

This pack includes work for the next 2 weeks -Monday 20th April to Friday 1st May (this is about 1.5 hours of working time).

It is divided up into sub-sections to help you work through it gradually. There is an extension task if needed.

This term we will be learning about an important global geographical issue which links to your geography & biology GCSE. We have tried to include other skills to help subjects like maths as well.

At the end of each section we will send you the answers so you can check & return your marks. The numbers in brackets are the marks for each question.

What do these images have in common?

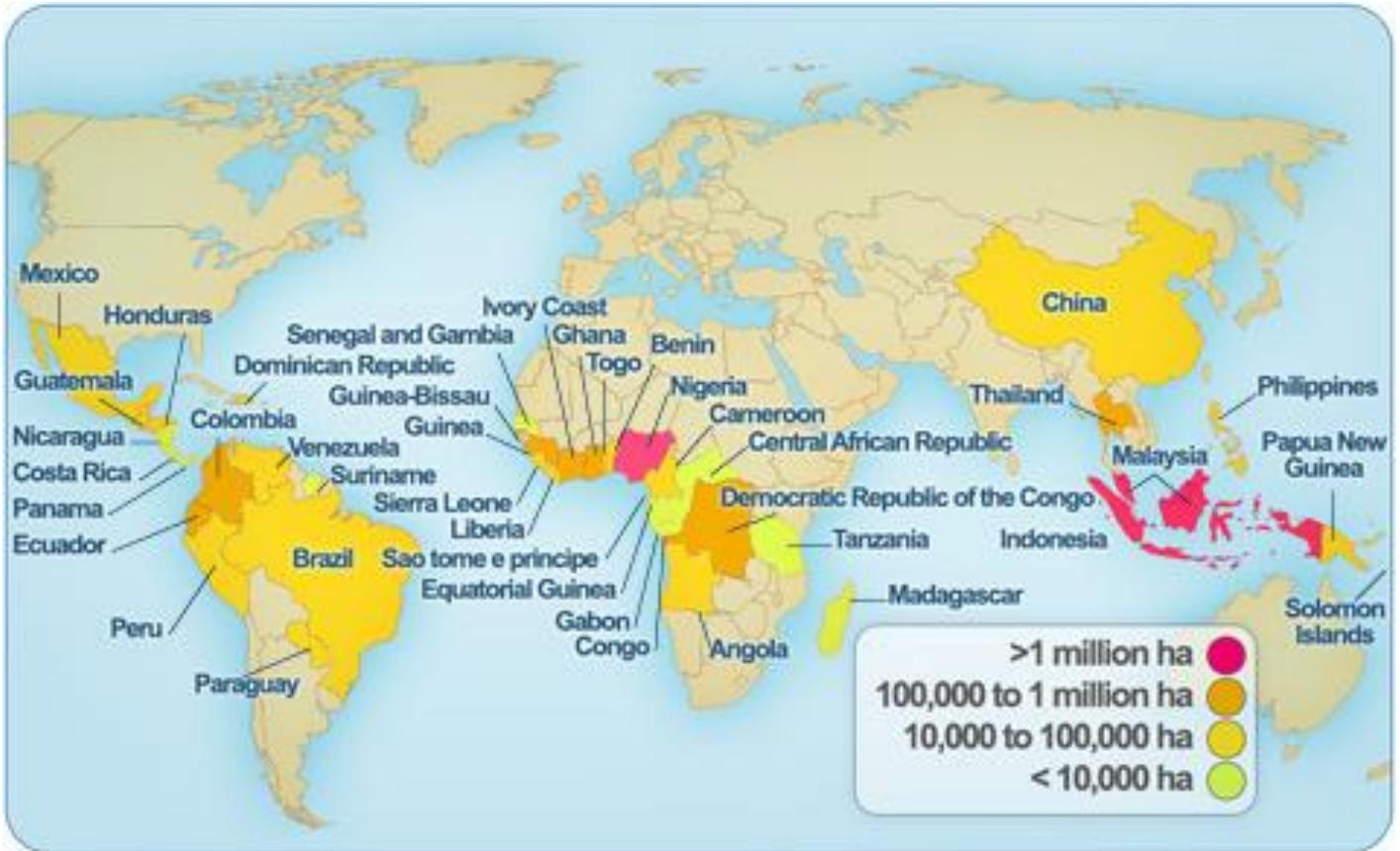


Answer _____

Section 1 1.5 hours

This booklet will investigate where **palm oil** is grown and the impacts it is having on the environment in these places. Section 1 will be about where palm oil is grown, why it's grown and what one of these places is like. Section 2 will be about the natural ecosystems in these places and section 3 about the damage done in rainforest areas.

