STOKE DAMEREL

Aspire Achieve Thrive

Spring Term

Term 2

Geography

Year 10

Name: _____

Tutor: _____

Year 10 Homework Timetable

Monday	English Task 1	Ebacc Option A Task 1	Option C Task 1
Tuesday	Option B Task 1	Sparx Science	Science Task 1
Wednesday	Sparx Maths	Option C Task 2	Sparx Science
Thursday	Ebacc Option A Task 2	Sparx Maths	Option B Task 2
Friday	Sparx Science	Science Task 2	English Task 2

Sparx Science

• Complete 100% of their assigned homework each week

Sparx Maths

• Complete 100% of their assigned homework each week

Option A (EBACC)
Computer Science
French
Geography
History

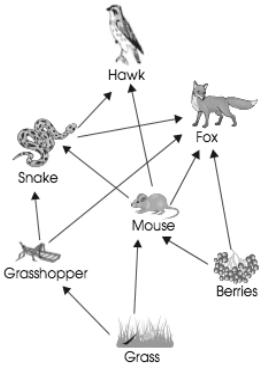
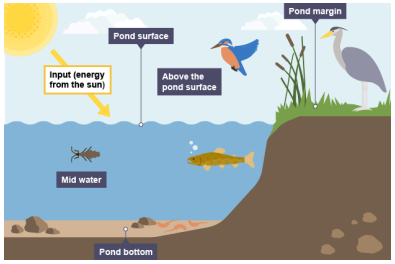
Option B
Business Studies
Hospitality and Catering
Drama
Music
Geography
Health and Social Care
ICT
Media Studies
Music
Sport
Travel and Tourism

Option C
Art
Business Studies
Hospitality and Catering
Child Development
Computer Science
Drama
Photography
Science (Triple)
Sport

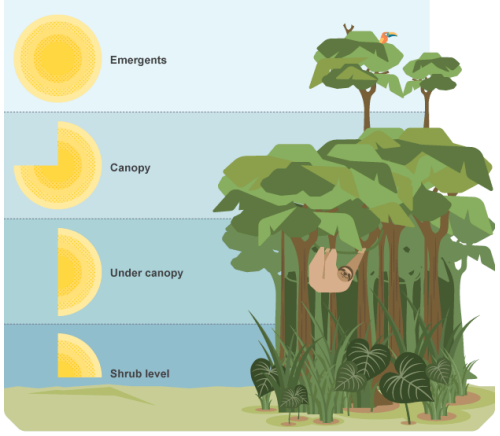
Half Term 3 (6 weeks) - Year 10		
Week / Date	**Homework task 1 Cornell Notes**	**Homework task 2 Exam Question**
Week 1 6th January 2025	**Cornell Notes on:** Ecosystems	**Question**: Outline what would happen if all the mice were removed from the food web on the knowledge organiser. (4)
Week 2 13th January 2025	**Cornell Notes on:** A small scale ecosystem	**Question**: Describe the features of a small scale ecosystem (pond). (4)
Week 3 20th January 2025	**Cornell Notes on:** Biomes	**Question**: Outline the difference between the Tundra biome and the biome most dominant in the UK. (6)
Week 4 27th January 2025	**Cornell Notes on:** Tropical rainforests	**Question**: Outline the difference between the 4 layers of the rainforest. (6)
Week 5 3rd February 2025	**Cornell Notes on:** Plant adaptations in the rainforest	**Question**: Describe and explain how plants have adapted to live in a tropical rainforest environment. (6)
Week 6 10th February 2025	**Cornell Notes on:** Animal adaptations in the rainforest	**Question**: Describe and explain how animals have adapted to live in a tropical rainforest environment. (6)

