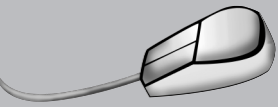


Contents

Introduction	5	Materials and their Properties	
Using Search Engines	7	Rocks and Minerals	28
(AS) Practise a Search	8	(AS) Find a Mineral	29
Making Contact	9	(AS) Minerals Hunt	30
		Waste Watch	31
		(AS) Waste Check	32
Life Processes and Living Things		Physical Processes	
Animals and Plants	10	Earth and Beyond	33
(AS) Animal Adaptations	11	(AS) Earth and its Moon	34
(AS) Food Chains	12	Sound	35
(AS) Classifying Animals	13	(AS) Echo the Bat	36
(AS) Flowers	14	Colour	37
(AS) Tree Exploration	15	(AS) Colour Combinations	38
Insects	16	Electricity	39
(AS) Identify an Insect	17	(AS) Making Connections (1)	40
(AS) Insect Data Sheet	18	(AS) Making Connections (2)	41
The Human Body	19	Flight	42
(AS) Heart Beat	20	(AS) Test Flights	43
(AS) The Digestive System	21		
(AS) The Skeleton	22	Creating an Environment Website	44
Brain Games	23	Publishing Your Website	48
Nutrition	25		
(AS) Healthy Eating (1)	26		
(AS) Healthy Eating (2)	27		

(AS) = Activity Sheet



Introduction

As primary schools connect to the Internet, a new vast and exciting resource becomes available to teachers and children. The purpose of this book is to provide:

- an easy introduction to those who are new to the Internet
- suitable websites to support children's learning and from which they can obtain information quickly
- enjoyable and challenging activities which support children's scientific research using the Internet.

The book does not suggest that traditional sources of information – books, libraries, videos – should be replaced, but rather that different sources and types of information have now become accessible.

The Internet is a good place for

- locating information not available in textbooks or the library
- finding and contacting experts on a subject
- communicating with children in different parts of the world
- obtaining up-to-date information
- accessing information and images which are otherwise difficult or time-consuming to obtain
- publishing your own work for others to use.

The Internet is not a good place for

- finding quick summaries or overviews of a topic
- children to research freely and unsupervised
- replacing hands-on activities, such as practical investigations
- finding material that has necessarily been well researched and is accurate.

The websites mentioned in this book are a mixture of Australian, UK and US sites. Please be aware that the spellings on the US sites will obviously be in American English.

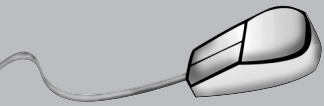
At the time of publication **all** the sites listed are free and we have not referred to any sites which require subscriptions. However, we do refer to shareware sites, from which you can download software free for a limited time, but are then charged.

The Internet is constantly changing and so are the sites that appear on it. We cannot guarantee that all the sites and links mentioned in this book will remain as described (some might disappear altogether). Therefore, any comments about specific sites, such as the level of text difficulty, speed of loading, etc., are based on the status of the site when the book was written and subsequent upgrades might alter such facts.

N.B. The screenshots in this book have been taken directly from the Internet. The quality of some of these may look poor, however, this is because they are intended to be looked at on-screen rather than reproduced on a printed page.

Working off-line

When using sites it might well be more useful to download the site for the children to use: to save time on the Internet and to provide a permanent resource. In this way, all the children can be working off-line on a site at the same time. There are many commercially available programs for you to try, such as *WebWhacker* (available from <http://www.ffg.com>), which can capture whole sites. Often these programs work in the background while you continue searching elsewhere on the Internet.

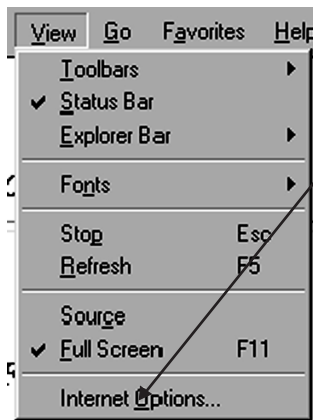


Introduction

Other programs, such as *Secret Agent*, will allow you to work off-line by loading files from your 'cache' (the store on your hard disk where your visited pages are kept when on-line). However, these files are not permanent and would be lost if you did not save them. You may wish to save certain pages manually, using the 'file and save' option in your browser, although this will take longer. This, however, only saves text, unless you are using the latest version of your browser, so you will also need to save images using the right button on your mouse to click on the images.

What if pages do not look the same off-line?

The usual problem is that images are not displayed. If an image does not load off-line, often it will be simply a matter of checking the HTML* link to it in your browser.

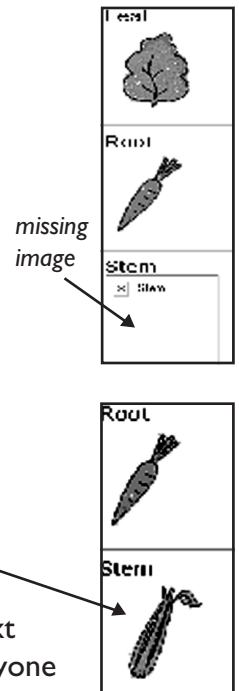


Display the source HTML code to look for the image reference,
e.g. `
`,
and change the link to where you have saved the images,
e.g. `
`.

