

Sustainable palm oil

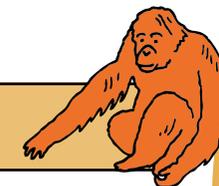
Conservation

Term: Autumn/ Spring/ Summer

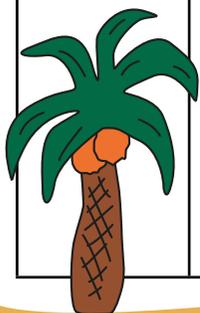
Subject: Geography

Topic: Comparing and contrasting a sustainable and unsustainable oil palm plantation

Year: 6

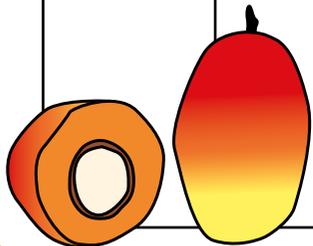


	National Curriculum Links	Overview	Assessment / Questions	Resources
LESSON	<p>Geography Place knowledge</p> <ul style="list-style-type: none"> Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America. <p>Human and Physical Geography</p> <ul style="list-style-type: none"> Describe and understand key aspects of human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water. <p>Learning Objective(s)</p> <ul style="list-style-type: none"> To compare and contrast a sustainable and unsustainable oil palm plantation. <p>Success Criteria I can:</p> <ul style="list-style-type: none"> Understand the differences between sustainable palm oil and unsustainable palm oil. Recognise features on plantation images that are sustainable and unsustainable. Annotate images to give reasons for my choices. 	<p>N.B. Although the plantations shown in this lesson are hypothetical, the features are typical of oil palm plantations found in rainforests across the world, including in South America that follow RSPO certification guidelines that are sustainable and those that are not sustainable.</p> <p>Prior learning</p> <ul style="list-style-type: none"> The Geography work may form part of a larger topic around the subject of America, North and South America. Previous work may be related to: <ul style="list-style-type: none"> Using a world map to locate North and South America. Using a map of North and South America to locate different countries and capital cities. Comparing and contrasting the weather and climate. This should also include the significance of studying their position in relation to latitude, longitude, the Equator, the Northern and Southern Hemisphere, the Tropics of Cancer and Capricorn. Studying the physical and human features of specific areas e.g. from photographs and satellite images. (See 'Google Earth' and 'Google Maps'). Comparing and contrasting the regions of North and South America studied with the local area. The region of South America will be the rainforest. Studying the types of settlement found in the rainforest. The children should have been identified physical and human features in Year 3 or Year 4 (see Y4 Geography lesson plans). The children may have studied the local area in more depth prior to the work on America or this may occur following the work. Sketch maps and other methods of field work could occur in the local area, observing, measuring, recording and presenting the human and physical features. See English work related to sustainable palm oil/ certified sustainable palm oil. Geography work could have included children playing Chester Zoo's 'Green Gold' Game <p>Introduction The PowerPoint (file name): 'Comparing and Contrasting a Sustainable and Unsustainable OPP' will be used to guide the teaching of the lesson.</p>	<ul style="list-style-type: none"> Who is causing the most change in the rainforest? What is palm oil? Why is palm oil produced? Why do some people want to stop palm oil from being produced? What is sustainable palm oil? What can other areas of the world learn from the South-East Asia palm oil industry? Recent restrictions in South-East Asia have led to an increase in plantations elsewhere, such as Latin America (areas of central and south America). Have these areas learned from South-East Asia? Can you give me an example of a sustainable feature/ an unsustainable feature? Can you give me an example of a sustainable feature that you identified? Why is it a sustainable feature? Can you read out examples of annotations that you wrote that explained why certain features showed sustainable farming? How did you identify the second plantation as being unsustainable? Can you read out annotations that you wrote that explained why certain 	<ul style="list-style-type: none"> PowerPoint: 'Comparing and Contrasting a Sustainable and Unsustainable OPP.' Worksheets: Identifying sustainable and unsustainable oil palm plantations 1 and 2 (File named: 'Identifying sus and unsus OPP 1 and 2 WORKSHEETS') Large pieces of paper (A3) and marker pens/ pencils. Pencils and pens. Teacher background reading: <ul style="list-style-type: none"> Mongabay: 'Latin America palm oil production doubled since 2001 without massive uptick in deforestation': Feb 2017 https://news.mongabay.com/2017/02/latin-america-palm-oil-production-doubled-since-2001-without-massive-uptick-in-deforestation/



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Show slide 2 to the children. Ask the question:

'Who is causing the most change in the rainforest?'

A range of wild rainforest animals are shown alongside a human. The children are to offer answers to the above question. If the response refers to a specific animal/ the human, then it is necessary to click on the appropriate picture. For any of the animals the response will be 'Not me!' However, for the human it will be: 'I'm afraid so. Almost half of the world's rainforests have been destroyed, largely due to humans, and they could vanish altogether in 100 years.'

