Mrs Streeter's

COMPONENT 3 BIBLE

People and the biosphere
Forests under threat
Consuming energy resources

Traffic light sheets

**Key words**

Common questions

*this booklet should be used in addition to the revision you already have planned!

Contents

This paper is a 'synoptic paper' meaning you will be expected to make links between all three topics - there will not be separate sections for each topic.
You will be given a resource booklet and are advised to spend 30 minutes reading, annotating and thinking before starting the exam paper (you may not need the whole 30 minutes to do this!!)

Biosphere

ISSUE!!

Fores **Energy**
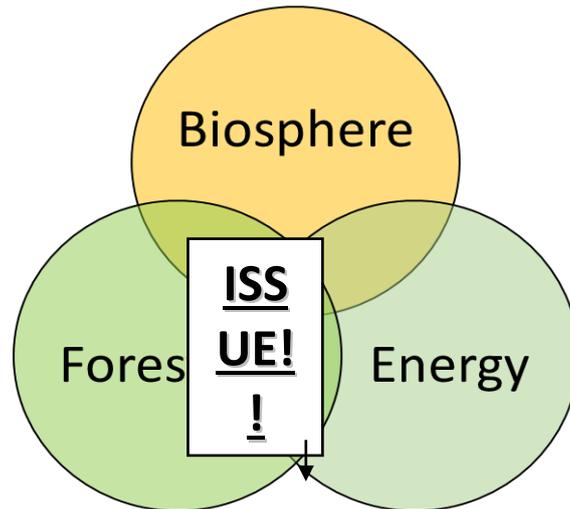
Making a geographical decision

Information about the exam

Time: 1 hour 30 mins

Worth: 64 marks

This paper has a mix of small questions but also some that are much bigger than the other papers
One also be worth an additional 4 marks for SPAG
This will show as a **15 mark** question but it really just means 12 for answer + 4 for SPaG

Counts for: 37.5% of your final grade

*Shorter questions do not need case study detail (although if you can put it in then it may carry marks)
*8 or 12 mark questions **MUST HAVE CASE STUDY DETAIL**

People and the biosphere

Colour code each question or statement.
Green   *I fully understand. I'm a Geography genius - check me out!*
Yellow   *I know some of it but not really too sure. I need a bit of help/revision.*
Red   *I have no idea - I don't understand this? Was I even here?*

Spec	Content	G/Y/R
Enquiry Question: Why is the biosphere so important to human wellbeing and how do humans use and modify it to obtain resources?		
7.1a	I can identify where the world's major biomes are and can explain how this is influenced by temperature, precipitation and sunshine hours.	
7.1b	I can explain how local factors such as altitude, rock type, drainage and continentality impact on biome distribution.	
	I know how the biotic and abiotic components of a biome interact with one another	
7.2a	I can identify the goods created by the biosphere and explain how they are useful for indigenous people	
	I know how, why and by whom the biosphere is being exploited commercially for energy, mineral and water resources	
7.2b	I can explain how the biospheres services help to regulate the atmosphere, soil health, and water	
7.2c	I can explain the ideas of Malthus and Boserup and the relationship between resources and population (urbanisation, population growth and rising affluence)	
	I can suggest some examples of the ideas of Malthus and Boserup	
Integrated Skills		
1	I can plot information to form a climate graph, can compare and describe climate graphs	
2	I can use world maps to identify biome locations and suggest global and local reasons for biome distributions	
3	I can use and interpret line graphs showing the range of future global population projections and population in relation to available resources	

Keywords

Techniques for learning key words

- Colour coding e.g. traffic lights or categories e.g. geophysical (earth hazards) and hydro-meteorological (air hazards)
- Table e.g.

word	Definition	Picture	Case study / example

- Flash cards; word on the front, meaning and examples on the back
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abiotic

altitude

altitudinal zonation*

Asian growth

biodiversity

biofuels

biogas

biomass

biome

biosphere

biotic

Boserup

carbon sink

Club of Rome*

continentality / distance from sea

crop rotation

cultural services*

deforestation

drainage

ecosystem

exploitation

exponential growth

farm machinery

fauna

fertilisers

global factors

GM crops

goods

hydrological cycle

indigenous people

industrialisation

irrigation

latitude

litter

local factors

Malthus

natural resources

nutrient cycle

optimistic

pessimistic

photosynthesis

point of crisis'

