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PALM OIL PLANTATION GAME TEACHERS' NOTES

Introduction

Here at Chester Zoo, our mission is **preventing extinction**. We're currently hard at work across the globe, helping to save endangered animals and their habitats.

One of the greatest threats to biodiversity in South East Asia is unsustainable palm oil production. This game will help to show your students the differences between choosing sustainable versus unsustainable palm oil production from a plantation owner's perspective. It can be played over the course of a one hour lesson, or played over several days to allow independent research and discussion.

It works best as an introduction to palm oil – it's important that your students make their own decisions as they play, and aren't influenced by what they feel they should or shouldn't do. So we've made you this handy script to get the best discussions going!

Make sure you download the cards and student worksheets before getting started; for a class of 30, we recommend playing in teams of around five students – this sparks some interesting debates at the end!

The numbers of cards you will need depends on the number of students or groups, but for 5 teams we would recommend the following:

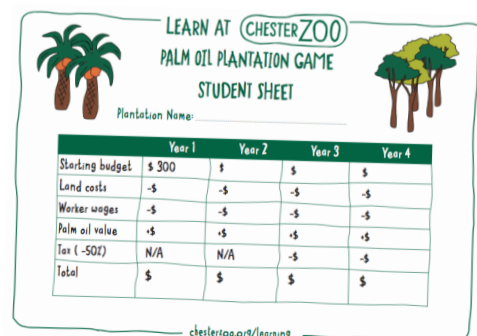
100 x \$50 Cards

100 x Worker Cards

40 x Rainforest Cards

40 x Clear Land Cards

5 x Plantation Game Student Sheet – 1 per group.



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PALM OIL PLANTATION GAME
STUDENT SHEET

Plantation Name: _____

	Year 1	Year 2	Year 3	Year 4
Starting budget	\$ 300	\$	\$	\$
Land costs	-\$	-\$	-\$	-\$
Worker wages	-\$	-\$	-\$	-\$
Palm oil value	+\$	+\$	+\$	+\$
Tax (-50%)	N/A	N/A	-\$	-\$
Total	\$	\$	\$	\$

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The Script

(Verbal instructions to be read aloud to your students are enclosed within speech marks. Instructions for you are in italics)

You will need to act as the leader, teams will collect money, land and worker cards from you as required.

Background

"Palm oil is a very useful vegetable oil found in over half of all supermarket products – we use a LOT of it! At the moment, around 85% of the world's palm oil is grown in Indonesia and Malaysia."

"Your task today is to take on the role of plantation owners, managing your trees and workers as best you can..."

Hand out one student worksheet and 6 x \$50 money card to each group. Keep the other cards at the front – you'll be handing them out to the groups as the game progresses.

Playing the Game

"Firstly, think of a name for your team's palm oil plantation and write it at the top of your worksheets."

Year 1

"You have a starting budget of \$300 to buy your first plot(s) of land. You can choose either open land or rainforest land. The rainforest land is cheaper and is quick to clear to make it suitable for a palm oil plantation. The open land has never had rainforest on it and is in high demand, so therefore is more expensive. Rainforest land plots cost \$100 and cleared land plots cost \$200. Remember to leave enough money to pay workers to harvest your palm oil! Worker wages are \$50 per worker. Choose how many workers you want on each plot – but note you can only have a maximum of four workers per plot."

The prices for each plot of land and worker wages are displayed on the cards – line up an example of each at the front of the class to remind your students of the costs.

Give your students a few minutes to decide how they want to spend their \$300 starting budget. Get them to add together all of their land costs (e.g. 2 x rainforest land plots at \$100 each would be \$200) and enter this amount into the 'Land costs' box of their student worksheet. Do the same for the number of workers they'd like to employ (e.g. 2 x workers at \$50 each would be \$100) and enter this amount into the 'Worker wages' box.

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The Script (continued...)

"Using your cards, work out how much palm oil yield per plot you'll get this year – this will all depend on how many workers you have employed to harvest the palm fruit, the back of the cards will help you, but it works out as \$100 per worker. Ignore the tax boxes for now – they're for later on..."