This map shows where palm oil is produced the most



1. Name the three countries that produce the most palm oil. (3)

a _____ b _____ c _____

2. Which continent produces the most palm oil? _____ (1)

Here is a table showing how much palm oil these countries produce.

3. Calculate the average production for each year. (add each column up & divide by 3)
(4)

Country	2006/7	2007/8	2008/9	2009/10
Indonesia	16,700	18,800	20,000	22,000
Malaysia	15,200	17,500	17,500	18,000
Nigeria	750	800	850	880
Average				

4. Describe the change in the average amount of palm oil produced each year. PE (2)

This table shows how much palm oil is being used or consumed.

Country	2006/7	2007/8	2008/9	2009/10
India	3,600	4,800	6,500	6,800
China	5,400	5,600	5,900	6,300
EU (27)	4,400	4,800	5,500	6,000
US	600	900	920	930
Average				

5. Calculate the average production for each year. (add each column up & divide by 4)
(4)

6. Describe the change in the average amount of palm oil produced each year PE (2)

7. Why do you think the world is using up more and more palm oil? (PEE x 2) (6)

30 MINUTES

8. Use the internet to fill in the table below. How rich are these countries & are they a high income country, newly emerging country or a low income country. (6)

Country	Wealth GNI per capita \$	HIC/NEE/LIC
UK	\$45,000	HIC
Indonesia		
Malaysia		
Nigeria		

9. Why do you think these countries want to grow palm oil? How will it help these countries? PEE x1 (3)

Use the table of data to show changes in palm oil production and wealth in Indonesia to answer the following questions.

Date	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Production	16	18	19	22	23	26	30	31	32	33	29
Wealth	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11200

10. Describe the increase in Indonesia's wealth. PE (2)

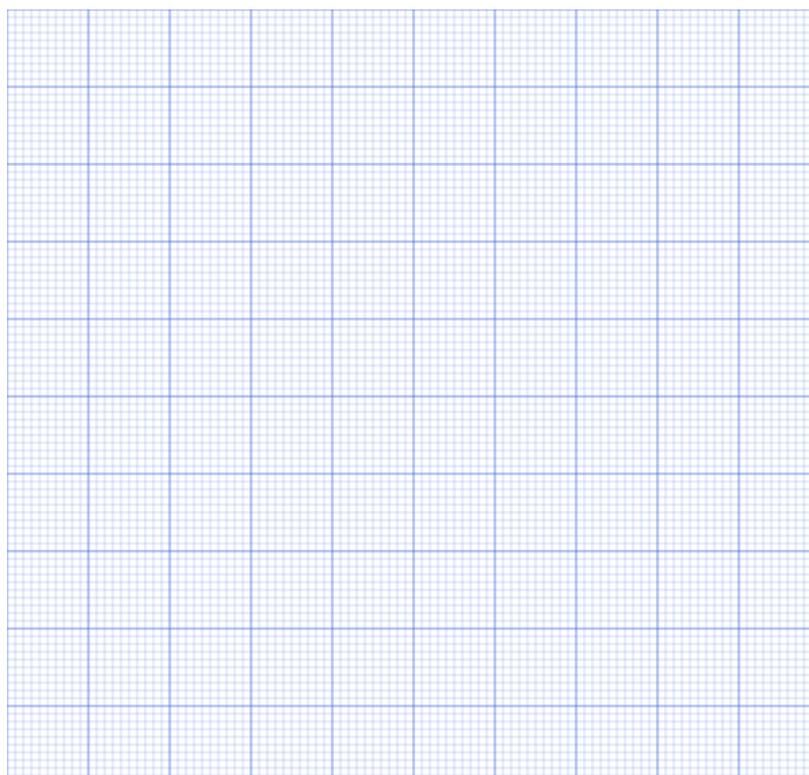
11. Describe the increase in Indonesia's palm oil production. PE (2)

Q 12 & 13 Extension activities

Use table of data about changes in wealth in Indonesia and the amount of palm oil they produce to draw a scatter graph (like we did about life expectancy in Sheffield) to see if there is a link between increased palm oil production & wealth.

Use the excel template, just add type in the figures and it will draw you a graph.

Or Try your best on the graph paper outline below



12. What does your graph show? (PE) 2

13. What type of relationship is it? Positive or negative? (1) _____

14. Is palm oil helping make Indonesia richer? Include evidence in your answer. (PE) (2)

15. Look at the picture which shows a market in a poorer part of Indonesia. Explain how growing more palm oil might help these people. (PEECO) (6)



30 MINUTES

Palm oil grows well in these places because they have a **tropical** climate, this means it is hot & wet. Look at the data for Indonesia, a tropical country that grows lots of palm oil. Look at the information below about Indonesia's climate. Use this to answer these questions.