positive checks

precipitation

preventative

provisioning services*

regulating services*

rock / soil type

runoff

services

supporting services*

temperate deciduous

tundra

uptake*

Forests under threat

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Spec	Content	G/Y/R
Enquiry Question: What are the threats to forest biomes and how can they be reduced?		
8.1a	I can describe and explain how plants (flora) and animals (fauna) have adapted to living in the tropical rainforest	
8.1a	I can explain what the climate of the rainforest is like and can read this information on a climate graph	
8.1a	I can explain how the tropical rainforest is structured in different layers and can say what the characteristics of the trees in each layer are like	
8.1b	I can explain how the nutrient cycle works in tropical rainforests and how it supports high rates of biodiversity	
8.2a	I can explain what the climate of the taiga forest is like and can read this information on a climate graph	
8.2a	I can describe and explain how plants (flora) and animals (fauna) are adapted to living in the taiga forest	
8.2b	I can explain why the nutrient cycle is different in the taiga forest and why it is less productive than the tropical rainforest	
8.3a	I can explain how the tropical rainforest is under direct threat from poverty, deforestation, HEP and mineral exploitation	
8.3b	I can explain how the indirect threat of climate change is affecting the tropical rainforest (ecosystem changes, drought)	
8.4a	I can explain how the taiga forest is under threat from paper production, mining and energy demands (Canada tar sands and HEP)	
8.4b	I can explain how the taiga forest is under threat from fires, pests (spruce bark & mountain pine beetle), diseases (white pine blister rust) and acid rain	
8.5a	I can explain how global strategies such as CITES and REDD aim to protect the tropical rainforest and I can say what is good and bad about them	
8.5a	I can explain what the Juma Sustainable Forest Reserve (SFR) is. I can give details about it and say why it is good and bad	
8.5a	I can say why deforestation is increasing in some places (Indonesia, DRC, Nigeria) but decreasing in others (Brazil, Costa Rica and Colombia)	
8.5b	I can explain how people try to sustainably manage the tropical rainforests (Kilum-Ijim case study)	
8.5b	I can explain why sustainable forest management could be difficult in the future (challenges from population growth and climate change)	
8.6a	I can explain how wilderness areas, national parks and sustainable forestry (Finland example) can be used to protect the taiga forest	
8.6b	I can give reasons why people are for and against exploitation of the taiga forest and give the specific opinions of different groups	

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acid rain

adaption

agroforestry

biodiversity

biofuels

boreal forest

buttress roots

carbon sinks

carnivore

cattle ranches

CITES

clear-cutting

climate stress

conflict

conservation

debt

decay transfer*

decomposer

deforestation

demand

detrivores*

direct threats

drought

ecotourism

emergents

epiphytes

fauna

flora

food web

forest fires

global warming

herbivore

hibernate

hydroelectric power (HEP)

indirect threats

intact forest

invasive species

isolation

leaching

litter

migrate

mineral exploitation

National Parks

net primary productivity (NPP)

nutrient cycle

palm oil

poverty

primary consumer

primary producer

productivity

rainforest

RAMSAR

REDD

secondary consumer

selective logging

strip mining

Sustainable Forest Reserve (SFR)

sustainable management

taiga

tar sands

The Forest Code Law

tourism

wilderness

World Heritage Site

Consuming energy resources :

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Spec	Content	G/Y/R
Enquiry Question: What are the types of energy resources and how are they consumed?		
9.1a	I can classify different types of energy resources	
9.1b	I can explain why different types of energy are used in different locations	
9.2	I can explain how energy production impacts different locations (China, USA, Brazil)	
9.3a	I can explain how accessibility impacts the ability to gain resources e.g coal	
9.3b	I can explain how different technologies affect access to different resources	
9.4a	I can describe the global distribution of coal, oil and natural gas.	
9.4b	I can explain the potential for renewable energy resources within the UK e.g. solar power and wave energy	
9.5a	I can explain why global use of energy varies (economic factors / demand)	
9.6a	I can describe global patters of oil production	
9.6b	I can explain the global growing demand for oil and reason for its consumption e.g. rapid industrialisation in China	
9.6b	I can explain the uneven distribution of oil reserves (countries that have oil) and oil production	
9.7a	I can identify OPEC (organisation of petroleum producing countries) and describe how they work	
9.7a	I can describe how oil prices change due to supply and demand	
9.7b	I can explain how the price and supply of oil can be affected by international relations e.g. the Iraq war	
9.8a	I can describe the remote locations used to find resources (Arctic circle, The Ichthys, Alaska)	
9.8b/9.9	I can explain the costs and benefits of searching for energy resources in sensitive and isolated areas e.g large oil and gas reserves / ecological damage in places such as Canada and New Zealand	
9.10a	I can Identify the measures used to reduce energy consumption e.g transport efficiency, cycle hire schemes, and energy efficient homes.	
9.10b	I can explain how energy efficiency can reduce energy consumption	
9.11a	I can identify alternatives to fossil fuels such as HEP, biofuels, solar and hydrogen technology	
9.11b	I can explain how renewable energies can reduce the global dependency on fossil fuels	
9.12	I can explain the differing views surrounding the future of energy e.g. sustainability and 'business as usual' (link to Malthus and Boserup)	
9.13	I can explain how attitudes to energy consumption are changing (eco footprints)	

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biofuels

biogas

bitumen

black gold

business as usual'

car hire scheme

carbon emissions

carbon footprint

coalfield

cycle super highways

declining demand

deforestation

demand

direct

economic source

energy diversification

energy efficiency

energy security

energy-poor

Exxon Valde

food miles

fossil fuels

fracking

gas producing countries

grants

high cost

hydroelectric power (HEP)

hydrogen technology

Ichthys LNG Project

imported

indirect

landscape scarring

liquefaction

loans

non renewable

oil producing countries

oil spill

OPEC

peak oil

recyclable

renewable

seismic imaging

shale gas

solar panels

subsidies

supply

The 450 Scenario

The Kuznets Curve

unconventional fossil fuels

Vehicle Excise Duty (VED)

wind power

wind turbines

World Energy outlook*