Geography Year 10

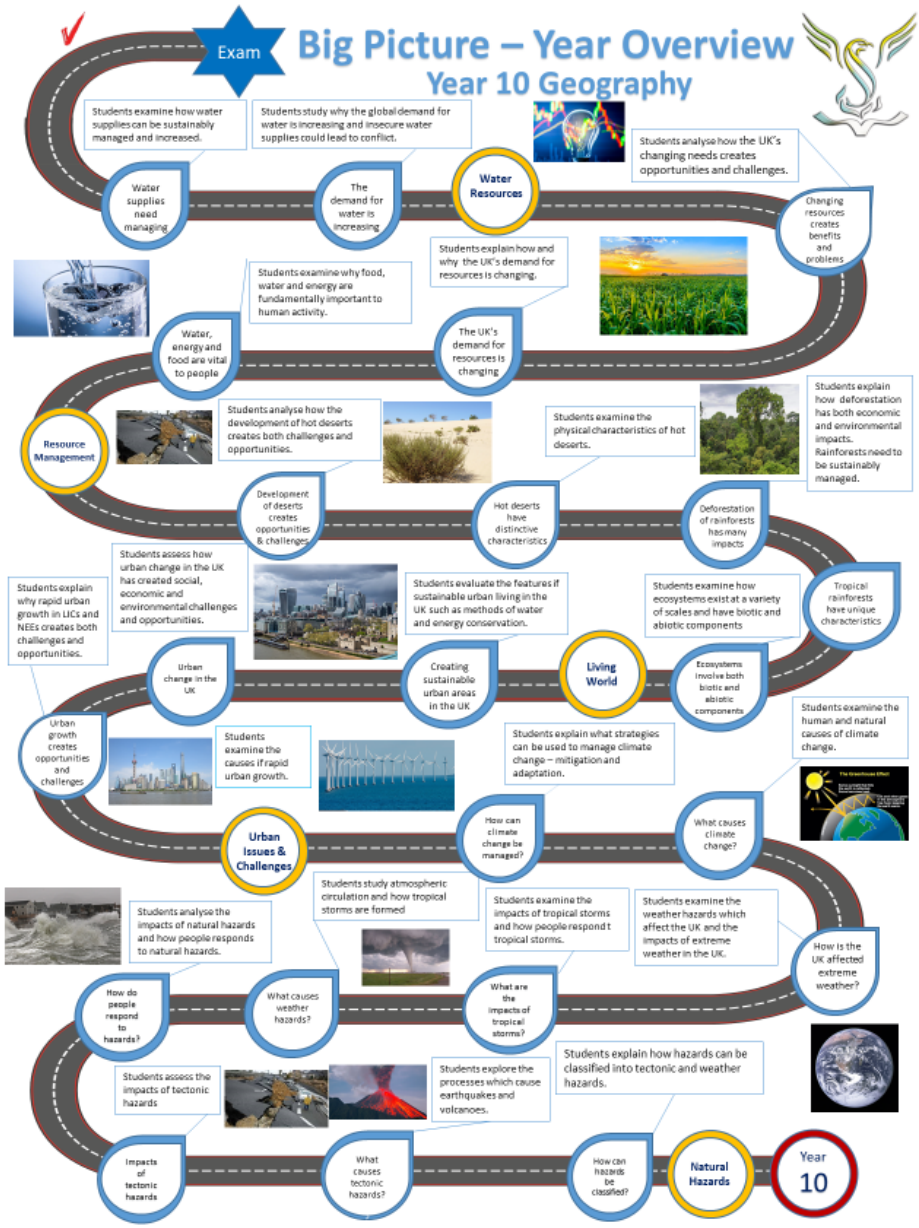
Blended Learning Booklet

Y10-4 Living World: Ecosystems & Tropical Rainforests

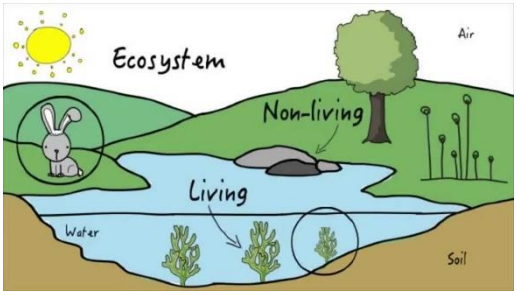
- Aim to complete follow your existing timetable of lessons (4 lessons over 2 weeks)
- Write down the title and LI for each lesson and then complete the tasks.
- Upload all work onto ClassCharts for feedback.



Contents



Lesson 1 – Components of an ecosystem



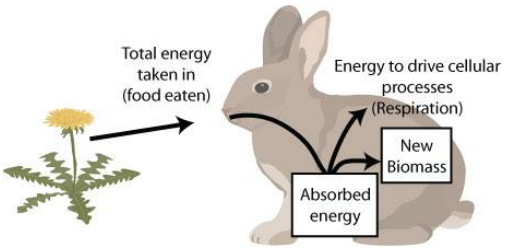
LI: To examine the characteristics of ecosystems

Key terms:

Ecosystem: natural environment and includes the flora (plants) and fauna (animals) that live and interact within that environment

Biome: large scale global ecosystem

Task 1: READ THE DART: The components of ecosystems



An ecosystem is a complex set of relations between the living and non-living aspects of nature. It includes plants, micro-organisms, water, birds, trees, air, and people.

If one side of the ecosystem is destructed or disappears, it will impact all other parts of the ecosystem. An ecosystem can be as big as an entire ocean or as small as a drop of water. All ecosystems are made up from biotic and abiotic components.

Abiotic Components

These are non-living components of ecosystems. There are several abiotic components:

- **The Sun** - The Sun is the main powerhouse of energy and is essential for the maintenance of life. The sun directly provides the energy to the plants while the animals use this energy through plants by eating them.
- **Water** - Water is important for the survival of living beings. It also regulates body temperature and water is also a habitat for many living forms.
- **Temperature** - It is one of the essential factors of the environment which in many ways influence the survival of the organisms. Different organisms are adapted to a different range of temperatures around them e.g., polar bears need a cold environment.
- **Atmosphere** - The existence of life on this planet is the result of a suitable atmosphere that is present on the earth. It is made up of oxygen (21%), nitrogen (78%) and other gases like neon, argon and carbon dioxide.
- **Latitude** - The temperature of an area is greatly influenced by its latitude or distance away from the Equator; therefore, rainforests are found near the Equator and the polar regions are found at the north and south pole.

