

inspiring the future

Guide for subject teachers - Schemes of Work: Key Stages 3 and 4



This document is intended to give you some inspiration for how to use employee volunteers in your subject specific schemes of work. It is not an exhaustive list, but is intended to give you some ideas on how you might be able to enhance your lessons. The document was developed by Education and Employers, the charity which runs *Inspiring the Future*. We are very grateful to the many Teach First and subject teachers who shared their first-hand experiences of working with volunteers to bring learning to life in creating this document. The *Inspiring the Future Guide for Subject Teachers* provides guidance on the effective use of employee volunteers in the classroom.

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Inspiring the Future
Education and Employers
Challoner House, 19-21 Clerkenwell
Close
London EC1R 0RR
Tel: 0207 566 4880
Email: enquiries@inspiringthefuture.org

1) Maths: KS4 Schemes of Work

Aim

- Practice & better understand problem solving in a practical context
- See the link between what we are learning and why they will need it later

Topic	Relevant Sectors / Job Titles	Possible Tasks / Themes for Discussion / Ideas for Volunteer Presentations	Cross-curricular opportunities
Geometry and Measures (including scale factor, enlargements, areas, volumes)	Architect Interior Designer Urban Planner Builder / Construction Manager Engineer	<ul style="list-style-type: none"> • Volunteer shares a current / recent project they are working on which requires calculating measures • Volunteer issues a similar task for pupils, adapted to make it accessible. For example, here is a paper plan of a room we have designed. We must scale up the objects, then work out costs of using the premium materials (e.g. carpet, wallpaper) and cheaper materials. Can it fit to budget? • Similar tasks could be created for buildings, planning road design (e.g. cycle lanes, pedestrian crossings, cars, bus stop etc.) 	Art and Design
Number Geometry and Measure	Book publisher	<ul style="list-style-type: none"> • Volunteer shares a current example of how they use measures to design a book layout • Volunteer sets a similar task for pupils • For example, they are given a budget for producing one (or two) book titles and a set number of pages. They work out how to make the words and possible images fit, considering the index, title pages etc. Students can work out the budget and profit implications of going over the page count 	
Number (including percentages, decimals)	Business buyers in any field e.g. fashion retail, commodities, consumer goods	<ul style="list-style-type: none"> • Volunteer shares a current / recent example of how they use data to maximise their profit / sales / commercial success • Volunteer sets a similar tasks for pupils adapted to make it accessible. This might include setting a budget for a product line, deciding how much of that product to buy or manufacture, what price to set for it, working out the profit 	

		<p>margin for each item sold, projecting an estimate of how much profit will be made, gross and net, working out the sales figure needed in order to break even</p> <ul style="list-style-type: none"> • Volunteer could share what the actual price, sales, revenue and profit for that product line was and invite pupils to review performance 	
Number (Ratio and Proportion)	Nutritionist Food scientist	<ul style="list-style-type: none"> • Volunteer shares an example of a nutrition plan they have put together for a client • Pupils are given a client profile and have to assemble nutrition plan tailored to that client's lifestyle. They work out the quantities of each food type which are permitted and produce possible menus • Volunteer could share the actual plan they produced for that client, and feedback on the impact it had on that client's health and change in lifestyle 	Science
Statistics	Business analyst Customer data analyst Management consultant	<ul style="list-style-type: none"> • Volunteer could give an indication of the major companies who hire business analysts to help them improve • Volunteer shares an example of a business plan they have put together for a client, breaking down the areas analysed e.g. resources spent, revenues earned • Volunteer gives students a task to analyse a client's performance. Students have to identify where there are inefficiencies and suggest advice they would give to the client to improve their business performance. • Students have to present findings and strategies back • Volunteer shares the advice they actually did give to the client in that scenario 	
Statistics & Sampling	Marketing professional Political marketing, canvassing voters Third sector – lobbying, research; social scientists	<ul style="list-style-type: none"> • Volunteer shares an example of market analysis and segmentation they have done, what kind of customer sampling they have conducted and how • Volunteer gives students a task to segment the market according to customer profiles based on data they are given. They must decide which market segment they will target. They could also come up with ideas on how they will carry out market research 	