Half Term 4 (6 weeks) - Year 10		
Week / Date	**Homework task 1 Cornell Notes**	**Homework task 2 Exam Question**
Week 7 24th February 2025	**Cornell Notes on:** Causes of deforestation	**Question**: Outline two causes of deforestation. (4)
Week 8 3rd March 2025	**Cornell Notes on:** Threats to the Malaysian rainforest	**Question**: Evaluate the impacts of logging and commercial farming in Malaysia. (6)
Week 9 10th March 2025	**Cornell Notes on:** Impacts of deforestation on the Malaysian rainforest part 1	**Question**: Evaluate the impacts of the loss of biodiversity in Malaysia. (6)
Week 10 17th March 2025	**Cornell Notes on:** Impacts of deforestation on the Malaysian rainforest part 2	**Question**: Evaluate the impacts of the decline of indigenous tribes in Malaysia. (6)
Week 11 24th March 2025	**Cornell Notes on:** Sustainable management of tropical rainforests	**Question**: Evaluate the impacts of the decline of indigenous tribes in Malaysia. (6)
Week 12 31st March 2025	**Cornell Notes on:** Sustainable management of the Malaysian Rainforests	**Question**: Explain how the management of the rainforest in Malaysia is sustainable. (6)

Geography Year 10 Knowledge Organiser: Ecosystems and the Tropical Rainforest

Session	Keywords	Knowledge	Geographical concepts	
1 Introduction to Ecosystems	**Producers**: In an ecosystem plants generate glucose (sugar) using the sun's energy (photosynthesis). **Consumers**: In an ecosystem animals feed by eating plants and other animals. **Decomposers**: In an ecosystem fungi feed by making dead plants and animals rot.	An **ecosystem** is a community of plants and animals that interact with each other and their environment. A food chain (Figure 1) shows how plants and animals get their energy. A food chain starts with a **producer,** which make their food by **photosynthesis. Consumers** are next in the chain. **Figure 1** 	When all the food chains in an ecosystem are joined up together, they form a **food web** 	The **hot, damp conditions** on the forest floor allow for the **rapid decomposition** of dead plant material. This provides plentiful nutrients that are easily absorbed by plant roots. However, as these nutrients are in high demand from the many fast-growing plants, they do not remain in the soil for long and stay close to the surface. If vegetation is removed, the soils quickly become **infertile**.
2 Pond ecosystem		The freshwater pond ecosystem consists of the following: 1. Pond bottom - very little oxygen or light at the bottom of the pond. Decomposers and scavengers live here where they feed on dead material, eg water worms 2. Mid water - fish are the main predators here. Food is found on the pond bottom or the pond surface. Animals here breathe through their skin or gills, e.g. stickleback fish, water fleas and dragonfly nymphs. 3. Pond surface - There is plenty of oxygen and light here. Animals found here include ducks, water boatmen, midge larvae and tadpoles. 4. Pond margin - plants provide a sheltered habitat for insects and small animals such as frogs. There is lots of light and oxygen so plants such as marsh marigold thrive. 5. Above the pond surface - birds such as kingfishers and insects like dragonflies are common here.	**Changes to ecosystems** Ecosystems are very sensitive to change. The living and non-living components of the ecosystem can be altered by either natural factors or human management. Changes to the ecosystem caused by natural factors include: • drought • flood • fire • disease Changes to the ecosystem caused by human management include: • introducing more fish (fish stocking) • altering the drainage of the land which may influence the amount of water • changing the pH level of the water • altering the nutrient levels of the water if fertilisers are leached into the water resulting in eutrophication	