16. What is the mean temperature in Indonesia? (1) _____

17. What is the temperature range for Indonesia? (1) _____

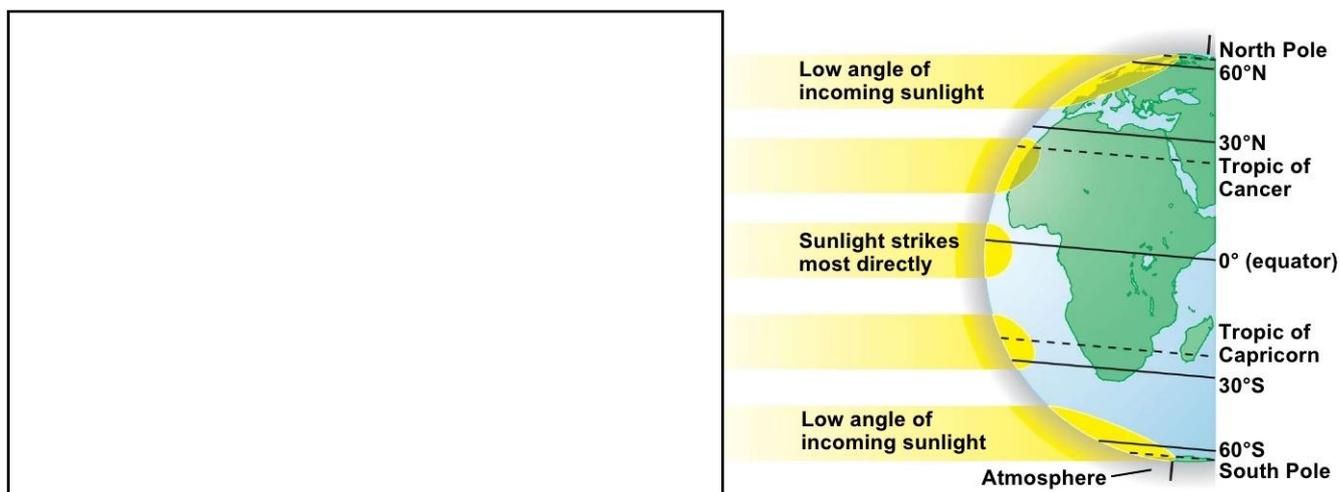
18. Which month has the highest & lowest rainfall? (1) _____

19. Sheffield's average July temperature is 15°C with 65 mm of rainfall. How does this compare to Indonesia? Compare Indonesia's to Sheffield's (PE x2) (4)

	J	F	M	A	M	J	J	A	S	O	N	D
Temperature (°C)	27	26	26	26	26	27	27	27	27	28	28	27
Rainfall (mm)	230	230	240	210	180	90	60	40	50	100	140	195

20. Use the diagram to help you explain why the tropical rainforest is so hot. You could also look on the internet for some help. (4)

<https://www.youtube.com/watch?v=cqKZYAmcReQ>



21. Read the extract below & watch the video about rainfall in Costa Rica, another place with a tropical rainforest and draw yourself a diagram to explain why the tropical rainforests are so wet. (4)

Tropical rainforests are very wet places; Manaus in Brazil has almost 2300mm of rain a year because the high temperatures cause it to rain. In Manaus it is very hot (about 27°C) so the sun it heats up the ground and the air next to the ground.

The heat from the sun will also cause some water to evaporate (turn from a liquid to a gas) from any rivers and plants. This makes the air humid (hot and wet).

During the day this hot wet air rises. As it rises it cools down. This causes the water vapour to condense (turn from a gas to a liquid) so we get clouds. During the day these clouds get larger and larger. By the afternoon there are large dark grey clouds called cumulonimbus clouds. We then get heavy rainfall called convectional rainfall.

Key word	Meaning
Evaporation	When water turns from a liquid to a gas.
Humid	When the air is hot and wet.
Condensation	When water turns from a gas to a liquid.
Cumulonimbus cloud	A type of large storm cloud.
Convectional rainfall	Rainfall causes by the heat from the sun causing the humid air to rise.

<https://www.bbc.co.uk/bitesize/guides/zpmb9q/revision/1>

22. Can you work out which of these is the odd ones out? Circle the one you think is the odd one out & say why. (5)

UK	Indonesia	Asia				_____
Humid	hot	wet	UK	Indonesia		_____
Indonesia	Equator	0°latitude	UK			_____
Equator	Convection rainfall		UK	wet		_____
Hot	wet	equator	arid			_____

30 MINUTES

Total /67

Quick things to do to recap.....

What are 5 things you have learnt from doing this work?

What 4 new or key words have you learnt or read?

What 3 things do you have at home that have got palm oil in them?

What 2 things have you done or learnt that help you with your other subjects?

What 1 thing are you going to discuss with your family about what you have learnt?

End of Section 1