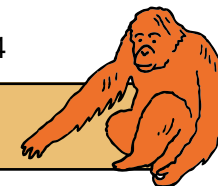
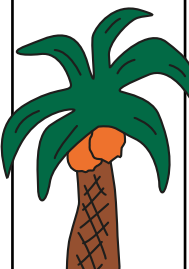


Sustainable palm oil

Conservation **Term:** Autumn **Subject:** Science/ Geography **Topic:** The reasons why deforestation occurs and its impact. **Year:** 4



	National Curriculum Links	Overview	Assessment / Questions	Resources
LESSON 	<p>Science: Living Things and their Habitats</p> <ul style="list-style-type: none"> Recognise environments can change and that this can sometimes pose dangers to living things <p>Pupils should explore examples of human impact (both positive and negative) on environments, for example, the positive effects of nature reserves, ecologically planned parks, or garden ponds, and the negative effects of population and development, litter or deforestation.</p> <p>Geography: Human and physical geography To describe and understand key aspects of human geography, including: types of settlement and land use, economic activity including energy, food, minerals and <i>water</i> <i>In the context of rainforests.</i></p> <p>Learning Objective(s)</p> <ul style="list-style-type: none"> To understand why deforestation occurs and its impact. <p>Success Criteria I can:</p> <ul style="list-style-type: none"> give reasons why deforestation is occurring. explain negative effects of deforestation. give examples of how to slow down deforestation. 	<p>Prior learning Previous Science lessons should involve the children learning about:</p> <ul style="list-style-type: none"> Changes to environments that are natural i.e. weather/ climate, tides, seasons, day and night, volcanoes etc. The consequence of expected changes to the environment i.e. adaptations of animals to changing conditions. The consequence of extreme changes to the environment and how these changes can affect the wildlife population and deplete numbers. E.g. extreme temperatures in Australia have caused forest fires and many plants and animals have not survived. The effect of humans on the environment. See lesson: 'Human impact on the environment'. <p>English lessons related to the issue of sustainable plantations (where deforestation does not occur) could be taught prior to or following this lesson on deforestation. (See English)</p> <p>Introduction Introduce slide 1 of the Presentation to the children that explains the content of the lesson: 'The reasons why deforestation occurs and its impact.'</p> <p>Using slide 2, introduce the learning objective and success criteria to the children.</p> <p>Show slide 3. Before showing the video, explain that in this session we are focussing on the impact of deforestation of the rainforest. However, make it clear that the environmental issues of deforestation are the same across the world.</p> <p>Explain that deforestation has occurred a great deal over the centuries since the UK was once covered in forest. In recent times, much deforestation occurred during World War I and II for transport construction. However, it occurs now mainly for construction, to remove tree disease and for agriculture (due to the expanding population). Play the video: 'What is deforestation?' that explains</p>	<ul style="list-style-type: none"> Why does deforestation occur? What is the negative impact of deforestation? Can you think of more sustainable methods? How do you think the life of the indigenous people might be affected by deforestation? Why do you think warming of the atmosphere affects plants and animals? What do you think might happen to life on Earth if too many trees are cut down? Can you give me a good reason why deforestation has occurred in the rainforest? Can you give me a negative effect of deforestation? What do you think might happen to the rainforest plants and animals if deforestation continues to occur? What gas is increasing in the atmosphere as a result of deforestation? Why is this important for the planet? Can you explain why deforestation in the rainforest in South-east Asia has increased drastically in the last few years (since the 1980s)? What can we do to prevent so much deforestation? 	<ul style="list-style-type: none"> Presentation: 'The reasons why deforestation occurs' 'The reasons for and against deforestation' worksheet. 'Deforestation chain game'. Paper and pencils. (Possibly sized A3). Marker pens. Whiteboards and whiteboard pens. Paper for assessment. (See plenary).

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the reasons for deforestation and also the impact of deforestation on animals, plants and the environment. If appropriate, some children could take notes on whiteboards.

Show slide 4. Explain that the children will be feeding back what they know by answering the following questions on a mind map.

'Why does deforestation occur? (Give examples).'

'What is the negative (bad) impact of deforestation? (Give examples).'

Model how to write a few ideas offered by the children on to a mind map as shown on the slide. Explain the first activity.

Activities 1:

In pairs or small groups, the children should write down all the knowledge they remember that answers the above questions, using knowledge gained from the video and perhaps gained from previous lessons. This could occur on a worksheet: 'Reasons for and against deforestation' (perhaps A3 size) or using the same mind map drawn on to a large sheet of paper; ideas could be collated from the group using marker pens (rather than using the worksheet).

N.B. Mind maps should be kept for the follow-up lesson, 'To understand the impact of deforestation on animals and plants'.

