

FOOD CHOICES AND THE LIVING WORLD

How Are Our Food Choices Connected to the Living World?



Introduction

This lesson investigates what happens to the living world when agricultural land expands to meet global demand for meat and animal products. Using the enquiry question, “How Are Our Food Choices Connected to the Living World?”, students move from exploring what makes tropical rainforest ecosystems geographically significant to tracing the causal chain that connects food choices in the UK to deforestation and biodiversity loss in the Amazon. The content of this lesson aligns with the KS3 National Curriculum specifically by building on geographical skills through the use of sources and using the Amazon rainforest as a real and geographically complex case study to examine how human processes impact the living world.

The I do, We do, You do structure is used deliberately. Teacher-led explanation builds the conceptual and geographical knowledge students need before they investigate. Paired case study work gives students the chance to trace real connections across space in a supported context; and the postcard task asks students to inhabit two genuine perspectives – a farmer and a wildlife ecologist – grounding their geographical thinking in the human realities of the issue. The lesson does not tell students what to think. It gives them the evidence, the perspectives, and the tools to think geographically.

Relevant Links

Why should we care about tropical rainforests – [WWF](#)

Deforestation and Reforestation – [The Vegan Society](#)

Vegan diet substantially more environmentally friendly – Scarborough et al., 2023, cited at [The Vegan Society](#)

Why go vegan – [The Vegan Society](#)

LESSON OVERVIEW

Timing
60 minutes

Setting
classroom

National Curriculum Links

Human and Physical Geography: understanding how human and physical processes interact to influence and change landscapes, environments and the climate; and how human activity relies on the effective functioning of natural systems.

Geographical skills: interpret a range of sources of geographical information; communicate geographical information in a variety of ways.

What you'll need

Slide Deck, Information Sheet, Branch Map (including the scaffolded ‘support’ option).

Additional resources

Mini whiteboards or scrap paper for starter; coloured pencils for the You Do; paper cut to A5 for the You Do postcard task (students can either write a different perspective on each side – therefore needing only one piece per student, or it can be a proper postcard, with a drawing on one side and the writing on the other – needing two per student).

Before the lesson

- Print the Information Sheet (one per pair).
- Print Branch Map (one per student).
- Print Branch Map – Supported (the scaffolded ‘support’ option is marked with an ‘S’ in the top corner, print as needed).
- Cut paper to A5 for the postcard task (1–2 per student depending on whether you are including the drawing option).



Learning Objectives

1. To explain how agricultural expansion drives deforestation and habitat loss, and why tropical rainforests are significant as natural systems.
2. To analyse how human activity is changing natural systems, and explain why this matters for landscapes, environments and the climate at a global scale.

There are a few things to consider when teaching this lesson. Firstly, this may be the first time that some students realise their individual impact on a global food system, which can be a difficult process to work through. Kindness and compassion are an important part of teaching about climate change and food choices. Additionally, for the You Do section, the task relies heavily on students understanding that farmers are not to blame for a complex system where human demands are causing deforestation, not individual farmers' choices.

The Lesson

Timings are a guide – adjust to suit your class.

Slide 1 – Title page

Slide 2 – Learning Objectives and key terms

Starter – [8 minutes]

Resources: Slide Deck, scrap paper/mini whiteboards.

Slide 3

The activity

- Display the photograph of the rainforest and ask students to individually jot down everything they already know about rainforests.
- After a few minutes, start taking responses as a whole class and build a mindmap on the board.

Potential script

- You've told me a lot about what rainforests are and what lives in them but now I want to ask a different kind of question, not "what is a rainforest?" but "what does it have to do with us?" and especially, "what does it have to do with what we eat?"

Task – I do – [12 minutes]

The activity

- This is the knowledge building phase which relies on a teacher-led explanation with checking questions and some optional stretch questions.
- See the key takeaways and potential script for the sequence below.

Slide 4 – What makes a rainforest extraordinary?

Key takeaway

The conditions that make a rainforest a thriving ecosystem e.g. warmth, rainfall, layers of habitat, food availability.

Potential script

- Before we look at what's happening to rainforests, I want to make sure we understand what we'd be losing.
- This map shows the world's major tropical rainforests and as we can see, they're found close to the equator where it's warm and wet year-round.
- They cover a relatively small fraction of the planet's land surface. And yet more than half of all the plant and animal species on Earth live within them. That's an extraordinary concentration of life in a relatively small space. This is called high biodiversity, a huge variety of living things, from insects and birds to mammals and plants, all depending on each other to survive.

