Department – Year 13 The Expert Geographer

Shirley High Curriculum Map

Students complete Resource security, begun at the end of Year 12, and study Hazards – the two Section C options – then carry out their independent investigation (NEA): four days of fieldwork at Seaford and in Croydon, followed by the write-up. They bring together knowledge and skills from both years and are fully prepared for their A Level exams and for the next stage of their journey after Shirley High School. NB: units don't fall neatly into half terms so there is some crossover.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:	Theme/Topic/Skill:
	Resource security (completed) Hazards (Paper 1, Section C) begins	Hazards (completed) PPE 3 (November)	NEA begins: titles, methodology and risk assessments NEA fieldwork: two days at Seaford and two days in Croydon PPE 4 (February)	NEA write-up: presentation, analysis, conclusion and evaluation	NEA submitted (by 15 May) Revision and A Level exams	Exams
Why Now?	Resource security and Hazards are the two Section C options, the largest questions on each paper at 48 marks. Resource security, begun at the end of Year 12, is completed with energy security, mineral security and resource futures. Hazards then begins with the concept of hazard, human responses and plate tectonics. Because Resource security started in Year 12, both units can be taught in full this term without squeezing assessment or feedback.	Hazards rests on the strongest GCSE foundation of all six units, since natural hazards is compulsory at GCSE, so it can be taught in depth in a busy year. It is completed by Christmas so that the spring term is kept entirely for the NEA. PPE 3 (pre-public examination) takes place in November.	The NEA begins in the spring term, once all six units have been taught, so students can base their investigation on any part of the course. They learn what the investigation requires, develop and have their own titles approved, and complete their methodology, sampling strategy and risk assessments. The four fieldwork days follow – two at Seaford and two in Croydon – so every student collects both a physical and a human dataset and meets AQA's requirement of four days covering physical and human geography. PPE 4 takes place in February.	The NEA moves from collection to writing: presenting and analysing the data, reaching a conclusion and evaluating the investigation, with teacher input limited to what AQA allows. Writing up straight after collection keeps the data fresh and leaves the summer term clear for revision.	The NEA is marked and submitted, with the fieldwork statement, by 15 May. The results of PPE 3 and PPE 4 direct the final revision programme before the two 2 hour 30 minute exams.	Exams complete. Students consider the next stage: university, apprenticeships and the world of work.
Fundamental Concepts	**Key concepts:** Interdependence · Sustainable development · Environmental impact · Physical and human processes · Scale **Disciplinary knowledge:** Weighing environmental impact against human need in energy and mineral development; then explaining hazards using the Park model and the hazard management cycle as analytical tools. **Substantive concepts:** • Energy security • Mineral security: copper • Resource futures • The concept of hazard and hazard perception • Human responses: the Park model and the hazard management cycle • Plate tectonics	**Key concepts:** Physical and human processes · Place · Scale · Environmental impact · Interdependence **Disciplinary knowledge:** Explaining causal sequences from Earth structure to hazard; comparing events in contrasting settings to judge the role of development; evaluating how people live with multiple hazards. **Substantive concepts:** • Volcanic hazards • Seismic hazards • Storm hazards • Wildfires • A multi-hazardous environment: Haiti • A local hazardous place: the Somerset Levels	**Key concepts:** Place · Space · Scale · Physical and human processes **Disciplinary knowledge:** Framing a researchable question and designing a methodology and sampling strategy; then, in the field, applying the agreed sampling strategy, measuring and recording accurately, working to a risk assessment and checking data for completeness. **Substantive concepts:** • The independent investigation: title and methodology • Physical fieldwork at Seaford • Human fieldwork in Croydon • Primary and secondary data • Sampling, accuracy and reliability • Risk and ethics	**Key concepts:** Place · Scale · Interdependence · Environmental impact **Disciplinary knowledge:** Choosing and justifying presentation and statistical techniques; interpreting findings; reaching and evaluating a conclusion. **Substantive concepts:** • Data presentation • Statistical analysis • Interpretation and conclusions • Evaluating the investigation • Wider reading and referencing	**Key concepts:** All key concepts revisited **Disciplinary knowledge:** Selecting the right evidence under time pressure; structuring a 20-mark argument; reading unfamiliar figures quickly and accurately. **Substantive concepts:** • Paper 1: Physical geography • Paper 2: Human geography • Question types: 4, 6, 9 and 20 marks • Case studies organised for use	
Students will…	**Learn about:** • Energy security: primary and secondary energy, energy mixes in contrasting countries (Norway and Mali) and the role of transnational corporations • The environmental impacts of energy development, and strategies to increase supply and manage demand • Mineral security: copper – where it is found, how it is extracted and traded, and the environmental impact of extraction • Resource futures for water, energy and minerals **Hazards:** • The concept of hazard, and hazard perception • Human responses to hazards – fatalism, prediction, adaptation, mitigation, management and risk sharing – the Park model and the hazard management cycle • Plate tectonics: Earth structure, convection, ridge push, slab pull and sea-floor spreading; plate margins and their landforms; hotspots and magma plumes	**Learn about:** • Volcanic hazards: their forms, distribution, magnitude and predictability, and the impacts of and responses to a recent eruption • Seismic hazards: earthquakes, tsunamis, liquefaction and landslides, and the impacts of and responses to a recent event • Storm hazards: the causes of tropical storms, and the impacts of and responses to two storms in contrasting areas • Wildfires: the conditions that favour them, their causes, impacts and management • A multi-hazardous environment: Haiti • A place at local scale in a hazardous setting: the Somerset Levels	**Learn about:** • What the independent investigation requires, and developing and having approved an individual title linked to any part of the specification • Sampling strategies and risk assessment; choosing statistical techniques met in Year 12; writing the methodology and piloting the recording sheets • Two days at Seaford: coastal data collection such as beach and wave profiles, sediment sampling, defence surveys and field sketches • Two days in Croydon: human data collection such as transects, land-use mapping, environmental quality surveys, questionnaires and interviews • Applying the agreed sampling strategy and recording any changes to it • Working to the risk assessment and ethical guidance, and checking data before leaving each site • Beginning to process and present the data	**Learn about:** • Presenting data using techniques they choose and justify • Analysing data, including statistical testing • Interpreting findings and linking them to theory and wider reading • Reaching a conclusion and evaluating the investigation • Completing, referencing and checking the final investigation (3,000–4,000 words)	**Learn about:** • Revising all six units against personal learning checklists (PLCs), prioritised by PPE results • The demands of each question type: 4-mark, 6-mark, 9-mark and 20-mark • Command words, and how the mark scheme rewards judgement • Organising case studies so they can be selected and applied • Sitting two 2 hour 30 minute papers	A Level examinations.
Language for Life (Key terms / Vocabulary)	Energy mix, primary and secondary energy, energy security, energy gap, fuel poverty, OPEC, ore, resource curse, geopolitics, hazard, disaster, risk, vulnerability, hazard perception, fatalism,	Tephra, pyroclastic flow, lahar, Volcanic Explosivity Index, focus, epicentre, P and S waves, liquefaction, tsunami, storm surge, eye and eyewall, crown fire, multi-hazardous environment, resilience.	Hypothesis, research question, sampling strategy, pilot study, risk assessment, primary data, secondary data, random, systematic and stratified sampling, transect, beach profile, sediment analysis,	Spearman's rank, chi-squared, standard deviation, significance, correlation, anomaly, conclusion, evaluation, limitation, referencing.	Command words across all six units: assess, evaluate, to what extent, analyse, explain, examine.	

