

Welcome to GCSE Geography



Where will it take us today?

1	G	3c
		3b
		3a
2	F	4c
		4b
		4a
2	E	5c
		5b
		5a
3	D	5c
		6b
		6a
4	C	7c
		7b
		7a
5	B	8c
		8b
		8a
6	B	EP
		EP
		EP
7	A	EP
		EP
		EP
8	A*	EP
		EP
		EP
9	A*	EP
		EP

CHALLENGE



POPULATION AND RESOURCES



UN forecasts a range from 8.3 billion to

10.9 BILLION PEOPLE BY 2050, with 9.6 billion as the mid-projection.

World population is expected to grow another

1 BILLION IN JUST 12 YEARS creating unprecedented demand for **FOOD, WATER, ENERGY, AND EMPLOYMENT.**

To keep up with population and economic growth, food production should increase by

70% BY 2050.



Some **2 BILLION PEOPLE** worldwide already supplement their diet with insects today.

OECD estimates that the private sector's investment in farmland and agricultural infrastructure is as much as **\$25 BILLION** and could double or triple over the next three to five years.



Agricultural productivity could decline 9–21% in developing countries by 2050 as a result of **GLOBAL WARMING.**



About **ONE IN EIGHT** people in the world are chronically undernourished.



HOW CAN POPULATION GROWTH AND RESOURCES BE BROUGHT INTO BALANCE?



Some **52%** of the world's population currently lives in **URBAN AREAS.** By **2025** it will increase to **58%.**



In **2025**, 4.3 billion urban residents will generate **2.2 BILLION TONS** of solid waste per year, an increase from 1.3 billion tons per year today.

Today life expectancy at birth is **70.5 YEARS**, which is projected to grow to **81 BY 2100.**



ICT continues to improve the match between needs and resources worldwide in **REAL TIME.**

www.themp.org

Examples of other ways to help **BALANCE FUTURE POPULATIONS AND RESOURCES** include:

- Encourage vegetarianism
- Anticipate potential impacts of synthetic biology and other longevity technologies
- New food production systems like seawater agriculture and meat without growing animals
- Healthy elderly making income via the Internet
- Accelerate safe nanotech R&D
- Encourage telemedicine and mobile phone tele-education
- Integrate urban sensors to create smarter cities
- Teach urban systems ecology



The Millennium Project
GLOBAL FUTURES STUDIES & RESEARCH

Topic 8: Resource Reliance

5
mins

Supplies of food, energy and water are three of the most challenging issues the world faces. Significant numbers of people are resource poor, whilst others consume more than their fair share. This topic investigates emerging patterns, where demand is outstripping supply, before taking the issue of food security and considering the question 'can we feed nine billion people?' We will investigate what it means to be food secure, how countries try to achieve this and reflect upon the sustainability of strategies to increase food security.



- 1. Skim read the above for FOUR items of geo-lingo, then add them to your key-word lists**
- 2. Resources can be natural or human – list as many as you can**

Learning is successful when I ...

Know:

- what resources are [2]
- how to classify resources [3]



Understand:

- the relationship between resource supply and demand [3-6]
- that our resources are inter-related [3-6]

- Supply
- Demand
- Biofuels
- Renewable
- Non renewable
- Energy
- Vaccination
- Megacity
- Finite
- Infinite
- Development
- Biodiversity
- Soil Erosion
- Nutrients
- Herbicides
- Pesticides
- Commercial
- Mechanisation
- Contamination
- Fracking
- Food security
- Infrastructure
- Famine
- Global hunger
- Malthus
- Boserup
- Geometric
- Arithmetic
- Bottom up
- Top down
- Imports
- Exports
- Agriculture
- Ethical
- Production
- Consumption
- Fair trade
- Food miles
- Agribusiness
- Genetically modified

These words are will be useful when it comes to tackling this unit. Try to use them at every opportunity to maximise your grade.

MUST – Level 1: Build a table with definitions of all the key words you do NOT know. Glossary task.

SHOULD – Think of a quiz question based on 4 the terms as you can to check the understanding of other people in the group. Quizmaster task.

COULD – Can you group together any of the words into categories and be prepared to share your thoughts. Geogmeister task.



Summary

5
mins

A **resource** is something that people n_____ and v_____.

N_____ m_____ become **resources** when humans value them. The u_____ and v_____ of **resources** varies from culture to culture and from time to time.