From Year 4 Science (see Y4 lesson plans) it is hoped that some children may remember that humans have affected the Earth more than any other animal on the planet. This should be emphasised at this point.

Introduce the learning objective and success criteria. (See slide 3).

Introduce slide 4. This reviews the children's understanding of the palm oil industry and reinforces the need for sustainable palm oil. See Activity 1.

Activities

Activity 1

The children are asked to work in small groups. Each group is given a large sheet of paper. The children are given the following questions:

'What is palm oil?'

'Why is palm oil produced?'

'Why do some people want to stop palm oil from being produced?'

'What is sustainable palm oil?'

The children should write these questions on a large sheet of paper. In their groups, they are to write down all that they have understood so far and can remember that might answer these questions. They should be given about 10 minutes to do this.

Mini Plenary

The children will feedback their information using a spokesperson from their group. Review the children's

features indicated unsustainable farming?

- What could you also include in a sustainable oil palm plantation?



knowledge by creating a class mind map from the children's ideas. Relate to the information given by Chester Zoo that answers the questions; this can be revealed by clicking on each question in turn on slide 4.

Introduce slide 5: 'What can we learn from past production of palm oil? This slide asks two questions related to palm oil:

'What can other areas of the world learn from the South-East Asia palm oil industry?'

'Recent restrictions in South-East Asia have led to an increase in plantations elsewhere, such as Latin America (areas of central and south America). Have these areas learned from South-East Asia?'

It is hoped that answers to the former question would reflect previous learning (see English), including some understanding of the impact of deforestation from the unsustainable palm oil industry. The children may not know the answer to the second question. Click on each question in turn, to reveal suitable answers to the questions.

Explain that people have not always understood the implications of deforestation and it is still necessary to educate people now. Explain that sustainable oil palm plantations have schools to educate the children.

Introduce activity 2:

Activity 2

Show slides 6 and 7. Slide 6 shows a sustainable oil palm plantation and slide 7 an unsustainable plantation. The children will be told that they will be carefully studying these plantations on the worksheets: 'Identifying sustainable and unsustainable oil palm plantations 1 and 2 WORKSHEETS'. In pairs, they should decide which one shows a sustainable oil palm plantation and which shows an unsustainable plantation.

The children should at least label the features that show it to be sustainable or unsustainable, e.g. 'wildlife corridor', 'deforested land.' However, if possible, they should give reasons for their choices by annotating the worksheets.

All are to label the features of a sustainable/ unsustainable oil palm plantation.

* Lower ability children to be paired with a child of higher ability.



/ Include some annotations to explain labels further.

*** Look back at previous work to add to annotations, where possible.

Plenary

Use slide 8 to review the children's ideas. This shows the images from slides 6 and 7 side by side to enable comparisons to be made.

The following items should hopefully be brought up in discussion:

CZ – very important

Please list under the following titles the items on the images that indicate the plantations are sustainable and unsustainable:

Slide 6 - sustainable

Slide 7 - unsustainable

CZ to list CZ to list

CZ - N.B. Please add this information to the notes beneath slide 8 on the PowerPoint also.

The children should also answer the following question on a piece of paper that the teacher could take in to review:

'What is sustainable palm oil?'

Review the learning objective and success criteria. Encourage pairs of children to check their work against the success criteria. Feedback what they have achieved to the rest of the class.

Ask differentiated questions:

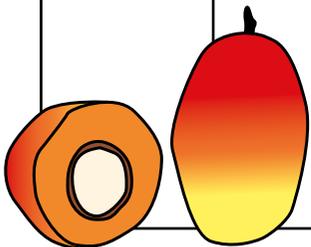
'Can you give me an example of a sustainable feature/ an unsustainable feature?'

'Can you give me an example of a sustainable feature that you identified? Why is it a sustainable feature?'

'Can you read out examples of annotations that you wrote that explained why certain features showed sustainable farming?'

'How did you identify the second plantation as being unsustainable?'

'Can you read out annotations that you wrote that explained why certain features indicated unsustainable farming?'





'What could you also include in a sustainable oil palm plantation?'

'How do you think you might develop your learning in a follow up lesson?'

Possible ongoing work

See prior learning: field work to study the local area. Compare and contrast to the areas studied in North and South America (including the rainforest).

The children can create a sketch map of the sustainable palm oil plantation shown in this PowerPoint, including sketch map features. See Geography lesson: 'To create a sketch map of a hypothetical sustainable oil palm plantation'. N.B. map work skills need to be taught before teaching this lesson i.e. local maps/ OS maps need to be studied to be introduced to detailed keys/ legends and scale.

See cross-curricular work on SPO (Sustainable Palm Oil).

