Geography

GCSE 2012

Geography B
J385

Skills mapping across Geography

www.ocr.org.uk/geography

OCR
Oxford Cambridge and RSA

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
OS map reading scales 1:50000 **OS map reading scales 1: 25000** **4 figure grid references**	The development of distinctive fluvial and coastal landforms (2.4.1, Theme 1, d).	• Using OS maps to find identify coastal landforms such as bays and headlands, coves, beaches, limestone scenery (arch, stack), spit etc. • Using OS maps to identify river landforms such as upper course, water fall, meander, oxbow lakes, flood plains etc.	http://mapzone.ordnancesurvey.co.uk/mapzone/competitions.html http://www.geographypods.com/map-skills.html
6 figure grid references		Treasure maps in the local area/ competition.	http://mapzone.ordnancesurvey.co.uk/mapzone/competitions.html http://www.rgs.org/webcasts/activities/grid_references/grid_references.html
OS symbols	Land use in cities, at coasts, in river valleys (2.4.2 Theme 2, d and e). Economic activities in the physical environment (2.4.4. Theme 4, e).	Map symbol bingo.	http://www.ordnancesurvey.co.uk/docs/ebooks/map-reading.pdf http://www.ordnancesurvey.co.uk/docs/teaching-resources/25Kflashcards.pdf http://www.ordnancesurvey.co.uk/docs/teaching-resources/50k-map-symbol-flashcards.pdf http://www.geographypods.com/map-skills.html
Height	Fluvial landforms (2.4.1 Theme 1, c). Coastal land forms (2.4.1 Theme 1, d).	• Model making (contours) – create a model using household recycling to show contour heights. • To increase challenge, add complex hill structures to the design brief and/or areas below sea level (inland dips) and spot heights.	http://www.3dgeography.co.uk/#!making-3d-maps/c1hew http://www.powershow.com/view/105d30-NjI2Y/Reading_and_Interpreting_Topographic_Maps_powerpoint_ppt_presentation

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
Gradient	Fluvial landforms (2.4.1 Theme 1, c). Coastal landforms (2.4.1 Theme 1, d).	Enquiry – how does aspect/gradient influence land use in a fluvial/coastal upland area?	http://serc.carleton.edu/mathyouneed/slope/slopes.html - calculation
Distance	Fluvial landforms (2.4.1 Theme 1, c). Coastal landforms (2.4.1 Theme 1, d).	Long and short of it – examining on an OS map how route ways are affected by rivers and coasts – students measure the straight line distance and the road distance of a route between two locations in a river valley or a coastal area and compare the two.	How to measure curved distances on an OS map: https://www.youtube.com/watch?v=g8CUeXPTBWs
Direction	Processes and factors responsible for geomorphic landforms at coasts – LSD, fetch, transport of sediment/wind direction (2.4.1 Theme 1, d).	• Revisit compass directions then use maps to identify locations of these in relation to other places. • Consider your own town (or UK place) and consider the locations of important areas within the city. Identify directions and distances between key points of interest: theatre locations, cultural zones (Chinatown for example), central mosque, cathedral, synagogue etc.	Compass games suitable for use in and outside the classroom http://girlscoutstoday.org/media/2012/01/Map_and_Compass_Activities__Games.pdf
Area	River basin sizes/Flooded areas (2.4.1 Theme 1 a and b).	• Guestimation! How big is….. • Use a list of locations/drainage basins to guess the size of their area – use the area tool to calculate it.	http://www.freemaptools.com/area-calculator.htm

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
Annotation	The movement of tectonic plates causes earthquakes and volcanoes (2.4.3 Theme 3 b). Coastal landforms are also influenced by geology (2.4.1. Theme 1 d).	Pupils are given just the diagrams of all 4 plate boundaries. Separately they are given the labels for the diagrams and are required to match them to the diagrams. With fully labelled diagrams pupils must hypothesise what happens at each margin and how. Annotation of diagrams is then added using reasoning. Could be done with discordant/concordant coast diagrams, or landforms at a coast (erosion of a headland for example).	Annotation tool: http://www.classtools.net/education-games-php/postIt http://www.coolgeography.co.uk/GCSE/Year11/Managing%20Hazards/Tectonics/types_of_plate_margin.htm
Sketching	Fluvial land forms and coastal landforms (2.4.1 Theme 1, c and d). Landscape changes following storm weather (management of coastlines) (2.4.1. Theme 1, e).	Landforms in coastal areas, river basins, volcanic areas – sketching from photographs. Pupils sit with their backs to one another – one has a photo (can be of anything geographical – preferably a relevant landscape but needs to be printed so it can only be seen by the correct pupil). Pupil 1 describes the photo to pupil 2. Reverse roles. Together they look at photos and explain why things are as they are – then they use these discussions as the basis of their annotations)	http://www.3dgeography.co.uk/#!river-worksheets/c18cy http://blogs.agu.org/landslideblog/2014/01/08/uk-storms/ http://environment.nationalgeographic.com/environment/freshwater/