- They create statistical charts to represent the different segments, what proportion each segment forms of the whole market. Students present back findings
- Volunteer shares the customer research they actually did carry out in that scenario

2) Science: KS3 Schemes of Work

Topic	Relevant sectors/ job titles	Possible tasks / themes for discussion / ideas for volunteer presentations	Cross-curricular opportunities
The Development of Scientific Thinking	Head of website, software developer	<ul style="list-style-type: none"> How website design has developed social and economic trends in society 	Citizenship
Analysis and Evaluation	Investment banker, research scientist	<ul style="list-style-type: none"> Discussion on how computer programming of statistical models can be used for analysis and to predict stock market trends 	Business Studies, Mathematics
Cell Biology	Microbiology laboratory manager, food scientist	<ul style="list-style-type: none"> Knowledge of how microbiology effects the decomposition of food and enables food scientist to preserve food so it may transported larger distances – i.e. so that we can eat Kiwi fruit in England 	Geography
Health, Disease and the Development of Medicines	Microbiology laboratory manager, doctor	<ul style="list-style-type: none"> Doctor to describe the immunisation of countries to wipe out small pox – the vaccine is no longer needed – a discussion could be had about the historical context and its potential weaponisation now that no one carries the immunity 	History, Citizenship
Rate and Extent of Chemical Change	Chemical engineer, Farmer	<ul style="list-style-type: none"> Discussion of the Haber process and the development of fertilizers that enables larger scale production of food – the Haber process is responsible for sustaining one third of the population of the earth 	Famine: History, Citizenship
Energy	Astrophysicist	<ul style="list-style-type: none"> Ask pupils to describe their areas of knowledge of energy in the universe Describe how knowledge of that energy can be inferred by observing space 	Mathematics

		<ul style="list-style-type: none"> Which can be used to describe the origin of the universe and its future 	
Forces	Bridge designer, civil engineer, carpenter, architect	<ul style="list-style-type: none"> With links to design technology a bridge design seminar could be given. With links to materials technology and shape structure bridges could be built and tested using weights. Evaluate the structural benefits of the pupils' designs 	Geography
Forces and Motion	Aerospace engineer, Apprentice engineer, building services mechanical design engineer	<ul style="list-style-type: none"> Aerospace engineer could describe the history of streamlining cars and the development of aerodynamics. Discussion of the development of wing technology which enables lift. A discussion could be had on the impact this has had on travel and tourism, and the adverse environmental effects 	Geography, Business Studies, Biology (ecosystems)
Wave Motion	Musician	<ul style="list-style-type: none"> Describe how knowledge of standing waves brought about understanding of the relation of musical notes 	Music
Magnetism and Electromagnetism	Electrical engineer	<ul style="list-style-type: none"> A discussion of the development of Alternating Current and Direct Current methods of transporting electricity, a historical view on the Telsa-Edison rivalry and the merits of both systems, and why the market tipped towards the Telsa AC system in modern power distribution 	Business Studies, History
The Structure of Matter	Materials engineer	<ul style="list-style-type: none"> Discussion of how the development of materials are enabling smaller mobile telephones to be developed, shrinking microchips, battery cell technology, sapphire crystal displays to improve scratch resistance etc. 	Electricity (Physics)

Experimental Skills and Strategies

Research scientist, technical apprentice, laboratory assistant

- Discussion of how important laboratory assistants are for the development of experimental science.

3) MFL: KS4 Schemes of Work relating specifically to the Edexcel Certificate in MFL schemes of work