Biotic Components

These components consist of living organisms such as plants, animals, and microorganisms. These can be categorised into consumers and producers.

Producers are plants and vegetables. All energy comes from the Sun and plants are the ones who make food with that energy. They use the process of photosynthesis. Plants also make loads of other nutrients for other organisms to eat.

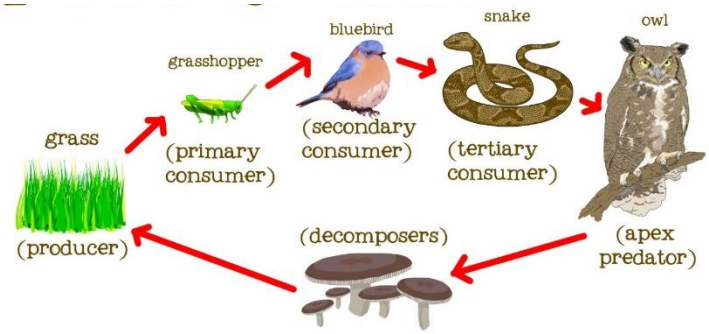
Consumers are living organisms that eat other living organisms. There are 3 types of consumers:

- Herbivores – These organisms eat plants e.g., cows eat grass
- Carnivores – These organisms eat meat e.g., lions eat zebra
- Omnivores – These organisms eat both meat and plants e.g., humans

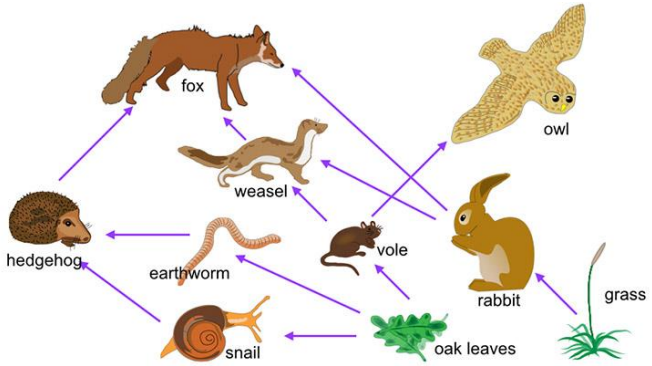
Task 2: Answer the questions

1) What is an 'ecosystem'? How large and small can ecosystems be?
2) Are 'abiotic components' living or non-living? Are 'biotic components' living or non-living?
3) Which do you think is the most important abiotic component? Justify your answer.
4) What are producers? How do producers create food? What do the 3 types of consumer eat?
5) Explain how humans harm ecosystems and harm living creatures.

Task 3: Describe this simple food chain in your own words starting with the producer:



Task 4: Explain what would happen to this food web if the grass did not grow.

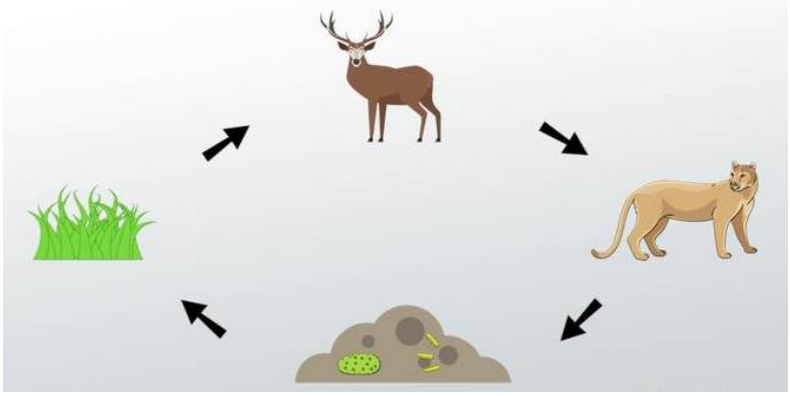


Task 5: Apart from food, what else might components of an ecosystem rely on each other for?

Lesson 2 – Small scale ecosystems

LI: To explain the importance of food chains, food webs and decomposers

Task 1: Describe the interdependence you can see in this food chain. Try to do it in 20 words or less.



Task 2: Read through the information about Epping Forest

- *Epping Forest is an area of temperate deciduous woodland in south-east England. It is a small-scale ecosystem and a natural place where the life cycles of plants, animals and other organisms are linked to each other and to the abiotic parts of the environment to form a natural system. It depends on energy flows and nutrient cycling.*

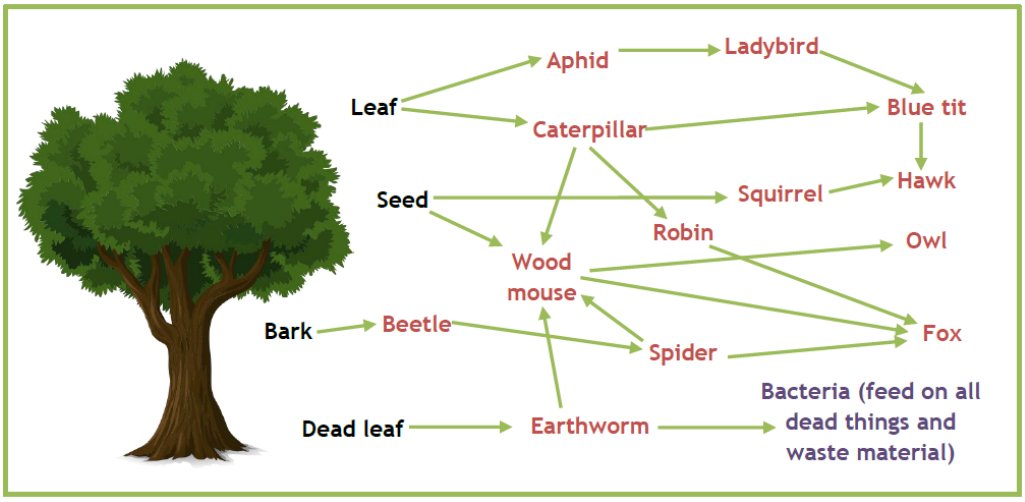
Task 3: Colour code the biotic components of the Epping Forest small-scale ecosystem (you might need to research some of the species!)