Checking questions

Why do you think so many species are found in rainforests?

What is it about the conditions there that might support so much life?

Slide 5 – What's happening to the world's rainforests?

Key takeaway

What deforestation is, the scale at which it's happening and the causes. Highlight the impact of losing primary forests.



Potential script

- This is what deforestation looks like from above. The dark areas are intact forest. The lighter patches are land that has been cleared.
- According to the World Resources Institute (cited by The Vegan Society), tropical countries lost 11.1 million hectares of tree cover in 2021 alone. To put that in perspective, that's an area almost the size of England, cleared in a single year.
- The loss of primary forests – the oldest, most biodiverse forests – is particularly significant because once that's gone, it cannot simply be replanted. The species that depend on it have nowhere else to go.

Checking questions

What do you think is driving this?

Why would someone clear a rainforest?

Why does cutting down trees cause climate change?

Stretch – why is losing primary forest more serious than losing forest that has been cleared before?

Slide 6 – What are the leading causes?

Key takeaway

There are two main agricultural drivers of deforestation: cattle ranching and feed crop production (particularly soy).

Potential script

- There are several reasons forests are cleared, but agricultural expansion is most commonly identified as the leading cause. This is when humans take forests and convert the land into farming land.
- When this land is converted for farming, it destroys habitats, and when habitats no longer exist, animals cannot survive. This is called biodiversity loss.
- There are two activities that cause biodiversity loss. The first is clearing forest directly for cattle to graze and the second is clearing forest to grow crops, particularly soy, that are then used for animal feed.
- In Brazil alone, the equivalent of 5.6 million acres of land is used to grow soya beans for animals in Europe (The Vegan Society). Take a moment to think about that geographical connection – forests in South America are being cleared to feed animals that will be eaten in Europe.

Checking questions

The soy is grown in Brazil but feeds animals in Europe. Who is connected to this deforestation?

Stretch – Is demand for food the only driver of deforestation?

Slide – What does deforestation mean for biodiversity?

Key takeaway

What biodiversity loss means and why it's more detrimental in a rainforest.

Potential script

- When a forest is cleared, it isn't just trees that are lost. Every species that depends on those trees for food, shelter, breeding and movement all lose their habitats.
- The consequences are severe when deforestation occurs in rainforests because biodiversity is so concentrated. Each species depends upon another and once one is removed, it starts a chain reaction of consequences.
- Research published in 2023 found that biodiversity loss is considerably higher when people eat a high-meat diet in comparison to a plant-based diet (Scarborough et al., (2023) cited at The Vegan Society). That's a significant geographical finding – it tells us that the type of food system we operate has high consequences for the living world.
- Rainforests aren't just home to wildlife. They're natural systems that regulate the climate, cycle water and maintain the conditions that make agricultural land productive. When they're destroyed, it affects the functioning of the whole system.
- Another problem that occurs from deforestation is due to the land being split into sections, either by roads or by extremely large patches of farming land. This is called habitat fragmentation. It breaks a continuous ecosystem up, which isolates animal populations and access to varied foods.

Checking questions

What is the significance of deforestation in a rainforest?

Stretch – if forests regulate climate and water, what happens to the food system when they're destroyed?



Slide 7 – The causal chain**Key takeaways**

Our food choices impact biodiversity loss.

Potential script

- Let's tie up what we've looked at together before you start the next task. This is the causal chain we've been building across these slides. Each step leads to the next. And notice where it starts – not with a farmer in Brazil, but with demand.
- Global demand for meat and animal products drives the need for more agricultural land, which drives forest clearance, which drives habitat loss, which drives biodiversity loss.
- In a moment, you're going to investigate one part of this chain in more detail and start thinking about what it means from a geographical perspective.

Checking question

What role do humans play in changing the landscape in rainforests?

Stretch – the chain starts with demand. Where in this chain would it be most effective to make a change – and why?

Task – we do – [15 minutes]

Resources: Information Sheet (one per pair), Branch Map (one per student), differentiated Branch Map – marked 'S' (distribute as needed), pencils.