Topic	Relevant sectors/job titles	Possible tasks / themes for discussion / ideas for volunteer presentations	Cross-curricular opportunities
Travel and Tourism	Leisure/Sport/Tourism Travel writers Cabin Crew Pilot	<ul style="list-style-type: none"> Comparing and contrasting travel for work and leisure 	Geography
Future Plans, (Education and Work)	Volunteers with MFL from any background	<ul style="list-style-type: none"> Volunteer presents job in TL, students to listen and find specific information General job insight Comparison of French/Spanish CV with English ones CV workshop with TL result Volunteer describes experience of school/route into career in TL, students to listen and find out specific information A panel from a range of sectors that have a language in common may be appropriate here 	Business Studies Cross-reference with sector volunteer is coming from
Media and Culture	Marketing/Advertising Media/Print/Publishing	<ul style="list-style-type: none"> Volunteer chairs/starts/gives opinion in debate on best form of media Volunteer shares route into their career in the media 	Media studies
Sport and Leisure	Leisure/Sport/Tourism Performing Arts Any (where healthy living is encouraged) Sports/Fitness worker	<ul style="list-style-type: none"> Fitness/dance class demonstration in the TL Discussion: How does your company ensure that you lead a healthy lifestyle? 	PE
Personal Relationships	Any – a panel from a range of sectors that have a language in common may be appropriate here	<ul style="list-style-type: none"> What makes a good colleague/team? What kind of person do you have to be to succeed in your job? Bring a picture/introduce and describe your colleagues/team 	PHSE
Business, Work and Employment	Any HR specialist	<ul style="list-style-type: none"> CV workshop in TL See Future plans, education and work for ideas 	Business Studies
My Town	Building/Construction Engineering Environment	<ul style="list-style-type: none"> How could we improve our town? 	DT

	Transport/Logistics Architect		
House, Home and Daily Routine	Any – a panel from a range of sectors that have a language in common may be appropriate here Catering/hospitality	<ul style="list-style-type: none"> • Description of working day including times • Describe what you have to do to maintain standards in catering/hospitality (link to chores) 	Cross-reference with sector volunteer is coming from
The Modern World and the Environment	Aerospace/Aviation Environment Transport/Logistic	<ul style="list-style-type: none"> • What kind of environmental commitments do those working in aviation have to make? • Environment/Sustainability career insights 	Geography Science
Health and Lifestyle	Any (where healthy living is encouraged) Healthcare Leisure/Sport/Tourism Healthcare worker Sports and Fitness worker	<ul style="list-style-type: none"> • Nutrition demo • Sports/Fitness demo • How does your company ensure that you lead a healthy lifestyle? 	Food technology PHSE PE Science

MFL: KS3 Schemes of Work

As KS3 students may not have enough TL to sustain a whole lesson, any TL suggestions may be suitable for small sections. The rest of the time may be used for career insights through Q&A or volunteer presentation.

Topic	Relevant sectors/job titles	Possible tasks / themes for discussion / ideas for volunteer presentations	Cross-curricular opportunities
Regions of Spain/France and common terms for introducing yourself	Any – a nice opportunity to invite a native speaker	<ul style="list-style-type: none"> General careers insights/subject talk Where are you from in Spain/France? How does it compare with UK? Where have you been to in Spain/France? Where have you travelled in the Francophone/Spanish-speaking world 	Geography
Greetings, how you are feeling and giving your name and the Spanish alphabet	Admin/Business Telecommunications Secretary PA	<ul style="list-style-type: none"> Volunteer demonstrates (simple) personal data collection in TL e.g. Phone number and name, D.O.B Volunteer gives students personal information about colleagues and picture(s) and students match information with pictures 	N/A
Items in your school bag and using plurals	Any – office-based ideally	<ul style="list-style-type: none"> Volunteer takes picture of office stationery cupboard (particularly if it's impressive) and describe items and what they're used for day to day Volunteer brings in key items of stationery that they need for their job 	N/A
Countries, nationalities, saying where you are from and ask others, languages you speak	Any – A panel of speakers that speak a range of languages	<ul style="list-style-type: none"> What language do you speak and how to you use this in your job? (conversation with volunteers may be in English but perhaps students are selecting answers from a questionnaire in the TL) 	N/A
Family members and descriptions	Any Languages/Info/Culture Social Work/Counselling	<ul style="list-style-type: none"> Volunteer describes colleagues and students could draw what they hear 	Art

