



Sources of Ideas for Food Related Projects

Teachers' Notes

The Institute of Food Science & Technology has provided these suggestions for experiments and projects on the condition that teachers carry out a health and safety risk assessment before commencement. Food experiments may involve pupils being exposed to a number of hazards in the laboratory. Health and safety risk assessment is designed to minimise as far as is reasonably practicable exposure to such hazards and where unavoidable, to minimise the effect.

Hazards that pupils may encounter in a food laboratory could include:

Physical - eg heat, sharp instruments, ejection of hot liquids etc.

Biological - eg use of or exposure to biologically active substances such as enzymes, foods which may contain pathogens such as salmonella in eggs or culture dishes growing unknown mixes of bacteria and fungi. Proper disposal of used materials must also be considered.

Chemical - eg use of, or exposure to, various chemicals which may be toxic, corrosive etc. Proper disposal of used materials must also be considered.

This list is not in any way exhaustive and teachers must carry out their own risk assessment to account for their own specific circumstances.

Key:

E = Educational resource (eg lesson ideas)

C = Careers information

Hyperlinks checked on 20th March 2009.

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Organisation	Website	Type	Level	Content
About.com	chemistry.about.com/od/foodscienceprojects/Food_Science_Projects.htm			Food science projects: gives range of different projects relating to food chemistry, e.g. browning of fruits, carbonation, pH, chromatography etc
Almond Board of California	www.almondsarein.com	E		Nutrition information and recipe ideas for almonds.
Anaphylaxis Campaign	www.anaphylaxis.org.uk	E&C	All	Offers teachers information on how to cope with allergic reactions in children at school. Information for young adults with free information packs. Offers promotional/educational videos/dvds/books.
Association for Science Education	www.ase.org.uk	E&C	All	Teachers courses e 'Biotechnology, Agriculture & Food' (Post-16). Teachers' books on teaching GCSE & Post-16. KS1/KS2 CDROMs and Activity Books. Technicians' courses.
A-Z Home's Cool Homeschooling	homeschooling.gomilpitas.com/explore/chemistryfood.htm	E		Has section on food chemistry although basic
Biochemical Society	www.biochemistry.org	E	All	Main website has links to webpages relevant to different age groups. Options to search age range (from 11 – 19+), by curriculum (AQA/Edexcel/OCR) or by subject.
	www.biochem4schools.org/	E	KS3/KS4/ Post 16	Topics include Microbiology, Metabolism and Biotechnology.
Brake Bros Foodservice Solutions	www.brake.co.uk	E		Free downloads – 'Catering for Special Diets' & 'Healthy Eating'. Posters, Material Safety Data Sheets (COSHH Sheets). Careers and recipes.

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British Egg Information Service	www.britegg.co.uk Teachers' site: www.crackingeggs.co.uk/ www.crackingeggs.co.uk/teachers/ks4_food_technology.php	E&C	All	Information on nutrition and safety. Primary & Secondary cross-curricular resource materials inc. interactive learning area Material up to KS4 – suitable for GCSE, GNVQ and AS level. Some experiments suitable for KS4 Food technology, e.g. Egg freshness, coagulation, aeration, emulsification.
British Meat Education Service	Meat & Education www.bmesonline.org.uk	E	All	Resources for schools at all levels. Interactive options. School projects for A' level Free Primary & Secondary resources. Free downloads KS2, KS3, KS4 and AS/A2. MVM (Meat Video Magazine) Teachers' magazine.
British Nutrition Foundation	www.foodafactoflife.org.uk www.nutrition.org.uk/home.asp?siteId=43&sectionId=690&subSectionId=313&parentSection=300&which=2#1178	E	Primary	Primary level food website with Teachers' area. Activities for KS1 and KS2. Provides up-to-date, accurate and consistent information about healthier eating. 12 experiment sheets are available for testing nutritional aspects e.g. fat, starch or sugar content, vitamin C, etc.
British Potato Council	www.potatoesforschools.org.uk/	E&C	All	Information for KS3/KS4 projects. Teachers' resources – Primary & Secondary worksheets. Recipes.
British Soft Drinks Association	www.liquidsmeanlife.org.uk	E	All	Schools pack with nutritional/health information.
Cadbury Ltd	www.cadburylearningzone.co.uk/	E&C	All	Resource packs for KS1-KS4 linked to the National Curriculum. Information on careers at Cadbury.

