Geography

GCSE 2012

Geography A
J382

Skills mapping across Geography

OCR
Oxford Cambridge and RSA

GCSE GEOGRAPHY A – J382

Skill	Links to Specification	Suggested teaching and learning activities	Links to resources
OS map reading scales 1:50000 **OS map reading scales 1: 25000**	• How do people use mountain environments? Tourism, HEP – Snowdonia, Lake District National Park (Mountain Environments, 5.1, 5.2 and 5.3). • Rural and urban areas have distinct land use patterns (Similarities and Differences in Settlements and Population, 2).	• Using OS maps to find relevant uses of a mountain area. • Use OS maps to identify land use.	http://mapzone.ordnancesurvey.co.uk/mapzone/competitions.html http://www.geographypods.com/map-skills.html
4 figure grid references **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	How do people use mountain environments (tourism)? (Mountain Environments, 5.1, 5.2).	Map symbol bingo.	http://www.ordnancesurvey.co.uk/docs/ebooks/map-reading.pdf http://www.geographypods.com/map-skills.html http://www.ordnancesurvey.co.uk/docs/teaching-resources/25Kflashcards.pdf http://www.ordnancesurvey.co.uk/docs/teaching-resources/50k-map-symbol-flashcards.pdf
Height	Mountains are created by physical processes (Mountain Environments 2.4). Mountain climates can change with altitude (Mountain Environments 3.1).	Model making (contours) – create a model using household recycling to show contour 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

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Gradient	• Hot desert environments (dunes) (Hot Desert Environments, 1.1). • Mountain steepness (accessibility and land use) (Mountain Environments, 1 and 4).	Enquiry – how does aspect/gradient influence land use in a mountain area? Students identify if there are differences in land-use on the North/South facing slopes of a mountain area using an OS map/photographs and at different heights.	http://serc.carleton.edu/mathyouneed/slope/slopes.html - calculation
Aspect	• Mountains can affect climate (Mountain Environments, 3.2). • Land use in mountainous areas (agriculture) (Mountain Environments, 5).		http://handygeography.wordpress.com/gcse/the-restless-earth-revision-materials/fold-mountains-case-study-the-alps/
Distance	Mountain environments have an impact on humans (Mountain Environments, 1.2). Products are produced and services are provided in different places (The Global Citizen, 2.2).	• Long and short of it – examining on an OS map how route ways are affected by mountains – students measure the straight line distance and the road distance of a route between two locations in a mountain area and compare the two. • How far has 'your product' (e.g. trainers, IPad, mobile phone, PC, uniform) come? Map its route from where it was produced (this could be multiple components) to where it was bought – work out how far this is and how many modes of transport were used to get here.	How to measure curved distances on an OS map: https://www.youtube.com/watch?v=g8CUeXPTBWs Calculating distances around the globe: http://www.freemaptools.com/measure-distance.htm
Direction	Describing site, situation and location of a range of settlements (Similarities and Differences in Settlements and Population, 1.1).	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

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Area	• Settlement size (Similarities and Differences in Settlements and Population, 1.1). • Mountain ranges size (Mountain Environments , 1 and 2). • Desert sizes (Hot Desert Environments, 1 and 2).	Guestimation! How big is….. Use a variety of locations to guess the size of their area – use the area tool to calculate it.	http://www.freemaptools.com/area-calculator.htm
Physical features of the landscape	What is a mountain environment like (Mountain Environments 1.1). What a physical hot desert environment is like (Hot Desert Environments, 1.1).	'Placebook' – describing the features of the landscape in the same way as a Facebook profile using the 'Fakebook' website.	http://www.classtools.net/FB/home-page
Human features of the landscape	Settlements (rural and urban) have distinct land use patterns (Similarities and Differences in Settlements and Population, 2).		
Annotation	Plants and animals have adapted to survive in hot deserts (Hot Desert Environments , 5.2 and 5.3).	Design your own animal suitable for a desert (or mountain) environment (annotate to show its features).	https://www.teachervision.com/ecological-adaptation/animals/6989.html http://www.picturescollections.com/dubai-tourism/ Annotation tool: http://www.classtools.net/education-games-php/postIt
Sketching	What a hot desert physical environment is like (Hot Desert Environments, 1.1). What a mountain environment is like (Mountain Environments, 1.1).	Landforms in hot deserts and mountain ranges – sketching from photographs.	Sahara deserts images: http://www.ezakwantu.com/Gallery%20Sahara%20Desert.htm Mountain range images: http://science.nationalgeographic.com/science/photos/mountains-gallery/#/mont-blanc_1095_600x450.jpg

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Extracting information from a map/ diagram	Location of hot desert environments and mountain environments (Hot Desert Environments, 2. Mountain Environments, 2).	Location of hot deserts/mountain areas world map.	http://www.mbgnet.net/sets/desert/hot.htm
Interpreting and analysing information from a map/diagram		Identifying why hot deserts/mountains are located there.	
Reading Atlas maps	There are major mountain ranges/ hot deserts on most continents (Mountain Environments, 2.2, Hot Desert Environments, 2.2).	Plot these on world maps to demonstrate their location.	World physical features game: http://www.yourchildlearns.com/mappuzzle/world-features-puzzle.html
Choropleth maps	Settlements can be categorised by population density. (Similarities and Differences in Settlements and Population, 1.2).	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 location of mountains and deserts from a world population density map.	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