"Now, total up your figures – how much money do you have in the bank?"

Feedback each groups' totals to the rest of the class.

Year 2

"Enter your total from the last round into the starting budget box."

"If you're in credit, you have the option to buy more land or employ more workers. But remember – you need to pay the wages of your existing staff before you take on any more!"

Work through the rest of the boxes like we did in Year 1. With groups purchasing extra land and workers as they want.

"Total your figures."

"How are all our groups faring? Which strategy is working best at this point?"

Open up some group discussions; if one team is doing exceptionally well, ask your students why this might be.

News flash!

"The World's attention has been drawn to the problems caused by unsustainable palm oil. Media campaigns and education work by Chester Zoo and other NGOs has led to a change in consumer behaviour in purchasing palm oil products from the supermarket. Sudden high demand for sustainable palm oil means that in Year 3, a tax may be imposed on those who grow their product on rainforest land."

Year 3

Continue the game as before, with groups purchasing land or hiring workers.

"Work through your sheet, buying more land or hiring more workers if you're in credit."

"Due to public pressure for sustainable palm oil, those who have been growing palm oil on rainforest land are subject to a tax, halving the value of their palm oil yield."

Your students should halve the total value of this years' palm oil yield and enter this figure into the 'Tax (-50%)' box.

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The Script (continued...)

"Total your figures."

Those groups who have been farming sustainably will continue to see profits increasing, those who have been using rainforest land may find they are no longer making enough profit, and may struggle to pay all their workers.

Year 4

Continue the game as with previous years.

"Fill in all of your boxes as you have for the past three years."

"Those of you growing on unsustainable plantations, can you afford to continue to pay all of your workers? Should you make a shift to be more sustainable?"

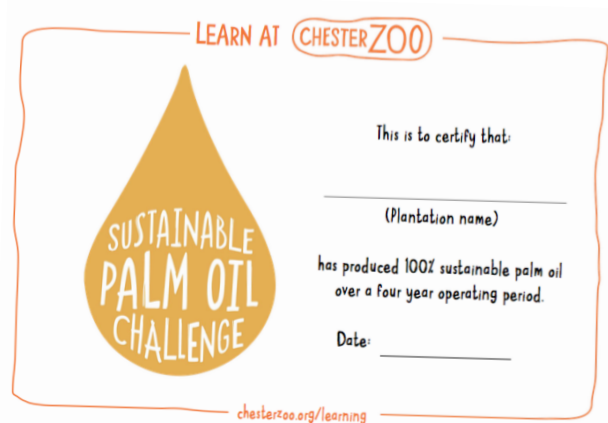
Allow a few minutes for group discussion.

"Now it's time to compare the results of your different teams. How would you measure success; the most profit or managing the plantation sustainably...?"

Discuss what effects deforesting has on local biodiversity. If your students have chosen rainforest land for their oil palm plantation this time, would they change their strategy next time?

"Has anyone used only open land all the way through (not chopped down any rainforest)? Here's your RSPO (Roundtable for Sustainable Palm Oil) certificate – congratulations!"

Issue the team(s) with their RSPO certificate.



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Follow Up

Once they've played the game, we've got loads of videos, posters, fact files, news and blog posts about palm oil, sustainability, rainforests and orangutans FREE to download on our website – just follow these links:

<http://www.chesterzoo.org/education/learning-resources>

<https://www.actforwildlife.org.uk/what-we-fight-for/animals-under-threat/orangutans/>

<https://www.actforwildlife.org.uk/conservation-news/>

<http://www.chesterzoo.org/support-us/palm-oil>

<https://www.actforwildlife.org.uk/get-involved/take-conservation-action/take-the-sustainable-palm-oil-challenge/making-chester-sustainable-palm-oil-city/whats-the-problem/>

You and your students can help us to save rainforest habitat in South East Asia by buying certified sustainable palm oil products and increasing that global demand for sustainable oil.

Watch our supply and demand video for more information:

<http://www.chesterzoo.org/en/education/learning-resources/palm-oil-supply-and-demand>

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Tweet us a photo of your class in action – we'd love to see!

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