Physical Descriptions		<ul style="list-style-type: none"> • Volunteer brings photo of colleagues (particularly nice if colleagues are diverse ages and from diverse backgrounds) and describe them (students complete listening activity of teacher's choice e.g. match up) • Volunteer describes the variety of families they work with (some children living with grandparents, cousins, foster parents etc.) 	
Pets, colours and asking others about their animals	Environment Any that work with animals Zoologist	<ul style="list-style-type: none"> • Volunteer describes (can be physical and character description) the animals that they work with/study, students guess the animal. • If volunteer works with animal they may bring props/animals toys to spark discussion 	Science
Directions	IT/Computer Any	<ul style="list-style-type: none"> • Volunteer leads virtual tour of office • Volunteer shows commute on map 	Cross-reference with sector volunteer is coming from
Town and local area, weather Places in town, where you are going	Any	<ul style="list-style-type: none"> • Volunteer describes the area where s/he works. Particularly effective if there is a contrast to students' environment (students live in the suburbs, volunteer works in the city). Also nice if the volunteer works outdoors or travels the country with work 	Geography
House and rooms description	Building/Construction Any Architect	<ul style="list-style-type: none"> • Volunteer brings picture of office building and describe 	Cross-reference with sector volunteer is coming from
Daily routine and telling the time	Any	<ul style="list-style-type: none"> • Description of working day including times 	Cross-reference with sector volunteer is coming from
Free time activities and opinions Sports and Opinions	Performing arts	<ul style="list-style-type: none"> • What do you do to keep fit? • Fitness/dance class demonstration in the TL 	PE
Household Chores	Catering/Hospitality	<ul style="list-style-type: none"> • Which chores must you do daily to maintain the hotel/restaurant 	N/A

School Subjects and Opinions	Any - a panel from a range of sectors that have a language in common may be appropriate here	<ul style="list-style-type: none"> • Which GCSE and post GCSE subjects did you do? Why? Most helpful subject(s)? 	Cross-reference with sector volunteer is coming from
Clothes	Any- a panel from a range of sectors that have a language in common may be appropriate here (including a few jobs where a uniform is worn)	<ul style="list-style-type: none"> • How do you dress for work? What is business dress? What is smart casual? What is 'dress down Friday' • Describe your work uniform 	Textiles
Food	Catering/Hospitality Chef, apprentice chef	<ul style="list-style-type: none"> • What are the customers' favourite foods? Which ingredient is most/least expensive • Volunteer brings in food for discussion/for students to try • Volunteer demonstrates making a simple dish 	Food technology

4) Citizenship: Key Stage 3 Schemes of Work

Topic	Relevant sectors/job titles	Possible tasks / themes for discussion / ideas for volunteer presentations
Year 7 Human Rights <ul style="list-style-type: none"> Children’s Rights Child labour Legal Rights Burkha Ban 	Social Worker Legal and political sector	<ul style="list-style-type: none"> General careers insights/subject talk Host a debate: indicate factors to consider and factors that will influence decision for which side of the debate is strongest. Debate topic banning child labour/banning the burkha Present examples of a case with questions for the student to consider such rights that have been infringed? Who is responsible for change?
Year 8 Media <ul style="list-style-type: none"> Newspapers Politics Advertising Press Freedom 	Editors Spin Doctors Marketing & Advertising	<ul style="list-style-type: none"> General careers insights/subject talk Present on how to choose what makes the news: facilitate students own newspaper design Session on how to change titles Steps on how to create a good advert: students create and guest judges
Year 8 Crime <ul style="list-style-type: none"> Young people and crime Types of punishment Policing Courts Death penalty 	Prison officer Probation officer Police officer Legal/political sector	<ul style="list-style-type: none"> General careers insights/subject talk Host a debate- indicate factors to consider and factors that will influence decision for which side of the debate is strongest. Debate topic prison works?/bring back the death penalty A day in the life of a prison worker followed by student QA Stop and Search procedures- Students to dramatize and officer to feedback using success criteria
Year 8 Types of government	Political correspondent International Development	<ul style="list-style-type: none"> Tell insights on their experiences of countries in anarchy or dictatorship and how they report used as information for students creative writing exercise
Year 9 Global Issues <ul style="list-style-type: none"> Global organisations Poverty War Fair Trade 	Security/armed forces Supermarket manager International Development	<ul style="list-style-type: none"> Why use fair trade and benefits for different stakeholders, process of engaging with fair trade, stats on fair trade sales How decisions are made about war/ effects from different perspectives

