <p>Free Chester Zoo Ranger visit</p> <p>Trip to local wildlife area</p> <p>External expertise could be used to work with children: A literacy specialist could be used to run a workshop for the children on how to write a script on a news report on the rainforests in the world affected by unsustainable palm oil production.</p> <p>A dance specialist could work with children to create, perform, evaluate and improve their own rap dance, typical of that in Africa and America. Dance performances could be filmed, to support children compare with previous ones, to demonstrate an improvement.</p> <p>An artist could work with</p>

plants and animals affected by unsustainable palm oil plantations.

Evolution and Inheritance -

identify how the rainforest animals and plants are adapted to suit their environment.

How might the consumer help this? (Using CSPO products).

Locate key places in the transatlantic trade on a world map, including UK ports. Use Google Earth to help with research.

Begin to use latitude and longitude on atlas maps to locate key places.

Confidently locate or identify given places (linked to palm oil production) on an OS map and world map, recognising this as a flattened globe. They will also describe the OS map features shown. Children will use a scale to measure the distance between different places.

Compare the weather in the main rainforests of the world and describe how latitude can influence geography and climate of these regions. Describe the significance of the Equator, Tropics and Poles. Compare to the UK.

Use the Koppen system, an atlas, information books/ the internet to find out the climate and biomes of specific places around the globe, including specific places in the rainforests of Indonesia.

Use an atlas to identify the main continents of the world and the main countries in North and South America and in South-east Asia. Use an atlas to find the capital cities of these regions.

The children are to carry out fieldwork of their local area to find out the different aspects of human and physical geography. Using secondary resources (videos, factual information given and research), the children are to compare and contrast their local area with a region in the

rainforest animal.

Creative Writing - as an orangutan, describe the day your home was destroyed through deforestation for palm oil growth.

Reading - Comprehension tasks related to CZ resources and other resources of varied genre e.g. persuasive texts and information texts. Pose questions to test reading skills i.e. understanding, retrieval, inference and prediction

Calculate the fraction and percentage coverage of e.g. open land, land with wildlife corridors etc. of a hypothetical palm oil farm.

Convert the estimated distances between different points on given palm oil plantation maps from miles to kilometres

Convert the estimated distances between different points on SPO factory plans pupils have drawn; from miles to kilometres.

perform a Palm Oil RAP performed and written by rapper Jon Chase in collaboration with Chester zoo. children to listen to the rhythm and rhyme and say sections of the rap to engrain it in to their memory. Children to rehearse, improving each time their aural memory of the raps detail.

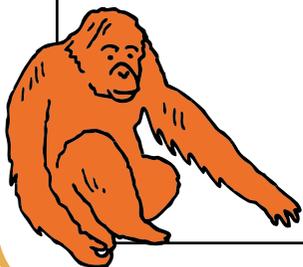
Dance

Children to explore rap dance typical of that in Africa and America. Children to perform a rap dance using a range of movement patterns; developing their technique. Children to film their performance, to compare with previous ones. Children to demonstrate improvement to achieve their personal best rap.

children to teach them the technique and skills needed for quilling. Children could create a group forest collage by quilling paper.

A **DT specialist** could work with groups of children to design, make and evaluate a 3D cross section of the rainforest, showing the many layers. Children to be taught how to incorporate a pulley and levers, using a variety of cutting, shaping, joining and finishing techniques.

A **music specialist** could lead a pupil workshop on learning and performing a Palm Oil RAP, such as the one performed and written by rapper Jon Chase in collaboration with Chester zoo.



rainforest of South America.

Children to play the Green Gold Game, learning about the negative impact of non-sustainable palm oil production on deforestation and pollution. As well as the positive impact of SPO production has on the rainforest animals, it's workers and us as consumers.

