

Subject: Geography

Year: GCSE

Term: 1a

Topic: Forests Under Threat

Lesson Sequence

1. TRF and the equatorial climate
 - a. Nutrient cycle
 - b. Adaptations
2. Taiga and the subarctic climate
 - a. Nutrient cycle
 - b. Adaptions
3. Differences: TRF vs taiga
 - a. Climate graphs
 - b. Food webs
4. TRF threats
5. Taiga threats
6. TRF protections
 - a. **CITES**
 - b. **REDD**
7. Taiga protections

Key Assessments

1. Exam paper 1
2. Past Exam paper.

Core Texts

Edexcel Geography B (9-1)
John Hopkin (ed.); Pearson

Key Words

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| acid precipitation | Also called acid rain. When industrial air pollution causes water vapour in the atmosphere to become acidic and fall as acid precipitation | leaching | When minerals are washed downwards through soil by rainwater |
| afforestation | The planting of trees where there was none before, or they had been cut down | litter | A layer on the forest floor made up of leaves and other dead organic material |
| biodiversity | The variety of living species in an ecosystem or area | migration | The long-term movement of people (or animals) within or between countries |
| biomass | The mass (weight) of all the living things in an ecosystem | nutrient cycle | The transfer of nutrients around different parts of an ecosystem |
| canopy | The continuous layer of tall trees which shades the forest floor | nutrient | Mineral or chemical that plants and animals need to grow and thrive |
| CITES | Convention on International Trade in Endangered Species of Wild Flora and Fauna | prehensile | Able to grip. For example, a monkey with a prehensile tail can hold on to branches with its tail |
| climate graph | A graph showing the average temperature and rainfall at a particular place | productivity | A measure of the biomass of an ecosystem; all its biotic components |
| commercial agriculture | Farming in which crops are grown for sale | REDD | Reducing Emissions from Deforestation and Forest Degradation |
| deforestation | Permanently removing forest so that land can be used for something else | remote sensing | Using satellites or aerial photography to provide information on land use over large areas |
| direct threat | When there is a direct cause between one thing happening and the damage being caused to something else | soil | The layer above bedrock in which plants grow |
| ecosystem stress | Factors, which can be natural or human-produced, which put pressure on ecosystem productivity and processes; ecosystems can tolerate some changes but if the change is too big, or goes on too long, then damage starts to occur | subarctic climate | A climate zone that runs around the northern hemisphere, just south of the Arctic Circle (at a latitude of around 66° north) |
| ecotourism | Tourism that minimises harmful impacts on the environment and which aims to use tourism to help local communities | subsistence agriculture | Farming in which crops are grown for the farmer's own use, to feed their family |
| emergent | Very high trees that grow another ten metres or more above the tropical rainforest canopy | sustainable forestry | When trees are cut down for timber and they are replaced by new trees, ideally with species that are naturally part of that ecosystem rather than non-native species |
| equatorial climate | The constantly wet and hot climate of regions near the Equator | sustainable rainforest management | Managing a rainforest so that the way it is used now does not use up its resources and will allow future generations to use it the same way |
| food web | Nutrients and energy absorbed by plants are passed along a line of living things | taiga | A forest ecosystem in the sub-arctic regions of Canada, Russia, Scandinavia and Alaska (USA); boreal forest |
| indirect threats | When there is not a direct cause between one thing happening and another thing being damaged | tropical rainforest | Forest that grows in the constantly hot and wet climate zone near the Equator; abbreviated as TRF |

Key Inquiry Questions

- How does the tropical rainforest reflect the equatorial climate? And, how does the taiga reflect the subarctic climate?
- How different are the climates of the tropical rainforest and the taiga?
- What are the threats to the tropical rainforest? And, what are the threats to the taiga?
- How can a tropical rainforest be protected? And, how can the taiga wilderness be protected?