Key:

Producer ☐ Consumer ☐ Decomposer ☐

wood pecker	bluebell	rabbit	ivy
wood louse	squirrel	owl	adder
maggot	hawk	earthworm	thrush
oak	fox	primrose	door mouse
stoat	fungi	hedgehog	mole
caterpillar	bramble	robin	violet
frog	snail	badger	bacteria

Task 4: Using the food web of Epping Forest, answer the exam questions



Exam Questions

1. Describe how the food web shows that different parts of the ecosystem are linked to each other (3 marks).
2. Outline the likely effects on the ecosystem on a reduction in the number of insects. (3 marks).

Lesson 3 – Global biomes

LI: To examine the unique physical characteristics of tropical rainforests

Task 1: Identify and describe the different biomes using the questions.

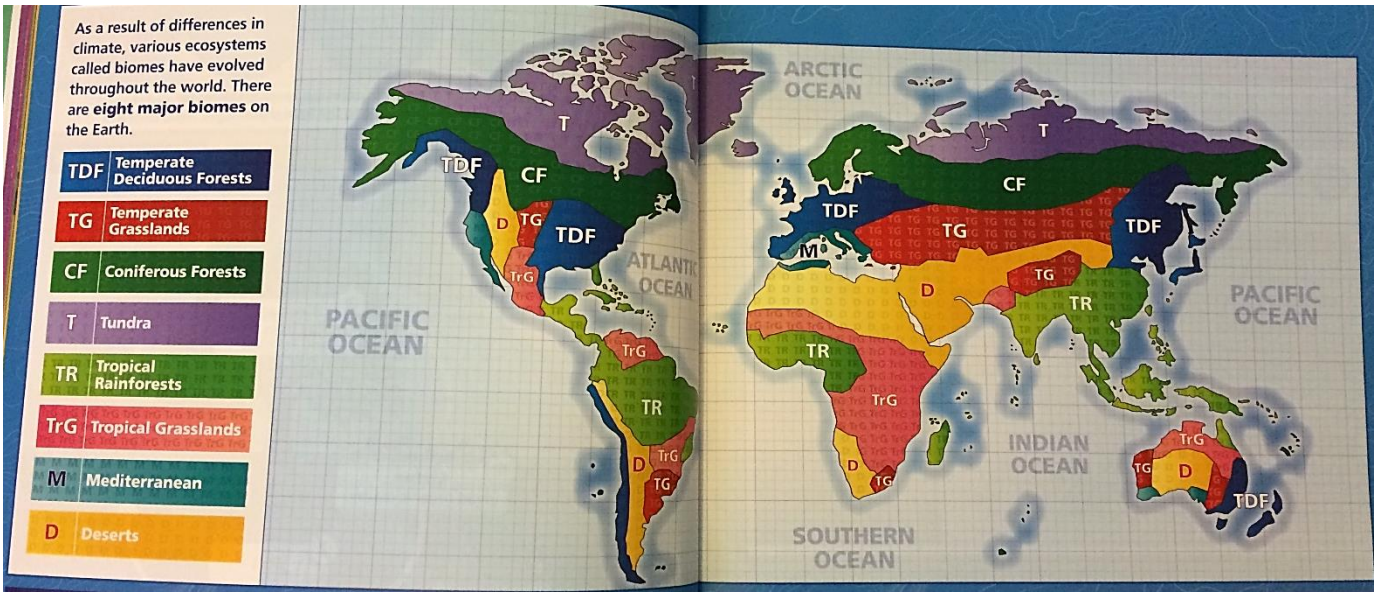
Where might these be located?

What makes each ecosystem unique?

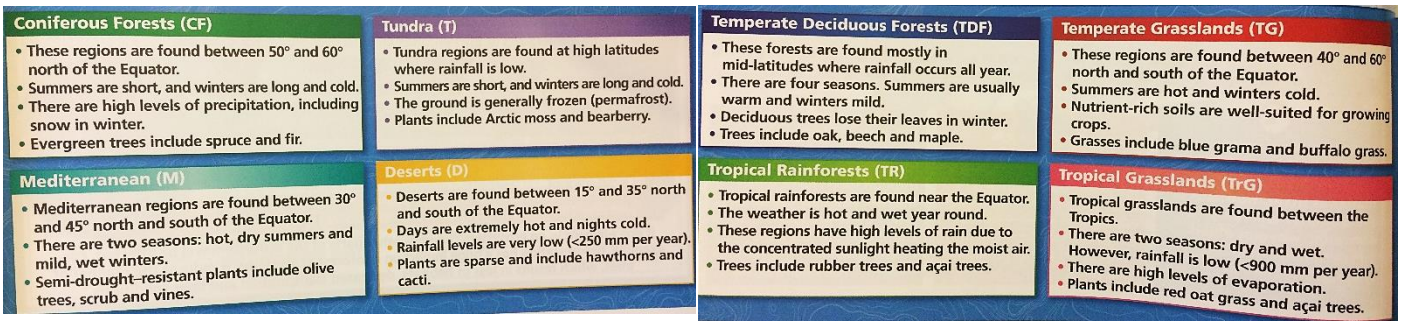
What native plants and animals could be found in each one?

Task 2: Describe the location of the following global ecosystems or global biomes using the map below:

- Tundra
- Hot Deserts
- Tropical Rainforests



Task 3: Read through the information about the different biomes and answer the questions.



