

Science websearch

- Websites are checked as close to printing as possible – however, website addresses do change.
- Inclusion of a website does not imply that ASE endorses the content of the site.
- Sites are suggested on the basis of ‘take a look, you might find something interesting and useful’ – we have not read every page on every website listed.
- Some sites may involve subscriptions and/or payment for download of material.

Please send details of any websites you have found or produced to the *Science websearch* editor, David Moore, at ssreditor@ase.org.uk. We would also be interested in hearing about how you have used websites that have appeared in *Science websearch* in your educational setting.

In this edition we mainly concentrate on websites concerned with all aspects of health science. It should be noted that many of the sites contain much more useful information than that just concerning health science, and it would probably prove profitable to investigate them further.

ScienceDaily®

Your source for the latest research news
www.sciencedaily.com/news/health_medicine

ScienceDaily is a website that covers all breaking science news. It is updated several times each day so you can be sure the information received is the most current available. There are no subscription fees. The *Health & Medicine News* part of the website would be of interest to all those interested in aspects of health science and medicine; there are numerous links indexing many different health-related topics. The site would probably be of most interest to those in the sixth form (ages 16–18) and above, particularly those wishing to remain fully up to date with current science, or those wishing to pursue health topics further. Take care though: it is remarkably easy to get distracted by other topics on this site and so spend more time on it than you were expecting to!



www.healthcareers.nhs.uk/Explore-roles/healthcare-science/studying-healthcare-science

Health Careers is a very useful website and information service designed to give information on the 300-plus careers available in this area. This website was established in 2015 and so contains the latest and most relevant information. The *Working in health* section has all you need to know about a career in health, including the NHS and social care. *Find your career* involves answering a number of questions, after which a selection of health-related careers are suggested. *Explore roles* allows you to work through and sort out for yourself just what roles are available; this leads on to more detailed information about the roles as well as directions to where more information can be found, such as salary scales, and so on. *Career planning* gives details on how to manage your career as well as careers progression, and what to do and ask when attending a careers fair. In all, this site would be of interest to students who think that they might be looking at a career in

health, allowing them to take things further, as well as acting as a good research tool.



www.nshcs.hee.nhs.uk/careers-in-healthcare-science

The National School of Healthcare Science was established in 2011 to support healthcare science education and training. The *Careers in healthcare science* page gives another source of information for these careers, particularly those that fit into the normal workings of the NHS. The downloadable booklet of the same name (with clickable links) is a particularly useful document and would be well suited for those students unsure of their future career paths.



www.ucas.com

For any student who is not quite sure what any particular career entails, this site is a good place to start. On the top menu, choose *Careers*, then *Finding a career* and then *Explore job roles*. Use the filters to get into whichever particular

career is of interest. Each career is explained, with information on related skills, academic routes and essential qualifications, along with links to finding out more (usually the associated professional bodies). UCAS is not just the site for applying for university: there is a lot more information here than may first meet the eye.



**LONDON MUSEUMS
of Health & Medicine**

<http://medicalmuseums.org>

This site is a comprehensive guide to London museums connected to health, medicine, nursing and learning, including the Alexander Fleming Laboratory and the Wellcome Collection. From the home page there are links to each of the museums, with basic information on the scope of the museum. Then for each of the individual museums there is a short introduction, visitor information (including prices if applicable, opening days and times, and accessibility), details of any events and exhibitions, how to find the museum and how to contact them. There are also details of walking tours around London concerned with various aspects of the museums, as well as a *Google* map with all of the sites superimposed should you wish to combine a visit to more than one museum. This site would be of great value for those wishing to visit one or more of the major health museums.



www.eurekaalert.org

EurekaAlert! is an online news service operated by the American Association for the Advancement of Science and is a site whereby different organisations can bring their news to the media. News

comes from all over the world, not just America; the material is presented in an easy-to-follow manner and is thoroughly up to date. The *News* tab gives access to sorted information: one of the links being to *Medicine and health*, from which articles can be accessed. There is a more general search facility, should you wish to investigate a particular topic. Each article generally has accompanying links to other available information. This site would be of use to any teacher wanting the latest information and to illustrate the cutting edge of science. As ever, however, material is posted on the site by organisations wishing to promote their research, and so should be treated accordingly.