Geography Year 10 Knowledge Organiser: Ecosystems and the Tropical Rainforest

Session	Keywords	Knowledge	Geographical concepts
3 Biomes	A **biome** is a large scale ecosystem eg desert, polar, tundra, tropical rainforest, coniferous forest, savanna	• Tundra - found near the North and South poles. Very few plants and animals can survive here. • Taiga (coniferous forest) - found in Scandinavia, Russia and Canada. Evergreen trees thrive in this cool temperate climate. • Temperate deciduous forest - found across Europe (the UK's most dominant biome) and in the USA. These trees lose their leaves every year and thrive in mild and wet conditions known as a temperate maritime climate. • Temperate grassland - found in Hungary, South Africa, Argentina and the USA. Consists of grass and trees that thrive in a temperate continental climate of moderate rainfall and mild conditions. • Chaparral or evergreen hardwood (Mediterranean) - found around the Mediterranean Sea, around Perth and Melbourne in Australia and California in the USA. • Desert - found near the Tropics of Cancer and Capricorn. Conditions here are very hot and dry. Plants and animals are specially adapted to survive in the harsh conditions. • Tropical rainforest - found near the Equator. The climate is hot and humid and many different species can be found here. • Savanna grassland - found mainly in central Africa, southern India, northern Australia and central South America. Long grasses and a few scattered trees are found in these hot and dry conditions.	
4 Tropical rainforests	**Rainforests** are wet with over 2,000 mm of rainfall per year and warm with an average daily temperature of 28°C. Temperatures never drops below 20°C and rarely exceeds 35°C.	**There are 4 layers to a rainforest** **Emergent**: the tallest section, lots of light. Birds and butterflies live here **Canopy**: More light here, makes up the most of the rainforest vegetation. In the canopy, tall trees which block most sunlight **Under canopy:** Some light, new young trees competing to get through the canopy. Monkeys and other animals live here, Llianas and other plants hang down to the floor. **Shrub layer:** dark damp, lots of tree litter, large tree trunks. Lots of insects.  	**The geographical location of tropical rainforests** In a description of location you should include: lines of latitude, continents, countries and oceans. Tropical rainforests are found in areas near the equator, between the tropics of Cancer and Capricorn. These countries include northern South America, Central Africa, Indonesia and northern India. An example of a tropical rainforest is the Amazon which is mostly found in Brazil.

Geography Year 10 Knowledge Organiser: Ecosystems and the Tropical Rainforest			
Session	**Keywords**	**Knowledge**	**Geographical concepts**
5 How plants are adapted to living in the rainforest	**Adaptation:** the process of change by which an organism (plant or animal) becomes better suited to its environment	<u>Plant adaptations to the rainforest:</u> **EMERGENTS** - Some trees are fast growing to EMERGE above forest canopy and capture sunlight. **LIANA** – a plant that takes root in soil but that is supported by trees so it can grow upwards to get sunlight **DRIP TIP** leaves to allow excess water to spill off, preventing leaf damage. Many trees have wide deep **BUTTRESS** roots at the base to stabilise the tree. **EPIPHYTES** - these are plants which live on the branches of trees high up in the **canopy**. They get their nutrients from the air and water, not from the soil.	
6 How animals are adapted to living in the rainforest	**Adaptation:** the process of change by which an organism (plant or animal) becomes better suited to its environment		<u>Animal adaptations to the rainforest:</u> The **SPIDER MONKEY** has long limbs and e strong tail for living in the canopy. They also have sharp nails for peeling off the bark to eat the sap underneath. **ANTEATERS** are mammals that live in the ground layer. They have long tongues that can gather up to 35,000 ants and termites each day and sharp claws that can tear open anthills. Anteaters have a good sense of smell to find food The **FLYING FROG** has web-like feet which allow it to glide through the air to escape predators. The **SLOTH** uses camouflage and moves very slowly to make it difficult for predators to spot.