Natural resources are naturally occurring substances such as o____ [3], f_____ [7], w_____ [5] and a_____ [7].

Human resources are the number of people in a population and their abilities and skills.

Example: Some countries such as Japan have **limited** natural resources but have built up a wealthy economy through their high level of skills.

Other countries which have large amounts of natural resources, have low levels of economic development eg Ghana

Over To You #1 classify the following resources as human or natural [ALL]

10
mins

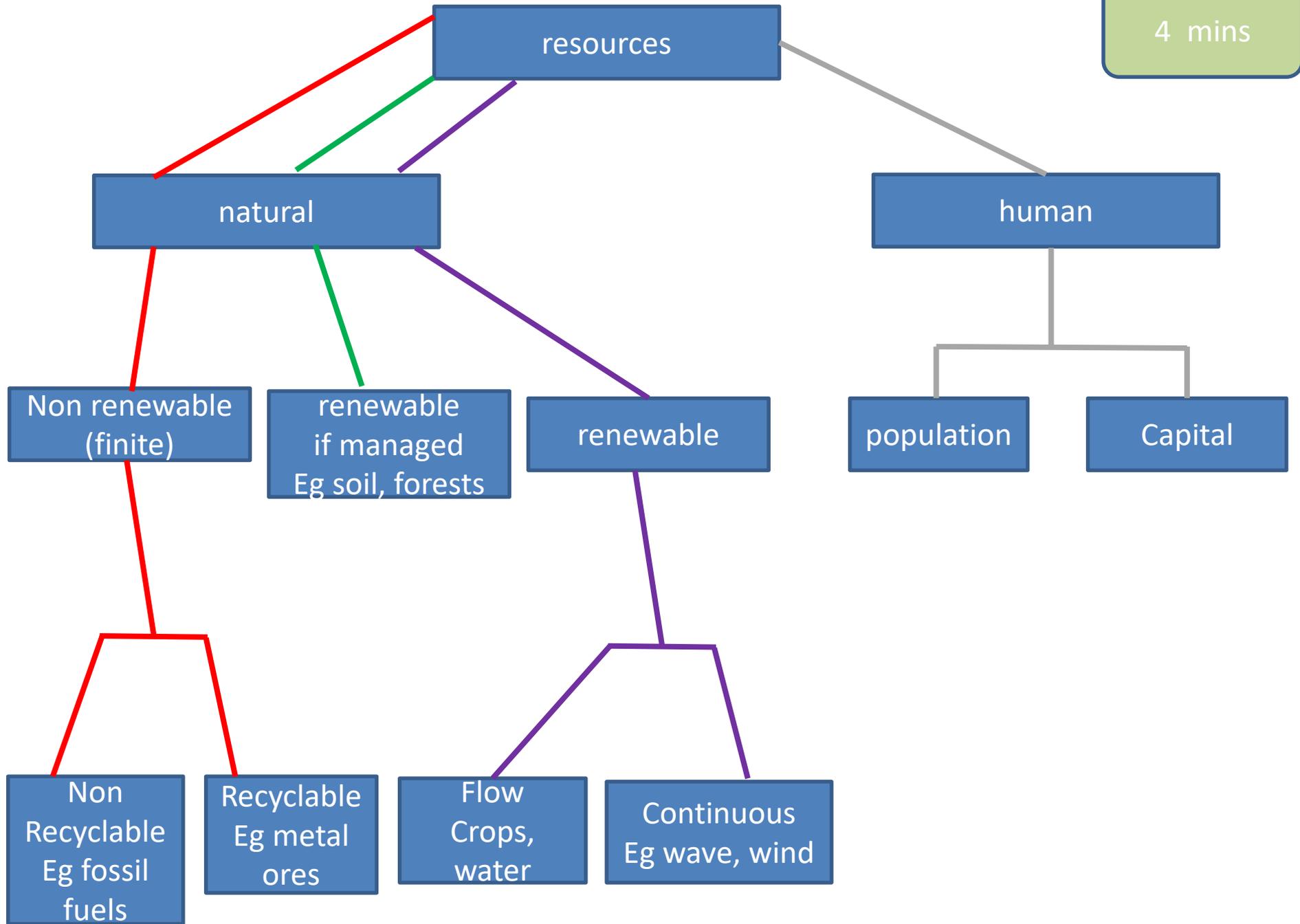
Oil	Bauxite	Technology	Solar energy	Rail networks
Forests	Buildings	Waves	Crops	People
Wind	Uranium	Gas	Fish	Water
Iron	Tides	Soil	Coal	Mathematician
Leadership	Flint	Copper	Animals	Police

CHALLENGE: Devise your own classification system

come
get it!