Slide 8**The activity**

- Students work in pairs to read through the Information Sheet.
- They will use the information to build their 'Branch Map' using the subtitles to organise their work.
- After the initial recording of information, students should use arrows to begin making connections between the different branches, annotating their reasoning. There are questions on the slide to help frame this.
- After about 10 minutes, bring the class together to discuss their findings.

Potential script – pre-task

- We've just considered the causal chain and now this task will get you to investigate what's happening in one of the world's most important natural systems; the Amazon rainforest. As you work through the information, you should begin to see connections between what happens there and what ends up on plates thousands of miles away.
- You will work in pairs to read through the information sheet and then jot your findings into the correct section of the Branch Map. Once you've finished this first step, you will start to make further connections – as you're going, you will see that the questions have deliberate overlaps, so work together to see how these branches connect, and annotate your reasoning straight onto the sheet.

Potential script – post-task

- Let's work together as a class now, let's see who is connected to deforestation in the Amazon? [Build a list on the board and push for: farmer, cattle ranchers, feed crop producers, food processing companies, supermarkets, consumers in Europe]. The people at one end – the farmers clearing the forest and farming the land as part of the primary industry, and then people at the other end – someone buying food in a UK supermarket – are thousands of miles apart. And yet they're connected through a global food system, and it's an important geographical concept, that what happens in one place is shaped by decisions and demand in another.

Differentiation

Support – hand out the supported Branch Map – marked 'S', with scaffolded questions and references of where to look on the Information Sheet.

Stretch – encourage students to think about scales by introducing a fifth branch for the Branches Map – "what could change this?".

Task – you do – [15 minutes]

Resources: A5 paper for the postcards (either 1 or 2 per student), Branch Map from previous task, Information Sheet, coloured pencils (if including the drawing option).



Slide 9

The activity

- Students work independently to produce postcards from two different perspectives: a farmer whose community depends on the agricultural land, and a wildlife ecologist studying the rainforest.
- Encourage students to use the checklist on the slide to frame geographical evidence, rather than this solely being a creative writing task.
- Optional: students could also draw their response and include labelling e.g. the farmer's perspective might show cleared land, monocrops, cattle, whereas the ecologist's perspective could show a forest canopy, specific species or a cleared patch of land.

Note on framing – the farmer's postcard should reflect genuine economic and social pressures, not position the farmer as a villain. Agricultural expansion driving deforestation is a consequence of a global system of demand, land ownership, economic necessity and policy – not simply bad individual choices. If a student's postcard starts to lean towards blame, gently redirect: "what pressures might be driving the farmer's decision?" and "who else is a part of this system?"

Potential script

- You are going to write two postcards from the Amazon – one from a farmer whose community depends on agricultural land, and one from a wildlife ecologist studying the rainforest ecosystem. Each person is looking at the same place. But what they see, and what they want the world to understand, is very different.
- Every postcard must be grounded in the evidence from today's lesson, let's look through the checklist on the slide to see how to do this.
- It's important to remember that both perspectives are real and both perspectives matter. There is no right or wrong person in this.

Differentiation

Support – point towards the sentence starters and key terms on the slide.

Stretch – offer a further response as 'the geographer', to synthesise a geographical conclusion considering both perspectives.

Plenary – [10 minutes]

Slide 10

The activity

- Three statements are on the slide and students respond with thumbs up to agree, in the middle for partially agree, or down for disagree.
- The teacher should take a few responses from students with different positions and ask them to justify their reasoning.
- Use this chance to tie learning up, back to the enquiry question.

Potential script

- For the last few minutes I want to know what you actually think, not just what the evidence says, but your own geographical judgement.
- You can respond with your thumb up to agree, in the middle to partially agree or thumb down to disagree.
- When I read a statement, I'll count down from three and you'll reveal your response. I might be asking you why, so be ready to justify your response.

Differentiation & SEN Considerations

Support

- In the starter, there are questions on the slide to prompt; differentiated Branches Map includes scaffolding, marked with an 'S' in the top corner; word bank and sentence starters for the postcard on the slides.

Stretch

- Stretch questioning during the "I Do" phase; encourage students to think about scales by introducing a fifth branch for the Branches Map – "what could change this?"; for the "You Do" task, offer a further response as 'the geographer', to synthesise a geographical conclusion considering both perspectives.