Geography Year 10 Knowledge Organiser: Ecosystems and the Tropical Rainforest			
Session	**Keywords**	**Knowledge**	**Geographical concepts**
7 Causes of deforestation	**Deforestation** is the permanent destruction of forests in order to make the land available for other uses.	**Rainforests are important because:** 1. They remove carbon dioxide from the atmosphere. 2. Provides habitats for 75% of the world's plants and animals 3. They regulate the earth's climate 4. About 25% of all medicines come from rainforest plants	**Deforestation is the main threat to rainforests. Deforestation is often caused by one of these three activities;** 1. **Mining**: destroys trees and habitats. Chemicals and toxins infiltrate into the ground and get into the water table 2. **Cattle farming**- Land cleared for cattle as well as for growing the feed for the cattle. 3. **Crops-** forest areas cleared and burned to make room for new crops eg Soya beans. The burning releases greenhouses into the atmosphere, the soil will have less nutrients in because there is a smaller variety of plants. Habitats destroyed.
8 Threats to the Malaysian Rainforest	A rainforest works through **interdependence**. This is where the plants and animals **depend on each other** for survival. If one component changes, there can be **serious knock-on effects** for the entire ecosystem.	Malaysia is a LIC country in south-east Asia. 67% of Malaysia is a tropical rainforest with 18% of it not being interfered with. However , Malaysia has the fastest rate of deforestation compared to anywhere in the world	**Causes of deforestation** **Road Building:** In Malaysia, logging companies use an **extensive network of roads** for heavy machinery and to transport wood. **Logging:** Timber is harvested to create **commercial items** such as furniture and paper. **Agriculture:** Large scale **'slash and burn'** of land for ranches and palm oil. Increase in **palm oil** is making the **soil infertile**. **Mineral Extraction: Precious metals** are found in the rainforest. Areas **mined** can experience **soil and water contamination** **Energy Development** : H**ydro-electric power (HEP).** • The **Bakun Dam was built in 2011** in Malaysia is key for creating energy in this developing country, however, both people and environment have suffered as it flooded 700km^2 of rainforest.

Geography Year 10 Knowledge Organiser: Ecosystems and the Tropical Rainforest			
Session	**Keywords**	**Knowledge**	**Geographical concepts**
9 Impacts of deforestation on the Malaysian rainforest part 1	**Biodiversity** is a variety of species of plants and animals in a habitat	**Deforestation has significant economic benefits** + Mining, farming and logging creates employment and tax income for the government. + Products such as palm oil provide valuable income for countries. **Uncontrolled and unchecked exploitation can cause environmental damage.** - **Soil erosion:** - Once the land is **exposed by deforestation,** the soil is more **vulnerable to rain**. - **Climate change:** -Trees are **carbon 'sinks**'. With greater deforestation comes more greenhouse emissions in the atmosphere.	**Main issues with biodiversity decline** • **Keystone species** (a species that are important to other species) are extremely important in the rainforest ecosystem. Humans are threatening these vital components. • **Decline in species** could cause tribes being unable to survive. • **Plants** & **animals** may become **extinct.** • Key medical **plants** may become **extinct.**
10 Impacts of deforestation on the Malaysian rainforest part 2	**Indigenous tribes** are groups of people who have always lived in the rainforests and who get everything they need from the forest.	**The Decline of Indigenous Tribes** Malaysia's Orang Asli have been stripped of historic lands and are more susceptible to deadly illness. Loss of forest due to illegal logging has significantly reduced the bat population. Bats are a natural means by which fruit crops are pollinated, so there is an enormous impact on indigenous people and their food security when the forest is illegally cleared. A. because the food source has directly been removed through illegal logging B. because the bat population is no longer available to pollinate the wider forest area. C. Malaysia now has a situation where some communities have to pollinate fruit trees by hand. The problem is exacerbated by the increased use of pesticides, which further cause problems in maintaining wildlife and rainforest. Pesticides are being used more because the bat population no longer provides the natural means by which insect populations are managed.	

Geography Year 10 Knowledge Organiser: Ecosystems and the Tropical Rainforest			
Session	**Keywords**	**Knowledge**	**Geographical concepts**
11 Sustainable management of tropical rainforests	Sustainable management is where resources are used to support current economic development, but will still be available for future generations to use.	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 - Promoting the value and benefits of biodiversity associated with tropical rainforests. ● Ecotourism - this encourages sustainable tourism that creates jobs 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.	
12 Sustainable management of the Malaysia Rainforests	Sustainable management is where resources are used to support current economic development, but will still be available for future generations to use.	The Malaysian government have implemented the following policies to ensure that the tropical rainforest can be conserved and enjoyed by future generations: ● Public awareness of the value of tropical rainforests increased through education. ● Local communities included and involved in forest conservation projects. ● Use of alternative timber sources such as rubber trees was encouraged. ● Selective logging of mature and commercially viable trees over a 40-year cycle to ensure that trees had time to re-establish themselves. This is known as a Selective Management System. ● Ecotourism promoted and developed in tropical rainforest areas. ● Permanent Forest Estates have been created by the government where no change of land use is allowed. ● Creation of National Parks to protect biodiversity.	