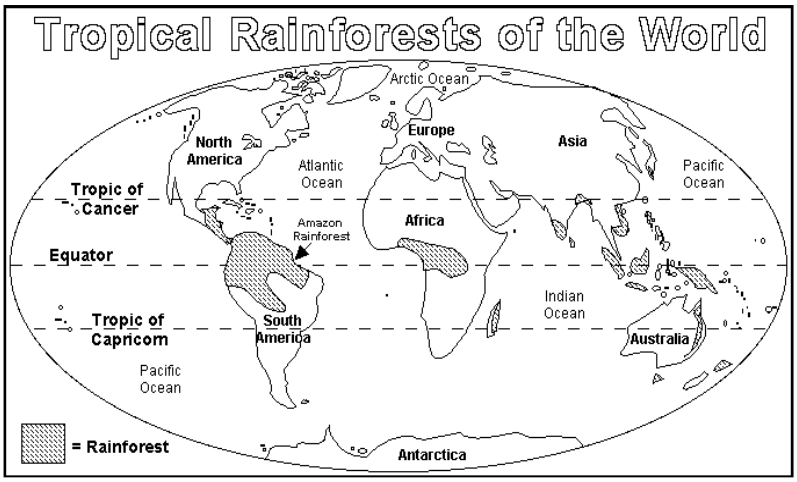
Questions

1. Which biome is the coldest?
2. How many seasons are there in the Mediterranean biome?
3. Where are TRF found?
4. What biome is found between 50°and 60° north of the Equator?
5. How much rainfall do deserts get?
6. Give one difference between temperate and tropical grasslands.

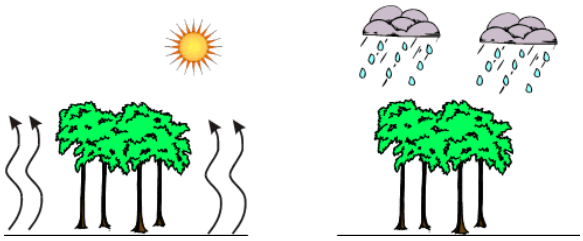
Lesson 4 – Location and climate of tropical rainforests

LI: To describe the location and climate of tropical rainforests

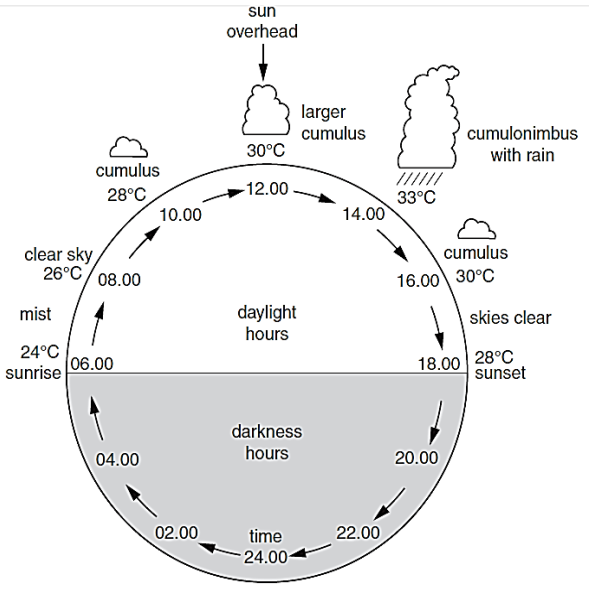
Task 1: Identify and describe the location of tropical rainforests. Use examples and key features from the map.



Task 2: What do you think the image is showing?



Task 3: Using the diagram, answer the questions on the Amazon's climate (typical of a tropical rainforest)



1) What time is sunset?
2) How many hours of sunshine are there?
3) How many hours of darkness?
4) What is the temperature at sunset?
5) What is the temperature at 12:00?
6) By how much does the temperature change overnight?
7) At what time is the sun 'overhead'?
8) At what time of day does 'mist' form?
9) At what time do 'cumulus' clouds start to form?
10) Why do clouds start to form in a rain forest?
11) What time is the peak daily temperature?
12) What is the peak daily temperature?
13) What is the difference between the highest and lowest daily temperature?
14) What type of cloud forms at 12:00?
15) What are the largest clouds to form?
16) What time is the heaviest rainfall?
17) What happens to the clouds at 16:00? Why do they get smaller?
18) When do the skies clear after the rainfall?

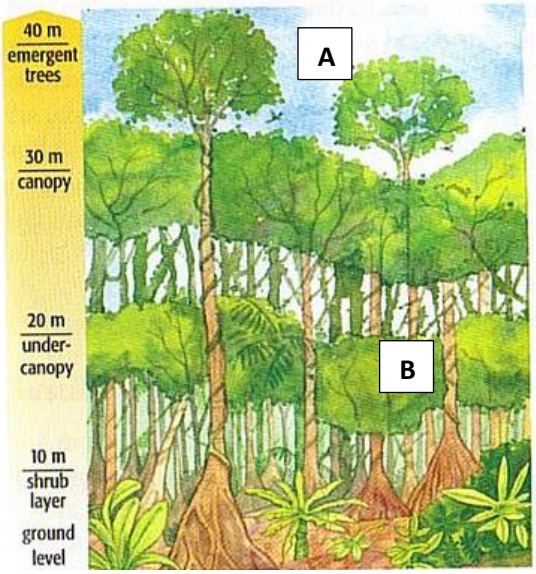
Explain these as short paragraphs (include statistics to support your answers)

19) Explain how the clouds form and change between 06:00 and 18:00
20) Why do sunsets and sunrises occur at set times in rainforests?
21) Why do rainforests have very high humidity?
22) If you visited a rainforest, what would it be like?

Lesson 5 – Physical characteristics of a tropical rainforests

LI: To examine the unique physical characteristics of tropical rainforests

Task 1: Using the blue boxes on the diagram below, describe the layers found in a rainforest: *emergent trees, canopy, under-canopy and shrub layer*



The way the rainforest is divided into four distinct layers is all due to the availability of light, which all plants need for the process of photosynthesis.