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Isoline maps	Earthquakes vary in magnitude and can be measured (Earthquake, 2.1).	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. Write a short summary – how can earthquakes be measured?	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	Products and services routes (The Global Citizen 4.2).	Using data about your product or fruits identify where products/foods used/eaten in the UK come from.	http://www.climatechoices.org.uk/pages/food1.htm
	People move in and out of areas for different reasons (Similarities and Differences in Settlements and Population, 3.3).	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	Urban and rural areas have a variety of functions including services and recreational functions (Similarities and Differences in Settlements and Population, 2.1, 2.2).	Identify the sphere of influence of a rural and urban place. Use Google Earth to create a sphere of influence for you.	http://www.digitalgeography.co.uk/?s=sphere+of+influence&search submit
Thematic maps	Products are transported to market for selling to customers (The Global Citizen, 4.2).	How does 'your named product' get to the UK for sale in a shop? What other countries is it exported to? How does it get to those countries?	http://nikeinc.com/pages/manufacturing-map
Route maps	Products are transported to market for selling to customers (The Global Citizen, 4.2).		http://www.archatlas.org/Trade/Trade.php http://webarchive.nationalarchives.gov.uk/+/http:/www.dft.gov.uk/about/strategy/transportstrategy/tasts/userexperience/endtoendjourney.pdf (fig 31, fig 39) https://globalizationstudies.sas.upenn.edu/node/736?size=preview

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Bar graphs	How does population vary in different places (Similarities and Differences in Settlements and Population, 3).	Draw a bar graph of population in the world's ten most populous 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/
Divided bar graphs	Despite having differing locations, places will have similarities as well as differences (Similarities and Differences in Settlements and Population, 5.1).	Draw divided bars for religion and/or economy of your local place and non-UK place – compare and contrast using census data from the Government website.	http://www.i-use.eu/ http://www.ons.gov.uk/ons/guide-method/compendiums/compendium-of-uk-statistics/index.html
Histograms/pictogram	How does population vary in different places (Similarities and Differences in Settlements and Population, 3).	• Living histogram – pupils move into position in the classroom to show numbers of people in the ten most populous countries. • 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.	http://www.enchantedlearning.com/math/tables/reading/countries/
Line graphs	Population changes naturally over time (Similarities and Differences in Settlements and Population, 3.1).	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/

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Scatter graphs (with line of best fit) / Dispersion graphs	• Earthquakes can vary in magnitude and be measured (Earthquake, 2.1). • Differing impacts on countries at different stages of development (Earthquake, 3.3).	Draw a scatter graph showing earthquake magnitude v deaths. Sort locations into HIC, NIC, LIC and comment on the relationship.	http://www.infoplease.com/ipa/A0884804.html http://www.alcula.com/calculators/statistics/scatter-plot/
Pie charts	Economic activities can be classified into different sectors, which can vary (The Global Citizen, 3.2).	Draw a pie chart 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
Climate graphs	Hot desert and mountain area climates (Hot Desert Environments, 3. Mountain Environments, 3).	• Mystery – give pupils 6 different climate graphs – get them to identify what each climate is like. Ask them to try to guess which is a mountain climate and which is a hot desert climate and why. • Pupils to draw a climate graph for a UK location.	http://www.geoknow.net/pages/climategraphs.html How to: http://web2.warilla-h.schools.nsw.edu.au/dept/hsie/climategraphs.htm UK data: http://www.metoffice.gov.uk/public/weather/climate/gcwr04zvq
Proportional symbols	Settlements can be classified by size (Similarities and Differences in Settlements and Population, 1.1).	Plot 5 cities on a map working out the scale and the correct size for each (could be done by population or by area or both and then compared as a look at density).	How to draw guide: http://www.tes.co.uk/ResourceDetail.aspx?storyCode=6115501
Cross-sections	What are mountain landscapes like? (Mountain Environments, 4).	• Examine plate boundaries which cause fold mountains. • 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