Save this file and the next time you open the page in your browser, the image will appear.

Using web addresses

*Above, we have mentioned 'HTML'. This is the HyperText Markup Language which is the standard language that everyone on the Internet has used to create pages (although other new languages are now being added). To access a page, an address is typed into the box at the top of your browser.



an NMIT site address

The address is referred to as a site's URL (Uniform Resource Locator) and usually begins with HTTP:// which tells your browser that it is making a web connection. **online.nmit.vic.edu.au** is the name of the web server, the computer where the pages are stored (in the case of the NMIT example). **/link/** shows the directory where we want to look.

You can store addresses of sites which are useful by using the bookmarking or 'favourites' option in your browser.

First steps

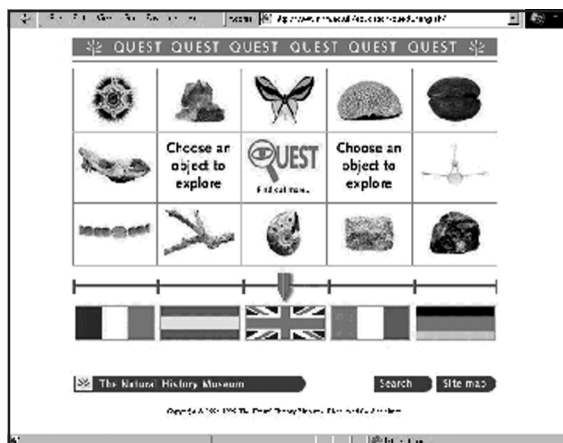
Here are some suggestions for excellent sites which you may want to visit first, containing information and many links to browse for yourself.

- The Education Australia site is increasing and is a source of information and teaching materials for teachers at <http://online.nmit.vic.edu.au/link>
- The ABC site is an excellently designed, massive resource and is organised in many sections at <http://www.abc.gov.au>
- Links to many science education associations can be found at http://www.teachers.ash.org.au/sciencelinks/teachers/professional_associations.html
- You may also want to browse what is on offer at other museums around the world and there are many link pages to them, one can be found at <http://vimp.museophile.com/world.html>

Animals and Plants

Animal adaptations

The *Animal Adaptations Activity Sheet* (page 11) allows children to look carefully at the way diet has shaped the jaws of certain animals. The children could then go on to examine their own teeth, and draw their own jaw (using mirrors) showing the different types of teeth and their functions. This could lead on to work on healthy teeth and how to keep them healthy. Ideas and lessons can be found at http://eric.syr.edu/cgi-bin/lessons.cgi/health/body_systems_and_senses/. The activity can also be included in work on classifying animals, assigning animals to groups and using keys.



The Quest section of London's Natural History Museum site at <http://www.nhm.ac.uk/education/quest2/english> provides a further opportunity for examining skulls, as well as giving the children an excellent interactive opportunity to investigate and draw conclusions from examining other observable features.

Zoo links

The *Classifying Animals Activity Sheet* (page 13), uses one of the many zoo sites which can be found on the Internet. Many of these sites have images of the creatures in the zoo, which the children can view and download. See, for example, the UK zoo site at <http://www.marwell.org.uk/ZooPhoto/ZooPhotos.htm/>. Some sites have live 'webcams', so that the children can obtain up-to-the-minute images at feeding times, etc. At <http://zootv1.si.edu> you will find live cams from the National Zoo at Washington and the Discovery website at <http://www.discovery.com/cams/cams.html> has links to many other cameras observing animals.

<http://trinizoo.com/zoos.html> and <http://www.cbsg.org/gzd.htm> are two useful lists of zoo links that the children may want to browse. The activity sheet uses the new babies section at The Emperor Valley Zoo site at <http://trinizoo.com/babies.html/>.

Animal habitats

The Nature Explorer website at the Canterbury Environmental Education Centre is an excellent and colourful site, which can be used in many ways to explore habitats. The children can find out from this site which creatures can be found in woodland, grassland and pond environments. The site can also be used to explore food chains (*Food Chains Activity Sheet*). The site can be found at <http://www.naturegrid.org.uk/explorer/>. It is a must to view if you also wish to create your own environment website (see pages 44 to 47). It provides 'virtual environments' which can be explored in depth, as well as worksheets and ideas for teachers.

For younger children, <http://www.rmplc.co.uk/eduweb/sites/sirrobbitch.suffolk/habitats/index.htm> is a simple site with large text and photographs, to show which animals live in a wood or hedgerow, or which pets can be found in homes.

Plants

The *Tree Exploration Activity Sheet* (page 15) examines the habitat a tree can provide for various animals. Pollination and the reproductive parts of a flower are investigated on the *Flowers Activity Sheet* (page 14).