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Chemistry Video Consortium	www.rsc.org/chemistryimages/	E	Secondary	Videos for KS3/KS4.
Dairy Council	www.milk.co.uk	E&C	Primary & Prof.	Leaflets for 7-11 yr olds (KS2). Career packs containing 6 careers profiles in the industry (can be downloaded free).
DfES/DH	www.foodinschools.org/	E		
The Design & Technology Association	www.data.org.uk http://www.data.org.uk/generaldocs/Food%20in%20Schools.pdf	E&C	All	Professional body for those in Design & Technology education. Food in Schools info leaflet - A range of nutrition-related activities and projects
Domestos Advisory Service	www.domestos.co.uk	E		Facts about germs, where they are found, and how you can destroy them/protect yourself against them.
European Food Information Council	http://www.eufic.org/	E		Aims to provide 'science-based information on food safety & quality and health & nutrition to the media, health and nutrition professionals, educators and opinion leaders, in a way that consumers can understand.'
The Food Additives & Ingredients Association	www.faia.org.uk	E		Offers a 16-page booklet of website information to download, inc. advise on Food safety, Allergies, Diet & Behaviour.
Food & Drink Federation	www.foodfuture.org.uk Primary Resources: www.foodlink.org.uk Teachers' notes www.foodfitness.org.uk	E E E	Secondary Primary Primary	Website under review Has been independently evaluated by 'schoolzone' who recommend it for KS3/KS4 and A' level. Lots of resources aimed at KS1/KS2 Teachers' notes, activity books and CDROM packs aimed at KS1/KS2 – provided free to schools.

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Food Labs	www.geocities.com/CapeCanaveral/Hall/1410/lab-Food-contents.html	E		A short selection of food related experiments which are really recipes
Food Museum	www.foodmuseum.com/	E		The FOOD Museum Online offers exhibits on food history and food heritage sites.
Food Standards Agency	www.food.gov.uk/healthier eating/nutrition/schools/teaching tools/	E	Primary	Teaching Tools page. Teachers' resources inc. interactive options.
		www.eatwell.gov.uk/info/games	E	Primary
Freaky Food Experiments (Horrible Science Handbooks)	www.amazon.co.uk/Freaky-Experiments-Horrible-Science-Handbooks/dp/0439944082/ref=sr_1_84?ie=UTF8&s=books&qid=1227977257&sr=1-84	E		by Nick Arnold (Author), Tony De Saulles; Dave Smith (Illustrator)
Foodworx	www.aifst.asn.au/foodworx/home.htm	C		Australian IFST website offering information on careers in the food and beverage industry.
Science Council	www.futuremorph.org/	C	All	'This website is designed to show you just some of the amazing and unexpected places that studying science, technology, engineering and maths can take you'
GlaxoSmithKline Education for Schools	www.gsk.com/community/supporting_education/uk.htm	E	All	Details of programmes available for schools, e.g. puppets and Crest investigators (in co-operation with British Association for the Advancement of Science)
Heinemann Educational	www.heinemann.co.uk	E	Secondary	Wide range of resources for Food Technology at KS3 and KS4.
Hobson's Publishing	www.hobsons.uk.com/home/student-zone.html	E&C	Post 16 +	Information on careers and courses.

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Hodder & Stoughton Educational Bookpoint Ltd	www.hoddereducation.co.uk	E&C	All	Books and resources
Hunkin's Experiments	www.hunkinsexperiments.com/themes/themes_food.htm	E		These unserious food experiments, illustrated with cartoons, will appeal to all ages.
Institute of Physics	www.iop.org/	E&C	KS3/KS4/ A' level	Offers teacher support and resources revolving around Physics.
Institute of Food Technologists (IFT)	members.ift.org/IFT/Education/EduResources/experiments.htm	E		A wide range of experiments grouped into Chemistry and Biology with handouts, guides, etc.
	www.accessexcellence.org/AE/AEPC/IFT/members.ift.org/IFT/Education/EduResources/mif.htm	E		With downloadable food chemistry experiment book
	members.ift.org/IFT/Education/EduResources/mif.htm	E		Microbiology in Food Systems Experiments
Institute of Refrigeration	www.ior.org.uk/ior/fantastic_fridges_site/education/index.html	E&C	KS3 +	'Fantastic Fridges' – an educational website within the main site aimed at 11-14 yr olds. Inc. project sheets for students and teachers. Information on the contribution of refrigeration technology. Careers and work placement information
International Food Information Service	www.foodinfoquest.com	E&C	Post 16 +	Offers advice on how to find and use food science information.
Interactive Science Ltd	www.interactives.co.uk	E	All	Lectures and shows, papers and publications, reports and studies, custard explosions, all aimed at getting children involved with science.

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Journal of Food Science Education from Institute of Food Technologists (IFT)	www3.interscience.wiley.com/journal/118537181/home	E		This <u>free</u> journal contains articles discussing experiments with food.
mr-damon.com – (Ecole Active Bilingue Jeannine Manuel, Paris)	www.mr-damon.com/experiments/3svt/food_energy/index.htm			Energy in food - with an interactive experiment measuring food energy
The Naked Scientist Kitchen Science	www.thenakedscientists.com/HTML/content/kitchenscience/food/			Fun-looking site with zany experiments, e.g. lemon-powered iPod, red cabbage litmus etc.
National Centre for Biotechnology Education	www.ncbe.reading.ac.uk	E&C	Post 16 +	Resources available for biotechnology projects
New Zealand Institute of Food Science & Technology	www.nzifst.org.nz/careers/secondaryresources.asp	E	Sec	A good range of mainly chemistry-based experiments e.g. enzyme activity, peroxide value, etc.
Northern Ireland Seafood	www.niseafood.co.uk	E	All	Information on fish. Small scale demonstrations at school.