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Population pyramids	Population structure varies between different places (Similarities and Differences in Settlements and Population, 3.2).	Jelly Baby game about population structure. Comparison between areas of the UK using graphics.	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)
Star/rose/radial graphs and charts	Land use in cities and rural settlements (Similarities and Differences in Settlements and Population, 2.1 and 2.2).	Draw two radar graphs to compare land uses in two contrasting settlements (rural v urban or LIC city v HIC city) or land use changes over time in one UK city.	http://www.statistics.gov.uk/hub/people-places/planning/land-use/index.html
Kite diagrams	Mountain vegetation changes with altitude – how do people use mountain climates (Mountain Environments, 5).	Draw a kite graph to show how a species of plant become more or less prevalent with increased altitude.	http://www.arizonadailyindependent.com/wp-content/uploads/2013/08/Brusca-plant-study.png
Analysing for understanding	Exploitation of energy sources can bring opportunities for people and the natural environment (Energy, 3.2).	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.). 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/
Analysing for bias	Mountains can be managed sustainably or unsustainably (Mountain Environments, 7.1).	Watch the EU promotional video about farming in upland areas – identify areas of bias within it.	http://enrd.ec.europa.eu/themes/agriculture/mountain-farming/en/mountain-farming_en.cfm http://enrd.ec.europa.eu/publications-and-media/media-gallery/videos/en/video_068.cfm
Analysing for interpretation	• Energy issues will continue to challenge people in the future (Energy, 5.1). • Climate change may have an impact in the future (Mountain Environments, 7.2).	Consider the global warming debate and its causes/effects. Write a speech siding with climate change happening and the evidence there is for this (or the reverse).	http://www.unep.org/pdf/himalayareport_screen.pdf http://climate.nasa.gov/effects

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Making decisions based on geographical evidence	Plants and animals have adapted to survive in hot deserts (Hot Desert Environments, 5.2, 5.3).	Design your own animal suitable for a desert (or mountain) environment (annotate to show key features of your animal).	https://www.teachervision.com/ecological-adaptation/animals/6989.html http://www.tes.co.uk/teaching-resource/Adaptation-lesson-6432013/
Making decisions based on analysis of evidence			
Formulating an argument	• Mountains can be used by a variety of people for different reasons/managed sustainably (Mountain Environments, 5.1. • Hot deserts can be used by a variety of people for different reasons (Hot Desert Environments, 6.1).	• Debate uses of a mountain area by role playing. Create a conflict matrix to show the varying levels of possible conflict in this environment. • Debate uses of hot desert areas/periphery (mystery).	http://www.thegreattrossachsforest.co.uk/assets/educational-resource-packs/geography/pdf/GeographyClassroomActivities.pdf http://www.tes.co.uk/teaching-resource/Threats-to-Nomadic-pastoralists-mystery-6097425/
Justifying an argument			
Drawing conclusions			
Justifying conclusions			
Communicate to a variety of audiences	The impacts of earthquakes can be managed over the short and long term (Earthquakes, 4.1).	Create a series of public information media about how best to prepare for an earthquake – they should appeal to multiple age groups, people with limited language skills and people in different socio-economic groups (HIC and LIC too). They will be used in more than one media (TV, radio, posters, newspaper adverts etc.) Create a newspaper article about the impacts of recent earthquakes. Research and create an earthquake emergency plan – act out the best one in class.	http://www.bbc.co.uk/news/world-12717980 http://paperzip.co.uk/literacy/writing/blank-newspaper-templates http://shakeout.govt.nz/ http://www.civildefence.govt.nz/memwebsite.nsf/Files/Shakeout/$file/workplacediscussionsheet.pdf
Communicate in a range of styles			

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Interpret data tables	Development gaps can exist at global and regional scales (Similarities and Differences in Settlements and Population, 4.4).	Use world bank data to analyse your non-UK place and your UK place and 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
Carry out surveys **Carry out interviews** **Devise a questionnaire** **Carry out a questionnaire**	What are the short and long term impacts of your energy supply issue? (Energy, 3).	Create a questionnaire based on energy use and sustainability. Ask your friends, family and teachers your questions.	Survey monkey can be used if access to ICT resources.
Interpret photos (ground, oblique and aerial) **Annotate photos (ground, oblique and aerial)**	What challenges do hot deserts pose to people and how can they be overcome? (Hot Desert Environments, 7).	• 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. • Use Google Earth to view a hot desert environment. What features can be made out? What challenges might these pose?	http://www.360cities.net/image/broad-peak-basecamp-and-k2#34.60,2.00,58.5 http://www.picturescollections.com/dubai-tourism/ http://photography.nationalgeographic.com/photography/ http://www.ocr.org.uk/Images/73022-unit-a731-01-02-contemporary-themes-in-geography-resource-booklet-insert-specimen.pdf (Fig 2+3)
Use overlays	All places have distinctive physical and human features (Similarities and Differences in Settlements and Population, 2.3).	Use Google maps and Google Earth to overlay physical and human features in a variety of locations: a city (non-UK), a mountain area, a hot desert, a rural area in the UK, and a city in the UK (your place).	http://www.google.co.uk/intl/en_uk/earth/

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Produce field sketches/sketch maps **Interpret field sketches**	• All places have distinctive physical and human features (Similarities and Differences in Settlements and Population, 2.3). • What is a mountain environment like (Mountain Environments, 1.1). • What a physical hot desert environment is like (Hot Desert Environments, 1.1).	• Take students outside and ask them to draw a field sketch from the school gates. They should include the direction of North, time of day, weather conditions and annotations of items such as building material, green space, and quality of environment. • 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
Interpret cartoons	Population change can be influenced by a variety of factors (Population change, 2.1).	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

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