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
Extracting information from a map/ diagram	The effects of river flooding varies between areas (2.4.1 Theme 1, b).	Pupils use live data to look at flooding in locations across the UK. Identify areas most likely to flood in the next 24-48 hours. Look at the historical data/maps to identify which places have flooded recently. Look for trends in the data.	http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=357683.0&y=355134.0&scale=1&layerGroups=default&ep=map&textonly=off&lang=_e&topic=floodmap&utm_source=Poster&utm_medium=FloodRisk&utm_campaign=FloodMonth13
Reading Atlas maps	Global distributions of natural hazards (2.4.3 Theme 3, a).	Plot these on world maps to demonstrate their location then describe and explain their distribution.	http://preview.grid.unep.ch/index.php?preview=map&lang=eng
Choropleth maps	Local areas are affected by the movement of people between urban and rural areas (2.4.2, Theme 2, c).	• UK – why do some places stay rural? Produce a spider diagram showing human and physical factors that influence the population of an area? Colour code the features - human and physical. • Look at the spatial distribution of population on a UK atlas map – how does this relate to physical and human characteristics and rural and urban environments. Try to identify five reasons why some places stay rural. • World – hypothesise about the areas of the world that would be become inhabitable and uninhabitable if global warming causes ice to melt and why. Why do some places become accessible that were not before? Why do some places become uninhabitable that were inhabited before – what may this mean for migration patterns in the future?	http://www.worldometers.info/world-population/#pastfuture http://www.atozmapsdata.com/zoomify.asp?name=Country/Modern/Z_UK_Pop UK census mapping: http://www.ons.gov.uk/ons/interactive/census-map-1-4/index.html

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
Isoline maps	Natural hazards have significant impact on people and their quality of life (2.4.3 Theme 3,c).	Draw isolines (lines of equal magnitude/ damage in this case) around a large earthquake epicentre location. Your isolines should demonstrate equal magnitude of shockwaves (Richter) or lines of equal damage (Mercalli) – use British Geological Survey website to collate relevant numerical data.	How to: http://www2.hawaii.edu/~dennis/Geog101L/Isolines.pdf http://www.earthquakes.bgs.ac.uk/earthquakes/recent_world_events.html
Flow line maps/ Desire line maps	International migration affects population change (2.4.2 Theme 2, c).	Who is moving into and out of the UK? Map this on a world and/or EU map using flow lines.	http://migrationsmap.net/#/GBR/arrivals http://www.viewsoftheworld.net/wp-content/uploads/2010/03/MigrationUK.jpg
Sphere of influence maps	The relationship between the provision of goods and retail services and the population size of a settlement (2.4.2 Theme 2, e).	• Identify the sphere of influence of a rural and urban place. • Use Google Earth to create a sphere of influence for you based on a quick questionnaire of where you bought your: last pair of shoes/last supermarket shop/ last cinema visit etc (ask around the class and plot the school as the central point for this exercise – Google Earth will do the drawing for you).	http://www.digitalgeography.co.uk/?s=sphere+of+influence&searchsubmit
Bar graphs	Population change and growth (2.4.2 Theme 2 b).	Draw a bar graph of population in the world's ten most populous countries. Can be done as a 'living graph' where students move into position in the classroom. Each pupil can be 'worth' between 10 and 25 million people (or more for some of the rapidly growing Asian countries).	General graphing and data help: http://www.bbc.co.uk/skillswise/worksheet/ma37grap-l1-w-cup-final-results http://www.i-use.eu/ http://www.enchantedlearning.com/math/tables/reading/countries/

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
Histograms/pictogram	Population change and growth (2.4.2 Theme 2 b).	• Living histogram – pupils move into position in the classroom to show numbers of people in the ten most populous countries (can be done for any discreet data). • Can be done as a jelly baby histogram using a graph paper base and one jelly baby to represent 1 million or half a million people (scale can be amended as required).	http://www.enchantedlearning.com/math/tables/reading/countries/
Line graphs	Population change and growth (2.4.2 Theme 2 b). The growth of population on a global scale (2.4.2 Theme 2 b).	• Look at line graph of world population growth and discuss. • Give pupils a number of line graphs of country populations over time and ask them to suggest/match countries they could be and why.	http://www.worldometers.info/world-population/ http://www.worldometers.info/world-population/#pastfuture http://www.worldometers.info/world-population/population-by-country/
Scatter graphs (with line of best fit) /	Natural hazards have a significant impact on people and their quality of life (2.4.3 Theme 3 c). How do natural hazards affect people and places in parts of the world with different levels of development? (2.4.3 Theme 3 c).	• Draw a scatter graph showing earthquake magnitude v deaths. • Sort locations into MEDC, NIC, LEDC and comment on the relationship.	http://www.infoplease.com/ipa/A0884804.html http://www.alcula.com/calculators/statistics/scatter-plot/
Pie charts / Triangular graphs	How and why are there variations between the employment structures of different countries (2.4.4. Theme 4, b).	Draw a pie chart/triangular graph to show economic sectors in two differing countries.	Good for a humorous look at pie charts: http://www.tes.co.uk/ResourceDetail.aspx?storyCode=6181348