	adaptation, mitigation, risk sharing, Park model, hazard management cycle, lithosphere, asthenosphere, sea-floor spreading, subduction, Benioff zone, magma plume, hotspot.		environmental quality survey, questionnaire, interview, accuracy, reliability, validity, ethics.			
Extended writing Opportunities	9-mark: political factors and energy mix. 9-mark: the sustainability of an ore. First Hazards questions on perception and response.	20-mark: 'The impacts of volcanic activity cannot be prevented'. 20-mark: 'Tropical storms are always more severe in less developed countries'. 9-mark: a wildfire event and the hazard management cycle.	The NEA title, introduction and methodology; the field notebook.	The NEA: data presentation, analysis, conclusion and evaluation.	Timed 20-mark essays across all six units, planned then written to time and red-penned against the mark scheme.	
Maths Across the Curriculum	Energy mix pie charts (percentages to degrees); ore production data; plate velocities; plotting Park model curves.	Focal depth; the Richter, moment magnitude and Mercalli scales; describing wildfire data using TEA (trend, evidence, anomaly).	Accurate measurement and recording at both sites – profiles, sediment size, survey scores and response counts – and choosing sample sizes and intervals.	Spearman's rank, chi-squared and standard deviation applied to the student's own data; significance testing.	Reading unfamiliar figures quickly and accurately under timed conditions.	
Links to careers / aspirations	Energy sector analyst, resource economist, mining and extractives, geologist; UCAS applications are written this term.	Seismologist, volcanologist, meteorologist, emergency planner, humanitarian and aid worker, insurance risk analyst.	Environmental consultant, surveyor, researcher, data analyst.	Researcher, data analyst, report writer.	Degree and apprenticeship routes, and how geography is used in the careers met over two years.	Next steps: university, apprenticeships and employment.
Cultural Capital	Energy prices and security in the news; documentaries such as Simon Reeve's The Americas; the scientific debate over plate tectonics (Wegener and Tuzo Wilson).	The 2004 Indian Ocean tsunami; the work of the Red Cross and Médecins Sans Frontières in Haiti.	First-hand fieldwork at the coast (Seaford) and in the city (Croydon).	Reading geographical research to set the investigation in context.	Using the news to add contemporary examples for the exam.	Reading for interest beyond the course.
Practical Application of Skills	Energy and mineral data analysis; plotting earthquakes and volcanoes on map overlays; plotting Park model curves.	A liquefaction experiment; a wildfire card sort and NASA fire maps; a decision-making exercise on Haiti.	Writing the research question, methodology table and risk assessments, and piloting the recording sheets; then four days of fieldwork: beach and wave profiling, sediment sampling, defence surveys and field sketching at Seaford; transects, land-use mapping, environmental quality surveys, questionnaires and interviews in Croydon.	Presenting data with justified techniques and carrying out statistical tests.	Timed full papers under exam conditions; working from unfamiliar figures and resources.	