The **emergent trees** and those in the **canopy** receive most of the light and therefore grow tall.

Below the canopy, competition for sunlight is fierce. Trees in the **under-canopy** are shorter, as they are in the shade, but they are waiting for their chance to take advantage of the next light space to become available.

Only 1% of sunlight reaches the forest floor, so growth in the shrub layer is more limited.

Task 2: Answer the questions:

1. What is the largest rainforest in the world?
2. What are the four layers of the rainforest structure?
3. What is the layer of the rainforest that has very little sunlight and supports little plants?
4. Describe the physical conditions in the layers labelled A and B.

Task 3: Read through the information about soil and vegetation in tropical rainforests

Vegetation	Soil
○ Most trees are evergreen and dark coloured. ○ Take advantage of the continuous growing season. ○ Many trees are very tall. ○ Vegetation is very dense – little light reaches the forest floor. ○ Lots of epiphytes: plants that grow on other living plants and take nutrient and moisture from the air	○ Soil isn't very fertile. ○ Heavy/constant rain washes away nutrients and minerals - ***leaching.*** ○ Nutrients are at the surface due to decayed leaf fall. ○ Layer is very thin. ○ Decay is fast in the warm, moist climate

Task 4: Using the diagram of the rainforest nutrient cycle, answer the exam question: *Describe how nutrients are cycled in a land-based ecosystem. (4 marks)*

Lesson 6 – Animal and plant adaptations

LI: To explain how rainforest plants and animals adapt to the climate of a rainforest

Task 1: Read the DART on Rainforest Biodiversity

The **tropical rainforest** is a hot, moist biome found near Earth's equator. The world's largest tropical rainforests are in South America, Africa, and Southeast Asia. Tropical rainforests receive from 60 to 160 inches of precipitation that is evenly distributed throughout the year. Tropical rainforests support the greatest diversity of living organisms on Earth. Although they cover less than 2 percent of Earth's surface, rainforests house an estimated 50 percent of all life on the planet's land masses.

The **tropical rainforest biome** is one of the **most productive** areas on earth. More than half of the different species of animals and plants live in tropical rainforests. The abundant sunlight, warm temperatures, and daily rain lead to a fast turnover of nutrients. Subsequently plant growth is very rapid. This is because they contain a diversity of ecological niches from the forest floor to the canopy.

What is biodiversity?

Biodiversity (short for biological diversity) is the number and types of organisms within an ecosystem. No one knows exactly how many species live in the world's tropical rainforests — estimates range from 3 to 5 million species — rainforests are the undisputed champions of biodiversity among the world's ecosystems.

Tropical rainforests contain far higher numbers of species compared to temperate climates like the UK. For example, whereas UK temperate forests are often dominated by around 6 tree species that make up 90 percent of the trees in the forest, a tropical rainforest may have more than 480 tree species in a single hectare (2.5 acres). A single bush in the Amazon may have more species of ants than the entire British Isles. This diversity of rainforests is not a haphazard event but is the result of a series of unique circumstances.

Task 2: Answer these questions:

Q1) What are the general characteristics of tropical rainforests?
Q2) Why are tropical rainforests 'highly productive'? What does this mean?
Q3) What is biodiversity? How is biodiversity measured?
Q4) To what extent is biodiversity in tropical rainforests more complex compared to the UK?
Q5) Explain how human activity can reduce biodiversity in tropical rainforests.

Task 3: Watch the videos on different species adaptations in the tropical rainforest

Cordyceps - https://www.youtube.com/watch?v=vijGdWn5-h8
Mantis and jumping spider - https://www.youtube.com/watch?v=7wKu13wmHog
Jesus Christ Lizard - https://www.youtube.com/watch?v=45yabrnryXk
***If you are interested you can watch the entire Jungles episode of David Attenborough Our Planet. This is as well as, not instead of the lesson: https://www.youtube.com/watch?v=um2Q9aUecy0&t=866s ***

Task 4: Match the correct adaptions to the species

LONG LIMBS TO CLIMB THROUGH THE TREES AND REACH FOOD	NOCTURNAL TO AVOID PREDATORS	CAMOUFLAGE FROM PREDATORS	TOXIC TO PREDATORS AND COLOURED TO WARN THEM OFF

Task 5: Annotate the image to show how plants are adapted to survive in the tropical rainforest

Buttress roots to support tree growth

There is lots of competition for sunlight

Drip tip leaves

Waxy leaves

Helps water to run off plants during heavy rainfall

Epiphytes are adapted to grow on other plants

Absorb minerals/water from the plant and atmosphere

Task 6: Design your own species that would be able to survive in the tropical rainforest.

- *Consider the different adaptations that a species would need to have*
- *Conditions such as warm temperatures, high rainfall, dense vegetation, predators, day/night time*

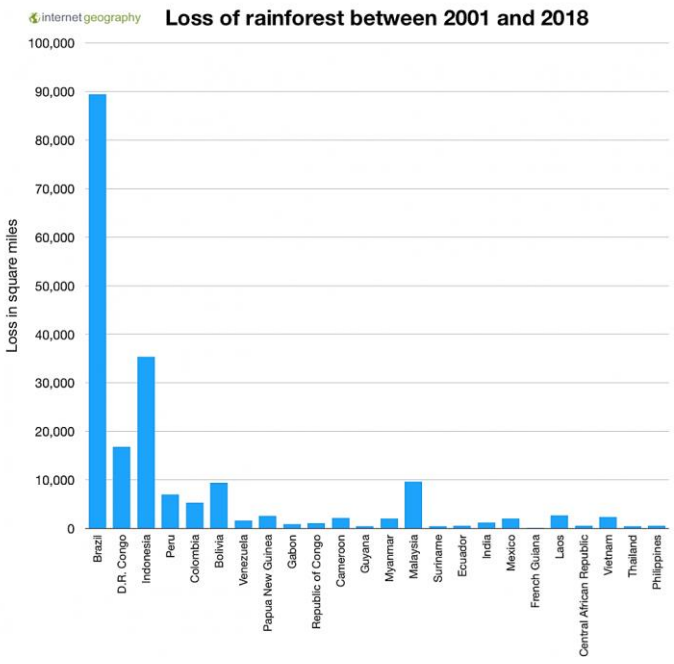
Lesson 7 – Causes of deforestation

LI: To examine the causes of tropical rainforest deforestation

Task 1: What does the figure show?