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
Cross-sections	What are fluvial landscapes like? (2.4.1 theme 1, c). What natural processes cause different types of natural hazards? (2.4.3 Theme 3, b).	• Examine plate boundaries which cause fold mountains and earthquakes. • Create a cross section of a hill on an OS map using contour mapping skills.	http://www.geographypods.com/uploads/7/6/2/2/7622863/contour-skills.pdf
Population pyramids	Population structure varies over time and between different countries (2.4.2. Theme 2 a).	• Jelly Baby game about population structure (available online). • Comparison between areas of the UK using graphics from census data available online as ready drawn population pyramids.	http://www.geographyalltheway.com/igcse_geography/population_settlement/population/jelly_baby_population.htm http://www.neighbourhood.statistics.gov.uk/HTMLDocs/dvc183/index.html (Can also be used as overlays)
Written extracts	What determines the location of different economic activities? (2.4.4 theme 4, c).	Empathise with indigenous people who are losing their habitat and suffering environmental degradation as a result of a new power plant (HEP reservoir or wind farm etc) or factory. Act as their lawyer and write your closing remarks for the jury to persuade them that the proposed development is unlawful.	http://www.macaulay.ac.uk/machair/Data/cs_energy.html http://www.fao.org/docrep/015/i2370e/i2370e.pdf http://energyinformative.org/nuclear-energy-pros-and-cons/
Interpret data tables	Identifying and explaining why countries are at different stages of development (2.4.4 Theme 4, a).	Use world bank data to analyse LEDC and MEDC locations to compare their development levels– e.g. Which has the highest: adult literacy rate, GNI, GDP, HDI, life expectancy, birth rate, death rate, infant mortality rate, employment rate, and economic sectors of employment. What do these show us about each place?	http://wdi.worldbank.org/tables

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
Interpret photos (ground, oblique and satellite)	• How can economic activity affect the physical environment at a variety of scales? 2.4.4 Theme 4, e). • Some of the ways to develop urban areas are more sustainable than others (2.4.2 theme 2, d).	• Use photos of Dubai (do not tell pupils this) – where in the world is this – start with the snowdome and move to the more obvious photos. • Learning to annotate i.e. 'Add –notes-to'. Pupils sit with their backs to one another – one has a photo (can be of anything geographical – preferably a landscape but needs to be printed so it can only be seen by the correct pupil). Pupil 1 describes the photo to pupil 2. Reverse roles. Together they look at photos and explain why things are as they are – then they use these discussions as the basis of their annotations).	http://www.360cities.net/image/broad-peak-basecamp-and-k2#34.60,2.00,58.5 http://www.satimagingcorp.com/gallery/geoeye-1/geoeye-1-burj-khalifa-dubai/ http://www.picturescollections.com/dubai-tourism/ http://photography.nationalgeographic.com/photography/
Produce and interpret field sketches/ sketch maps	• Fluvial land forms are also influenced by geology (2.4.1 Theme 1, c). • Coastal land forms are also influenced by geology (2.4.1 Theme 1, d). • How is the pattern of land use in cities changing? 2.4.2 Theme 2, d).	• Sketch a variety of environments. Consider how they are the same and how they are different. Which would you most like to visit and why? • Pupils sit with their backs to one another – one has a photo (can be of anything geographical – preferably a landscape but needs to be printed so it can only be seen by the correct pupil). Pupil 1 describes the photo to pupil 2. Reverse roles. Together they look at photos and explain why things are as they are – then they use these discussions as the basis of their annotations).	http://www.picturescollections.com/dubai-tourism/ http://photography.nationalgeographic.com/photography/ http://pcwww.liv.ac.uk/geo-oer/index_htm_files/Field%20sketches%20&%20how%20to%20draw%20them.pdf http://www.rgs.org/OurWork/Schools/Fieldwork+and+local+learning/Fieldwork+techniques/Sketching+and+photography.htm

GCSE GEOGRAPHY B – J385

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
Interpret cartoons	Why does migration occur and what are its effects? (2.4.2 Theme 2, c).	• Use a cartoon to consider push and pull factors. • Draw the factors from the cartoon out into a Diamond Nine decision making activity.	http://www.geographylwc.org.uk/GCSE/igcse/population/eumigration.htm http://www.classtools.net/education-games-php/diamond9

To give us feedback on, or ideas about the OCR resources you have used, email resourcesfeedback@ocr.org.uk