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On Networks	www.onnetworks.com/videos/food-science	E		Several videos on food science topics from American TV Channel
Practical Chemistry (RSC and Nuffield)	www.practicalchemistry.org/experiments/intermediate/food/topic-index.html	E		A chemistry-oriented page devoted to investigating a good range of food components.
Practical Physics - Nuffield Curriculum Centre	www.practicalphysics.org	E		Teaching and learning approaches to Physics. Experiments and activities.
The Quorn Education Service	www.quorn.com	E&C	Post-16 +	Information on nutrition and food production. Activity links to self-study learning tools designed to assist students in their career paths in food science. Careers profiles. .
Rapport Learning	www.rapportgroup.com	E	Secondary	Educational Publisher. GCSE and A' level Teaching resources on food from general health to <i>Science & Technology of Foods</i> and <i>Science & Experiments in Food & Textiles</i> .
Research Councils UK – Science In Society	www.rcuk.ac.uk/sis/schools.htm	E	All	Information on how schools can link up with researchers. Competitions and activities that students can get involved in. Activities for young people – CREST – an award scheme aimed at students aged 11-19 linked to the industry.
The Royal Society	royalsociety.org/page.asp?id=1156	E&C	All	A Teachers' page with Primary, Secondary and Post 16 teaching support, with a summary of news of relevant exhibitions, reports, conferences, etc
	royalsociety.org/landing.asp?id=3500	E&C	KS4/Post 16	Website specifically for students.
Royal Society of Chemistry	www.rsc.org/education/ www.rsc.org/images/FOOD_tcm18-48151.pdf	E&C	KS3/KS4	Offers information for both teachers and students. Games – enhancing the learning experience (KS3/KS4) A PDF document listing many areas with further links to RSC publications and external sources.

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Royal Society for the Promotion of Health	www.rsph.org.uk	E&C	Post-16 +	Tutor packs inc. CDROMs and videos on Food Hygiene & Safety, Nutrition, HACCP.
Sainsbury's/DA TA/BNF 'Active Kids Get Cooking' programme	www.activekidsgetcooking.org.uk/activekidsgetcooking/Welcome+page.htm	E&C	All	'An initiative which recognises, supports and promotes excellent healthy eating work and cooking in early years settings, primary, middle, secondary and special schools throughout the UK (including the Channel Islands and Service Children's Schools)'.
SCENTA	www.scenta.co.uk/careers	E&C	Post 16	Offers Careers catalogue. Case studies on specific jobs within the food industry. Courses in Food Technology – AS/NVQ/A' level. Information on work placements and apprenticeships in the food industry.
Schoolzone	www.schoolzone.co.uk	E	All	Free resources for teachers in the form of websites, software, hardware, articles, research reports, educational events and peripherals.
Science fair projects	www.easy-science-fair-projects.net/food-science-experiments.html	E	All	Ideas for a project
Science and Engineering UK	www.science-engineering.net/	E&C		Information on UK Science and Engineering courses.
Science Museum	www.sciencemuseum.org.uk/education	E	All	Teachers' page – all ages inc. Foundation, Primary, Secondary and Post-16 – tells you where to take each age group on a Science Museum visit, and what activities (with accompanying worksheets) are available to them. Offers a number of online resources that Post-16 students can use to complement their studies.
Science in School	www.scienceinschool.org	E	All	A quarterly online magazine/newsletter offering teaching materials: cutting edge science, education projects, interviews with young scientists, education research and European events for teachers.

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Teacher Scientist Network	www.tsn.org.uk	E	All	Offers a 'Kit Club' where science kits suitable for KS1-Post 16 can be borrowed in the local area (Norwich). All newsletters, current and archive, are available to download + links to Curriculum resources available.
Unilever UK	www.unilever.co.uk	E	Secondary	Gives nutritional information presented in a lively way suitable for young adults.
University of Reading Food Law Pages	http://www.rdg.ac.uk/foodlaw/index.htm	E	Post-16 +	A useful introduction to UK food labelling regulations including images of labels to illustrate the legal requirements.
Women in Science, Engineering and Construction	www.wisecampaign.org.uk	E&C	Secondary	Teachers' and careers advisors information. 'WISE Outlooks' – a 3 day programme run at local colleges enabling Year 9 girls (13/14) to experience engineering first-hand. 'SPARK' Magazine – aimed at 11-15 year old girls – website offers a PDF of the magazine (Adobe Reader).
YouTube	http://www.youtube.com/watch?v=f2XQ97XHjVw	E		Non-Newtonian starch - A video of walking on a pool filled with cornstarch and water.

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