Task 2: Watch the videos about causes of deforestation

- https://www.youtube.com/watch?v=SAZAKPUQMw0&t=1s
- https://www.youtube.com/watch?v=9YE5FbHWgn8



Task 3: Read the DART on Causes of Amazon deforestation

Logging

Commercial logging companies cut down trees for timber, which is mostly sold to developed countries. In most cases, large areas of forest are destroyed just to remove a few highly valued trees. The effect of this devastation has lasting consequences:

- Heavy machinery compacts soil and makes it more vulnerable to erosion

- Silt is washed into rivers

- Logging roads open the area to new settlers who remove even more trees

Farming

Land is cleared (e.g. by slash and burn) and planted with cash crops, usually just one – such as palm oil. Alternatively, it will be used for grazing by cattle ranchers. Most cash crops and cattle are eventually sold to developed countries. These actions affect the soil for future use because fertility falls after just a few years. Only farmers who can afford fertilisers will be able to use the soil to grow crops in the future. If they can't afford fertilisers, farmers simply move on and clear more land... More forest is lost.

Mining

Land is completely deforested. Soil is often removed with high-pressure hoses and chemicals are used. The run-off goes into local rivers and pollutes them. Huge scars from open-cast pits are left – the soil can't recover.

Road building

Loggers and miners build roads to get their materials out. People use the roads to enter the forest and build new settlements and set up industries. The Trans-Amazonian Highway in South America is 5,300 km long and has opened some remote parts of Brazil to development.

Settlement

Land is being cleared for new homes and settlements. There is more need for these in countries with increasing populations, especially around large, overcrowded cities.

Dam building

Hydro-electric dams provide energy but also result in deforestation. Problems include:

- Flooding of large areas of forest

- People may have to move

- Drowned forest rots and adds carbon to the atmosphere

Wood for fuel

Many people rely on wood for their main source of fuel, particularly in developing countries. As the population grows, more wood is chopped down.

Task 4: Answer the questions

1. What are the benefits of deforestation?
2. Why does it take place?
3. What problems does deforestation create?
4. In your opinion do you think the incentive and economic benefits outweigh the negative impacts?

Task 5: Why do you think tropical rainforests should be protected? List as many reasons as possible.

Lesson 8 – Impacts of deforestation

LI: To examine the impacts of rainforest deforestation

Task 1: Watch the videos about the impacts of deforestation in the Amazon

https://www.youtube.com/watch?v=e1_4JseKlO4

https://www.youtube.com/watch?v=oGjRNbXeRXI&t=359s

Task 2: Make 7 bullet points about the videos

Task 3: Colour code the impacts of deforestation

Positive ☐ Negative ☐ Social: SOC Economic: EC Environmental: ENV

Homes and schools can be built for the growing population	Roads, bridges, ports and airports can be built, enabling more trade	Large banana and coffee plantations can be planted, and the crops exported	Without the trees, the soils are exposed to heavy rain and are easily eroded
New towns can be built, and new jobs created	Without the shade from the trees, the land can be baked hard and the earth heats up	Climate change can occur due to less transpiration and photosynthesis	Biodiversity decreases as ecosystems and habitats are lost
Further economic development takes place, leading to a higher standard of living	Covering the ground with buildings and roads increases surface runoff, leading to flooding	Soil is eroded from the land and washed into the rivers, leading to more sedimentation	

Task 4: 9-mark question: "Deforestation creates jobs and opportunities but is a catastrophic environmental disaster". Do you agree? Justify your answer.

1. Intro: answer the question and briefly describe what deforestation is
2. Para 1: an explained example/scenario to back up your viewpoint
3. Para 3: an explained example/scenario to back up your viewpoint
4. Conclusion: bring together your answer in one or two sentences

Use specific examples from case studies as much as possible

Have you explained your points?

…this creates jobs because…
…this is an opportunity for some due to the fact…
…in the long term it may be an environmental disaster because…
…this causes which is environmentally damaging as it…

Lesson 9 – Protecting tropical rainforests

LI: To explain how tropical rainforests can be protected

Task 1: Recall 5 reasons why we should protect rainforests

Task 2: Watch the video about how one man grew his own rainforest: https://www.bbc.co.uk/news/av/stories-52122285

Task 3: Read through the DART discussing different attitudes on protecting the Amazon rainforest

We will 'fight to the death' to save the Amazon rainforest.

Deforestation in the Amazon rainforest is advancing at worrying levels. In January, the area lost was double that in the same month in 2019, according to official figures.

This after a catastrophic dry season last year in which fires destroyed large swathes of the rainforest, a carbon store which is seen as key in slowing down the pace of global warming. There was outrage around the world as fire destroyed trees and killed wildlife at a rate not seen in years.

'We will fight to the death'

Maristela Clediane Uapa Arara is 14 years old and a member of the Arara-Karo indigenous group. The hunter-gatherers are one of about 900,000 groups which have lived in the rainforest for thousands of years. But now their specially protected territories are under threat from loggers and miners. "We are worried because the forest is very important to us," Maristela says.

"The forest is our mother, she takes care of us, so we must take care of her because that's where everything comes from."

Brazilian President Jair Bolsonaro has said that indigenous people's special land and cultural rights should be scrapped. He has promised to "integrate" them into the rest of the population and open some of their lands to agriculture and mining.

It is a policy which worries Maristela: "This new government hates indigenous people, but I am really proud to be indigenous, and as women it is our role to fight for our land."

Maristela's cousin, 22-year-old Juliana Tuiti Arara, says it is not just the president and his plans that concerns them but also attacks on the forest by fellow indigenous people. "It was very sad for us, people from outside are co-opting our indigenous people to log the forest," she explains as she fights back tears. "In the last years, we saw our relatives killing the trees, they came in with bulldozers."