IPEM Institute of Physics and Engineering in Medicine

www.ipem.ac.uk/CareersJobs/TheScienceandtheScientists.aspx

This website gives access to a series of six leaflets and accompanying posters aimed at the general public concerning the physics and engineering behind some commonly used medical treatments. Information is clearly presented and colourful, and would be helpful in explaining some of the science behind the various techniques. Leaflets and posters are currently available on: *Seeing inside the body with ultrasound*, *Improving mobility with gait analysis*, *Treating cancer with radiation*, *Diagnosing disease with radioactivity*, *Seeing inside the body with MRI* and *Assessing the body with physiological measurement*. These resources would be useful to those studying A-level (or equivalent) sciences.



www.amputee-coalition.org/history-prosthetic-leg

An interesting, and not at all gory, history of the development of prosthetics. This would be useful background reading for any would-be surgeons. Information is presented in a colourful manner suitable for dissemination among students. There are a number of prosthetic-related links from which more information can be gleaned.



Education

Inspiring your teaching and learning

<https://edu.rsc.org/resources/collections/analytical-chemistry-introductions>

This website gives a number of resources and links on analytical chemistry. Perhaps the most useful in a school situation is *Introduction to spectroscopy*. On this part of the site the following techniques are explored: infrared spectroscopy, nuclear magnetic resonance, ultraviolet–visible spectroscopy, mass spectrometry and chromatography. Each topic is covered in detail, complete with animations, as well as looking at the results obtained for each technique by using specific examples. There are also further links to other resources covered by each technique. Some of the techniques are covered in more detail than others; however, all the information given would be useful for any student wishing to revise any particular topic.

howstuffworks

www.howstuffworks.com

HowStuffWorks is a site that simply explains a huge variety of different topics, including a large number of scientific ones. Each topic is explained in a way that breaks down the process and gives a number of simple analogies to explain it. Linking to the previous website, use the search button to search for 'How mass spectrometry works'. This article carefully explains the basics behind the technique and then links the use of mass spectrometry to drugs testing in basketball players, although other uses of the technique, such as looking at the composition of the solar wind, its use by environmental scientists, biologists and anaesthesiologists, are also mentioned. Other spectroscopic techniques (infrared, ultraviolet, gas chromatography, etc.) are mentioned in the 'How forensic lab techniques work' pages. This site is worth exploring further; for example, 'How atoms work' gives the background behind the discovery of atoms and the history behind the elucidation of their constituent parts. There are many other topics that should prove to be of interest.



<https://scienceblog.cancerresearchuk.org/2017/07/12/an-introduction-to-radiotherapy-what-is-it-how-does-it-work-and-whats-it-for>
Cancer Research UK provides this 2017 article about radiotherapy,

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what it is and how it works. On the page there is also an instructive video about different types of tumours and how they can be treated using alternative types of therapy. These are explored further in the text, as well as in a series of related links at the foot of the page. This site would prove to be of worth to anyone thinking of medicine or radiography as a career.

MEDICALNEWS TODAY

www.medicalnewstoday.com/articles/248791.php

This article from 2017, entitled 'A brief introduction to physiology', is an interesting document that would be of interest to students wishing to go into the various branches of physiology as a career. The article carefully explains what physiology is, its history, the major systems covered in the study of human physiology, and its different branches. A link helps to explain the interaction of anatomy and physiology and the differences between the two.



WIKIPEDIA
The Free Encyclopedia

<https://en.wikipedia.org/wiki/Portal:Science>

Wikipedia might not be your first thought when looking for a scientific technique: however, give it a go and you might be pleasantly surprised. Do treat each article with a certain amount of caution until you have verified that you are happy with the article. Long

articles concerned with all aspects of spectroscopy can be found using the search button. Each article is probably longer than would be required in a normal teaching situation, so some degree of editing might be required before recommending them to students. Each spectroscopic technique usually has a section devoted to technique – particularly useful if needing to know the basics before embarking on the spectroscopic skill. Also on the *Portal: Science* page are up-to-date links to very recent events in the news – useful if you need an introductory icebreaker for a lesson.

BMA

www.bma.org.uk/advice/career/studying-medicine/becoming-a-doctor

From the British Medical Association, this is a fully detailed and very accessible information site on how to become a doctor, covering everything from life as a doctor to how to apply to medical school. Each of the 11 major sections leads on to further pages that break down the information further. This site is definitely a 'must' for anyone who may be considering going into the medical professions.