4 mins



8.1. Will we run out of natural resources?		Scale
a. How has increasing demand for resources affected our planet?	<ul style="list-style-type: none"> Outline the factors leading to demand outstripping supply of food, energy and water. 	G
	<ul style="list-style-type: none"> Overview of how environments and ecosystems are used and modified by humans including: <ul style="list-style-type: none"> mechanisation of farming and commercial fishing to provide food deforestation and mining to provide energy reservoirs and water transfer schemes to provide water. 	G, N
8.2. Can we feed nine billion people by 2050?		
a. What does it mean to be food secure?	<ul style="list-style-type: none"> Understand the term 'food security' and the human and physical factors which influence this. 	
	<ul style="list-style-type: none"> How world patterns of access to food are illustrated, such as the world hunger index and average daily calorie consumption. 	G
	<ul style="list-style-type: none"> Investigate the differences between Malthusian and Boserupian theories about the relationship between population and food supply. 	G
b. How can countries ensure their food security?	<p>Case study of attempts to achieve food security in one country to include:</p> <ul style="list-style-type: none"> Investigation of statistics relating to food consumption and availability over time. The success of one attempt in helping achieve food security at a local scale such as food banks, urban gardens and allotments. The effectiveness of one past and one present attempt to achieve food security at a national scale such as global food trade, GM crops, 'The Green Revolution' and food production methods. 	G, R, N, L
c. How sustainable are these strategies?	<p>Explore the environmental, economic and social sustainability of attempts to achieve food security, in relation to:</p> <ul style="list-style-type: none"> ethical consumerism, such as fairly traded goods and food waste food production, such as organic methods and intensive farming technological developments, such as GM crops and hydroponics small scale 'bottom up' approaches, such as urban gardens and permaculture. 	N, L



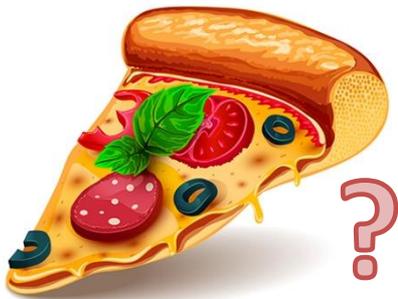
10
mins

How are food, water and energy inter-related??

To produce *food* we need

To move and treat *water* we need

To produce *energy* (gas and oil) we need ...



Did you know?

Producing one calorie of food requires about one litre of water. That means you “eat” more water than you drink.

Know

the three key resources needed for our survival in the 21st century

Understand

How our resources are inter-related

Employability: seeing the bigger picture



come
get it!



Why is demand outstripping supply?

Over To You:

1. Jot down your thoughts (SOLO), [also consider where the demand comes from; who supplies resources? change over time?]
2. Compare ideas with your shoulder partner ... what do you agree on? disagree about? (DUO)
3. Be prepared to share your thinking during class discussion (ALL)

2+2+6
mins



Know

Why our demand exceeds supply

Understand

The implications of this scenario

Food
Energy
Water

come
get it!



Why is demand outstripping supply?

5
mins

- Population growth – more people ➔ more
- Economic development – more \$% ➔ more people want and can afford
- Finite and threatened supplies – like MORRISONS the supermarket tells us about its deals ‘when it’s gone, it’s gone’
- Technology – has enabled us to ‘dig’, move resources and many factories are now automated so
- Selfishness and greed – people are wasteful

Uneven demand for resources

10
mins

“If each Indian were to start consuming the amount of commercial energy a Briton does, that would mean the world finding the equivalent of an extra 3,190 million tonnes of oil each year.”

Mark Tully, 1991

Over To You:

Why do we consume so much?

Why do they consume less?

What other resource implications are there that are not mentioned in the quote?

What might the environmental consequences of this increased demand be? Why?

come
get it!



Learning is successful now I ...

Know:

- what resources are [2]
- how to classify resources [3]



Understand:

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5 mins

Geog-Meister !!!



How many key-words and ideas can you recall from today's lesson?

Which had you/your partner forgotten?



Check these are on your keyword page(s)