STEP 2: CREATE CUES

What: Reduce your notes to just the essentials.

What: Immediately after class, discussion, or reading session.

How:

- **Jot down key ideas, important words and phrases**
- **Create questions that might appear on an exam**
- **Reducing your notes to the most important ideas and concepts improves recall. Creating questions that may appear on an exam gets you thinking about how the information might be applied and improves your performance on the exam.**

Why: Spend at least ten minutes every week reviewing all of your previous notes. Reflect on the material and ask yourself questions based on what you've recorded in the Cue area. Cover the note-taking area with a piece of paper. Can you answer them?

STEP 1: RECORD YOUR NOTES

What: Record all keywords, ideas, important dates, people, places, diagrams and formulas from the lesson. Create a new page for each topic discussed.

When: During class lecture, discussion, or reading session.

How:

- **Use bullet points, abbreviated phrases, and pictures**
- **Avoid full sentences and paragraphs**
- **Leave space between points to add more information later**

Why: Important ideas must be recorded in a way that is meaningful to you.

STEP 3: SUMMARISE & REVIEW

What: Summarise the main ideas from the lesson.
What: At the end of the class lecture, discussion, or reading session.
How: In complete sentences, write down the conclusions that can be made from the information in your notes.
Why: Summarising the information after it's learned improves long-term retention.

WEEK 1: Cornell Notes (Homework task 1)

Topic: Ecosystems

Link **Questions**	**Notes**
	What is an ecosystem?
	Producer
	Consumer
	Decomposer
	Food chain
	Food web

Summary

WEEK 1: Exam Question (Homework task 2)

Question: Outline what would happen if all the mice were removed from the food web on the knowledge organiser. (4)

Answer:

WEEK 1: Exam Question review and improvement (Classwork)

Question: Outline what would happen if all the mice were removed from the food web on the knowledge organiser. (4)

Answer:

WEEK 2: Cornell Notes (Homework task 1)

Topic: A small scale ecosystem

Links	**Notes**
	**Features of a pond**
Questions	
	Pond bottom
	Mid water
	Pond surface
	Pond margin
	Above the pond surface

Summary

WEEK 2: Exam Question (Homework task 2)

Question: Describe the features of a small scale ecosystem (pond). (4)

Answer:

WEEK 2: Exam Question review and improvement (Classwork)

Question: Describe the features of a small scale ecosystem (pond). (4)

Answer:

WEEK 3: Cornell Notes (Homework task 1)

Topic: Biomes

Links	**Notes**
	**Location of global biomes**
Questions	
	Characteristics of different biomes

Summary

WEEK 3: Exam Question (Homework task 2)

Question: Outline the difference between the Tundra biome and the biome most dominant in the UK. (6)

Answer:

WEEK 3: Exam Question review and improvement (Classwork)

Question: Outline the difference between the Tundra biome and the biome most dominant in the UK. (6)

Answer:

WEEK 4: Cornell Notes (Homework task 1)

Topic: Tropical rainforests

Links	**Notes**
	**Climate**
Questions	
	Soils
	Layers

Summary

WEEK 4: Exam Question (Homework task 2)

Question: Outline the difference between the 4 layers of the rainforest. (6)

Answer:

WEEK 4: Exam Question review and improvement (Classwork)

Question: Outline the difference between the 4 layers of the rainforest. (6)

Answer:

WEEK 5: Cornell Notes (Homework task 1)

Topic: Plant adaptations in the rainforest

Links	**Notes**
	**Plant adaptations**
	Lianas
Questions	
	Buttress roots
	Drip tip leaves
	Epiphytes

Summary

WEEK 5: Exam Question (Homework task 2)

Question: Describe and explain how plants have adapted to live in a tropical rainforest environment. (6)

Answer:

WEEK 5: Exam Question review and improvement (Classwork)

Question: Describe and explain how plants have adapted to live in a tropical rainforest environment. (6)

Answer:

WEEK 6: Cornell Notes (Homework task 1)

Topic: Animal adaptations in the rainforest

Links	**Notes**
	**Animal adaptations to the rainforest**
Questions	
	Sloth
	Flying frog
	Anteater
	Spider monkey

Summary

WEEK 6: Exam Question (Homework task 2)

Question: Describe and explain how animals have adapted to live in a tropical rainforest environment. (6)

Answer:

WEEK 6: Exam Question review and improvement (Classwork)

Question: Describe and explain how animals have adapted to live in a tropical rainforest environment. (6)

Answer:

WEEK 7: Cornell Notes (Homework task 1)

Topic: Causes of deforestation

Links	**Notes**
	**Deforestation**
Questions	
	Farming
	Logging
	Mining
	Roads
	Hydroelectric power
	Population

Summary

WEEK 7: Exam Question (Homework task 2)

Question: Outline two causes of deforestation. (4)

Answer:

WEEK 7: Exam Question review and improvement (Classwork)

Question: Outline two causes of deforestation. (4)

Answer:

WEEK 8: Cornell Notes (Homework task 1)

Topic: Threats to the Malaysian rainforest

Links  **Questions**	**Notes**
	Malaysian Rainforest
	Commercial farming (Palm Oil)
	Population pressure
	Mineral extraction
	Logging
	Road building

Summary

WEEK 8: Exam Question (Homework task 2)

Question: Evaluate the impacts of logging and commercial farming in Malaysia. (6)

Answer:

WEEK 8: Exam Question review and improvement (Classwork)

Question: Evaluate the impacts of logging and commercial farming in Malaysia. (6)

Answer:

WEEK 9: Cornell Notes (Homework task 1)

Topic: Impacts of deforestation on the Malaysian rainforest part 1

Links	**Notes**
	**Global warming**
Questions	
	Loss of biodiversity

Summary

WEEK 9: Exam Question (Homework task 2)

Question: Evaluate the impacts of the loss of biodiversity in Malaysia. (6)

Answer:

WEEK 9: Exam Question review and improvement (Classwork)

Question: Evaluate the impacts of the loss of biodiversity in Malaysia. (6)

Answer:

WEEK 10: Cornell Notes (Homework task 1)

Topic: Impacts of deforestation on the Malaysian rainforest part 2

Links	**Notes**
	**Decline of indigenous tribes**
Questions	
	Soil erosion
	Other

Summary

WEEK 10: Exam Question (Homework task 2)

Question: Evaluate the impacts of the decline of indigenous tribes in Malaysia. (6)

Answer:

WEEK 10: Exam Question review and improvement (Classwork)

Question: Evaluate the impacts of the decline of indigenous tribes in Malaysia. (6)

Answer:

WEEK 11: Cornell Notes (Homework task 1)

Topic: Sustainable management of tropical rainforests

Links **Questions**	**Notes**
	Sustainable management
	Logging and replanting
	Education
	Ecotourism
	International agreements

Summary

WEEK 11: Exam Question (Homework task 2)

Question: Evaluate the impacts of the decline of indigenous tribes in Malaysia. (6)

Answer:

WEEK 11: Exam Question review and improvement (Classwork)

Question: Evaluate the impacts of the decline of indigenous tribes in Malaysia. (6)

Answer:

WEEK 12: Cornell Notes (Homework task 1)

Topic: Sustainable management of the Malaysian Rainforests

Links	**Notes**
	
Questions	

Summary

WEEK 12: Exam Question (Homework task 2)

Question: Explain how the management of the rainforest in Malaysia is sustainable. (6)

Answer:

WEEK 12: Exam Question review and improvement (Classwork)

Question: Explain how the management of the rainforest in Malaysia is sustainable. (6)

Answer: _____

Aspire Achieve Thrive

Develop your character

STOKE DAMEREL

Aspire | Achieve | Thrive