Both girls say it has strengthened their determination to protect the land which their ancestors fought for. "'Act' for me is a very strong word. We must act, we cannot stop and stand with our arms crossed."

How far will they go to fight for their lands? Without missing a beat, Maristela and Juliana both say "até à morte" (to the death).

'We all have the same rights to use the land'

It is not just the indigenous people that believe the land is theirs. In a different region, 16-year-old Carina de Faria and her brother Rodrigo, 18, are the next generation of farmers. They are spending the day herding cattle with their father Gerson leading the way. They want to follow in his footsteps.

"Everyone, absolutely everyone, needs the land," says Carina. "Many farmers need the land to produce for themselves and for others, globally or locally. So, I think everyone has that right and it should just be divided equally."

They have 100 hectares (1 sq. km) of farmland, which used to be rainforest, where they grow much of their own vegetables and rear cattle. But they are also worried about the effects of deforestation. "I think that enough has been destroyed and what remains, should be left alone," says Rodrigo.

"Many of the people who are deforesting the woods are much older, but us young people realise that climate change is already happening," Carina adds.

"Young people are very connected through technology so we should work together. And also, it is government's duty to find a solution for everyone."

'Many farmers are close-minded'

A few minutes' car drive away lives 18-year-old Gustavo, who is good friends with Rodrigo. Last August his family farm was hit by a fire. Fires are common during the dry season and often caused by naturally occurring events, but this time it was different. "We are very sad with this situation because someone illegally set fire to the land to clear it for himself," he says.

"We had 70% of the property burned and we had to treat our cattle, we lost animals too.... we lost a lot."

Even though Gustavo is from a farming family himself, he says it is other farmers who are putting the Amazon's future at risk. "The rainforest won't survive - many farmers are closed-minded about environmental issues. They just want to clear the land for more profit."

'What do we want? Climate justice! When do we want it? Now!'

These are the chants that can be heard on the busy streets of Manaus, the capital of Brazil's Amazonas state. In this city of two million people, right in the middle of the rainforest, 15-year-old Bruno Rodrigues and his classmates have started a group called Conscious Next.

They stop strangers to highlight the dangers of climate change. "We tell them why it is so urgent," Bruno explains, adding that not all of those they stop approve. "There will be some people that will never want to listen to what young activists are saying," he says. They are part of a movement of young people which gets together every Friday to protest, under the "Fridays For Future" banner launched by teenaged climate activist Greta Thunberg.

Fifteen-year-old Ana Beatriz says her family was affected by the Amazon fires. Her sister has breathing problems and had to be taken to hospital because of the smog caused by the fires.

"I was also very sad because of the trees and the animals burned there, it was shocking to me," she recalls. The Amazon is home to one in 10 species on earth and experts say the fires killed more than two million creatures, including jaguars, snakes, sloths and insects.

Despite the devastation caused by the fires, Bruno remains optimistic. "There is still hope in us - we live in action. The politicians need to take practical action and with thousands of us young people on the streets, it will be impossible for them to ignore us."

Task 4: Read through the different strategies used to protect rainforests.

4 methods of controlling deforestation

Tropical rainforests can be managed in the following ways to reduce deforestation:

Logging and replanting - selective logging of mature trees ensures that the rainforest canopy is preserved. This method allows the forest to recover because the younger trees gain more space and sunlight to grow. Planned and controlled logging ensures that for every tree logged another is planted.

Education - It is important that local people, businesses and politicians understand the true value of the tropical rainforest. Once they understand the value of biodiversity, particularly in terms of tourism, they will be more likely to want to protect it from deforestation.

Ecotourism - this encourages sustainable tourism that creates jobs and money for local people whilst ensuring that the money generated is used to protect and conserve the tropical rainforest for future generations to enjoy.

International agreements - agreements to protect tropical rainforests have been made between different countries through debt-for-nature swaps. This is when a country which is owed money by another country cancels part of the debt if an agreement is made by the debtor country to ensure the conservation of its tropical rainforests.

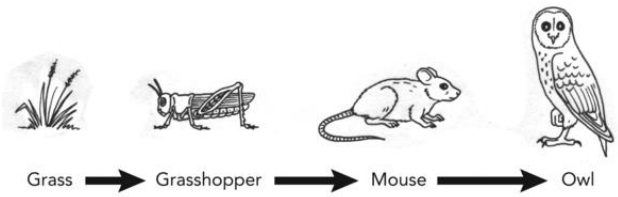
Debt reduction - debt reduction or conservation swaps offer an alternative to poorer countries to the reckless exploitation of their natural wealth. These swaps basically see poorer countries have portions of their debts wiped out or paid for by richer nations or charities of richer nations in exchange for promising to protect or conserve large parts of their natural environment. This has large scale global effects.

Task 5: Justify which method you think would be the most effective. Explain your choice.

Lesson 10 – Living World Assessment (Ecosystems and Tropical rainforests) [40 marks]

This is an open book assessment. Try to complete the assessment in 45 minutes and upload your completed assessment to ClassCharts. You can type or write your assessment answers.

Study Figure 1, a diagram of a food chain.



Q1) Give an example of a producer (1 mark)

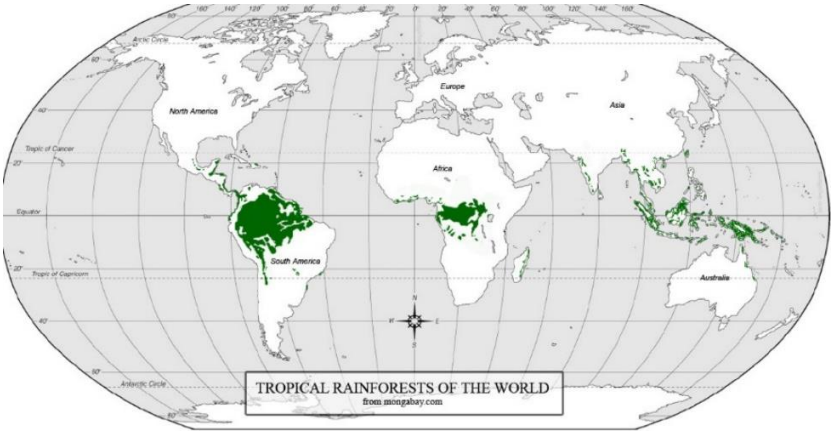
Q2) What is a food web? (2 mark)

Q3) Give an example of consumer (1 mark)

Q5) Describe how nutrients are recycled in a land-based ecosystem. (4 marks)

Q6) What are biomes? (1 mark)

Study Figure 2, the global distribution of tropical rainforests



Q7) Describe the global distribution (location) of tropical rainforests. (3 marks)

Study Figure 3, a drip tip leaf

Q8) Using Figure 3, describe two ways vegetation in a tropical rainforest adapts to the climate.