Mini plenary

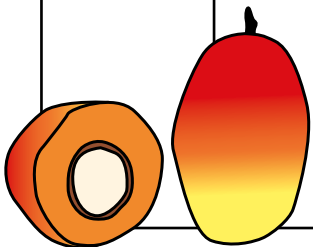
The children should feedback their ideas to the class. The teacher should then complete the class mind map, collating all the main ideas gathered so far.

Explain that people are now increasingly recognising the negative impact of deforestation and so it is important to seek other ways of e.g. farming and logging using more sustainable methods (ways that do not have such a negative impact on plants, animals and the environment). Ask the children:

'Can you think of more sustainable methods?'

If the children have been taught other lessons involving deforestation or discussion of sustainable palm oil, then the children could explain some of these e.g.:

- farming should re-use land previously deforested and





- should not cut down more areas of trees.
- wildlife corridors can be included to enable animals to move from one part of the rainforest across plantations to another part of the rainforest.
- replanting trees following removal for logging.

Encourage the children to discuss some of these ideas through suitable questioning.

Activity 2

Show slide 5. This explains how the children can play the chain game. To prepare for this, photocopy the worksheet: 'Deforestation Chain Game' on to card and cut out the cards. The game has been designed to reinforce some of the major issues about deforestation that have been explained in the video.

The activity will also be a good assessment of whether the children have grasped some of the deforestation issues. Monitoring the progress of the activity could highlight whether the children need for further clarification; this could be addressed immediately following the activity.

The children should work together in pairs for peer support.

*Children to be paired with a child of higher ability.

**The children could be given questions to answer on their whiteboards that are related to the chain game, when they have completed the activity and they should prepare feedback to the class e.g.:

'How do you think the life of the indigenous people might be affected by deforestation?'

'Why do you think warming of the atmosphere affects plants and animals?'

'What do you think might happen to life on Earth if too many trees are cut down?'

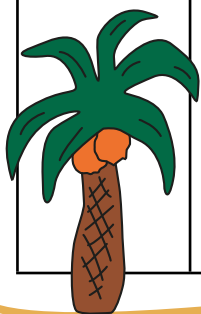
Mini Plenary

Ask the children:

'Have you learnt any new information about deforestation from the chain game?'

The higher ability children should be asked to feedback their answers to the questions they were given, related to the chain game.





The children should be encouraged to add any further learning to their mind maps.

Plenary

Important information should be added to the class mind map when the children feedback to the class. Review and discuss problems that the children encountered whilst answering the questions in the chain game.

See slide 6. Review the learning objective and success criteria.

The children should be asked to write down on paper:

- at least 2 reasons why deforestation is occurring.
- at least 2 negative effects of deforestation.

These could be taken in for assessment purposes. Pairs of children could explain to each other what they have written down and why. Some pairs of children could then feedback to the class. Discuss the responses positively with the children.

Differentiated questions could occur e.g.:

'Can you give me a good reason why deforestation has occurred in the rainforest?'

'Can you give me a negative effect of deforestation?'

'What do you think might happen to the rainforest plants and animals if deforestation continues to occur?'

'What gas is increasing in the atmosphere as a result of deforestation? Why is this important for the planet?'

'Can you explain why deforestation in the rainforest in South-east Asia has increased drastically in the last few years (since the 1980s)?'

'What can we do to prevent so much deforestation?'

If time allows:

Read slide 7 to the children: 'Deforestation – disaster of hope for the future?' Explain that although some scientists predict that all the rainforest will cease to exist in 100 years, this is the worst case scenario and dependant on humans and whether they recognise the importance of the rainforest. The issues related to deforestation are now being highlighted and it is important for countries across the world to put measures in place to protect the rainforest.

Read slide 8. This discusses palm oil production and restrictions put in place to make practices sustainable. It also highlights how important it is for people to buy products that contain sustainable palm oil. You may feel it important to expand on the points made:

- Explain that palm oil production in South-east Asia has caused huge destruction to the rainforest in this region. However, it is important to recognise that palm oil is preferable to other oils, which is why it should still be produced, but in a sustainable way.
- Explain that it is important for the palm oil industry to be sustainable in other areas of the world. Current plantations in Ecuador are generally sustainable, but this should continue.
- We should be encouraged to buy only products that contain sustainable palm oil, which will encourage plantations to be sustainable.

On slide 9, show the video: 'Our Planet: How to Restore Our Forests' in which David Attenborough gives some advice for the world. (See resources).

Possible ongoing work

The children could write a poem about deforestation caused by unsustainable palm oil. (See English).

See other Geography work linked to the rainforest including the lessons to teach how to create sketch maps. In particular, see the Geography lesson: 'To draw a basic sketch map identifying physical and human geographical features'.

(See 'Prior Learning' for activities that could also occur following this lesson).