5) History: Key Stage 4 Schemes of Work

Topic	Relevant Sectors	Possible tasks / themes for discussion / ideas for volunteer presentations	Key Skills	Cross Curricular
Black Death	Medical Writer	<ul style="list-style-type: none"> Consider a medical report on the Black Death. Looking at research finding clues why did it spread. 	Research, Analysis, Evaluation, Links	Science
Battle of Hastings	Writer	<ul style="list-style-type: none"> How to write a historical book? How to research? 	SPaG, Research Skills, Making Judgments	English
Civil rights Movement, Death of JFK	Reporter, Journalist	<ul style="list-style-type: none"> How to write a piece for a newspaper 	SPaG, Research skills,	English
Mary Queen of Scots	Deputy District Judge Court Clerk Solicitor	<ul style="list-style-type: none"> How to analyse and interpret information? 	Analysing and Interpreting Events, Making informed Judgments, Linking Information	English, personal skills i.e. Public Speaking
Government and Politics	Political Correspondent Civil Servant	<ul style="list-style-type: none"> Making decisions on relevant issues? How to interpret government information, agendas, what things to consider when evaluating Government decisions How it is that change happens or does not happen 	Developed understanding of Politics	
Elizabethan Era Research Project	Assistant Librarian	<ul style="list-style-type: none"> How to research? How to know which information is relevant or not? 	Researching, Independent Learners	English
Who shot JFK?	Detective Sergeant	<ul style="list-style-type: none"> Using the fact and information how would the sergeant go about solving the case 	Analysis and evaluation	
Great Fire of London	Architect	<ul style="list-style-type: none"> How would you rebuild London after the fire? What to take into consideration. How can you prevent the fire from happening again? 		Design and Technology

6) English: Schemes of Work

Topic	Fertile Question	Relevant job roles	Ideas	Possible Task	Skills
Lord of the Flies	What would happen in a world without adults?	Psychologist, Manager, CEO, Social Worker	<p>Volunteer delivers a talk on how they were inspired by the book and sets a task facilitated by them and the teacher and provides feedback at the end</p> <p>Focus on the links between the themes of the book (absence of leadership, greed, violence, social structure). Present a problem in your organisation and how you have to solve it as a manager. How did it compare the way that the characters deal with the absence of leadership on the island?</p>	You are the manager of company X. You are leading on a project to increase staff moral and retention. How can you use the lessons from Lord of the Flies to help carry off the project?	Making links across themes. Developing an interpretation of the novel as a whole (AO2 – Reading).
Macbeth	What is the difference between ambition and greed?	Psychologist	Volunteer delivers a talk on the play's fertile question and sets a task facilitated by them and the teacher and provides feedback at the end. Case study of a patient similar to Macbeth. What is the difference in clinical terms?	Write a diary entry from the perspective of Macbeth that can be analysed by the professional to develop an understanding of the theme	Making links across themes. Developing an interpretation of the novel as a whole (AO2 – Reading).
Advertising	Make a Christmas wish-list. How have you been influenced in	Planner, Brand Designer, Media, Advertising Agent	Volunteer explains how advertising techniques are used to subtly influence the target market. Speak about production of written copy and slogan writing. Importance of verb use; connotations of individual words and word classes	Volunteer brings in a product that they are trying to promote and the pupils come up with a slogan a present back to the volunteer. They have to consider the	Writing to persuade/influence. Rhetorical devices.

	the choices you have made?			connotations and rhetorical devices used	
Day of the Triffids (Dystopian Fiction)	If civilisation collapsed, how would you re-build it?	Architect, Town Planner, Engineer, Politician	Volunteer delivers a talk on how they would approach the fertile question and sets a task facilitated by them and the teacher and provides feedback at the end.	Volunteer speaks about their answer to the fertile question and then sets a task: Debate over two visions for future civilisations	AO2 developing sustained interpretations.
Speechmaking	How can words change the world?	Politician, CEO, Judge, Coach, civil servant	Volunteer gives a brief response (5 mins) to the fertile question. Highlight three key factors that allow words to be influential (these can be agreed in advance).	Set a problem: you are in the houses of Parliament and you have to make a speech representing the views of your constituents. Volunteer judges the speeches	Speaking and listening.
Merchant of Venice	Is one culture ever more important than another?	Politician, Judge, Social Worker, Economist	Volunteer to give a brief response to the fertile question.	Provide a case study of two families/patients/people who have different cultures which clash. How might they be resolved given the lessons that can be learnt from the play?	AO2 developing a sustained interpretation.