(2 marks)

Q9) Describe how animals adapt to survive in tropical rainforests. (3 marks)

Q10) Outline one cause of tropical rainforest deforestation. (2 marks)

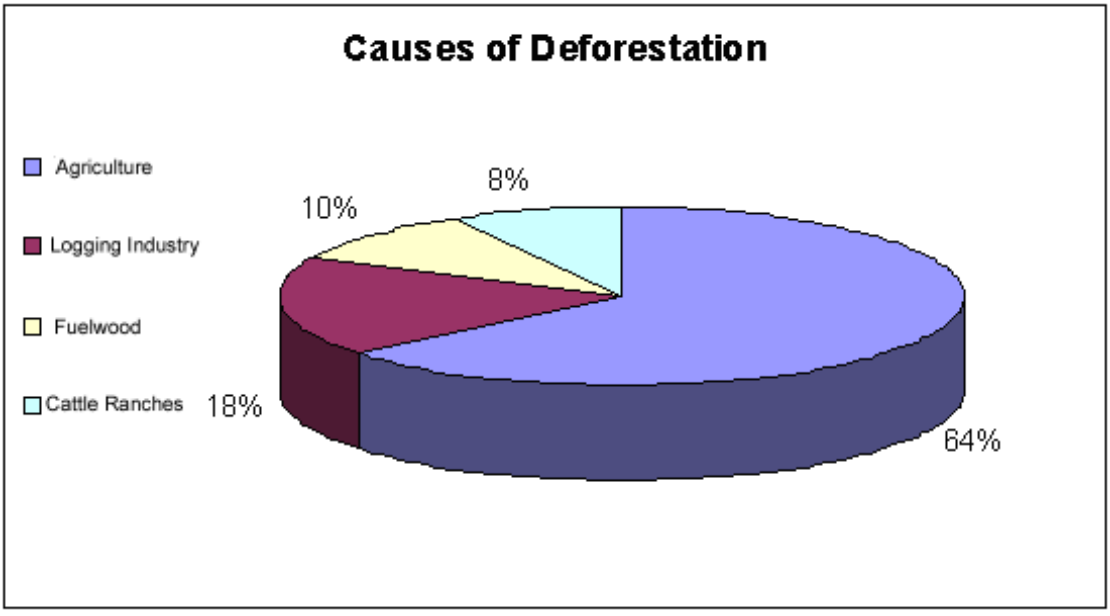
Figure 4, two photographs showing different parts of a tropical rainforest.

Q11) Using Figure 4 and your own understanding, explain how development in tropical rainforests creates economic advantages but at a cost to the environment. (6 marks)

Q12) Name one strategy that may have contributed to a decline in the rate of deforestation. (1 mark)

Q13) Explain how this strategy has contributed to the change in rate of deforestation. (2 marks)

Study Figure 5, the main causes of deforestation in the Amazon Rainforest



Q14) Using Figure 5 and your own knowledge, discuss the causes of tropical rainforest deforestation.

(9 marks + 3 SPaG)

Attainment band:	Year 10 Unit 4 – Living World: Ecosystems and Tropical Rainforests **Knowledge (AO1), Understanding (AO2), Application (AO3)**
Yellow Plus / Level 8-9 (33 to 40 marks)	1. Demonstrates accurate knowledge of small and large scale ecosystems 2. Fluently explain how animals and plants adapt to survive in tropical rainforests 3. Fluently assess the impacts of rainforest deforestation 4. Fluently explain the causes of deforestation in the Amazon rainforest 5. Effectively use figures to answer geographical questions and draw geographical conclusions 6. Independently use maps to locate places and identify key features
Yellow / Level 6-7 (24 to 32 marks)	1. Demonstrates clear knowledge of small and large scale ecosystems 2. Explain how animals and plants adapt to survive in tropical rainforests 3. Assess the impacts of rainforest deforestation 4. Explain the causes of deforestation in the Amazon rainforest 5. Shows an ability to use figures to answer geographical questions and draw geographical conclusions 6. Confidently use maps to locate places and identify key features
Blue / Level 4-5 (15 to 23 marks)	1. Demonstrates knowledge of small and large scale ecosystems 2. Describe how animals and plants adapt to survive in tropical rainforests 3. Describe the impacts of rainforest deforestation 4. Describe the causes of rainforest deforestation in the Amazon rainforest 5. Identify useful geographic information from figures 6. Use maps to locate places and identify some key features
Green / Level 2-3 (8 to 14 marks)	1. Demonstrates limited knowledge of small and large scale ecosystems 2. Identify and briefly describe how animals and plants adapt to survive in tropical rainforests 3. Identify the impacts of rainforest deforestation 4. Describe the causes of rainforest deforestation in the Amazon rainforest 5. Describe what figures are showing and link them to the topic of cold environments 6. Use maps to locate places
White / Level 1 (0 to 7 marks)	1. Demonstrates basic/no knowledge of small and large scale ecosystems 2. Recognise some animal and plant adaptations in tropical rainforests 3. Basic statements on the impacts of rainforest deforestation 4. Name and describe one or two causes of rainforest deforestation in the Amazon rainforest 5. Describe basic facts about what figures are showing 6. Use maps to locate places with support