

Using ICT to find, evaluate and use scientific information

Using scientific information found on the Internet

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Introduction

Having found and evaluated scientific information on the Internet, the task here is to develop classroom materials (or to get children to make their own materials) which use this information.

When they use Internet-based resources, children tend simply to 'cut and paste' it into their own documents. In this part of the module, you will meet ways in which you (and they) can incorporate pictures, sound and movies into electronic documents. You will also be using sites from which it is not possible to paste huge chunks of text, but where you need to select the information from different parts.

While it is possible to use these materials to produce web-pages of your own, this is not within the scope of this module. If you wish to learn how produce your own web-pages, it is suggested that you look at the (free) on-line tutorials listed in the section '[Taking things further](#)'.

In this module, the focus will be on producing word-processed documents which contain multi-media elements, the more effectively to tell a story – in this case the story of an element. These can be put on a school network and then shared by all members of a class or classes – and doing it this way means that you (and the children) only need to learn a few additional commands to the word-processing software you use for other purposes rather than have to learn a completely new piece of software.

You should first read the '[Task](#)' section and this will direct you to the web-sites from which you get the necessary scientific information.

The other sections of this part of the module tell you the how to incorporate pictures, sounds, movies and links to web-sites into your document. You should use these as necessary – but be sure that by the end of the module you are confident that you can do all of them.

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The task

In this part of the module your task is to tell the story of one element in words, pictures and sound and to then post that story to the others in the group (via First Class) so that all participants can get ideas from each other.

You can tell the story of whichever element you wish, but should use resources from the following three sites:

- [WebElements](#) – perhaps the best periodic table on the net, from Sheffield University. The one drawback to this site is that it now contains a huge amount of information on each element, which can make finding what you want difficult. However, it is an invaluable source for teaching and learning about the Periodic Table.
- [WebElements Scholar](#) – this is a new, cut-down version of the above which is specifically aimed at schools. Although it is currently (July 2000) neither officially complete or indeed open, it is still worth exploring.
- [Visual Elements](#) – this site is from the Chemistry Societies Network – ChemSoc. It contains far less information than the WebElements site but has been called ‘the most visual periodic table on the. As a result it can be slow to load.

(All these sites requires various plug-ins to work. For information on these, and how to download them, go to the [Plug-ins](#) section of the introduction to this module.)

Having chosen which element you wish to tell the story of, you should spend some time exploring these sites to see what information is available on it – before deciding which to incorporate in your story.

The sections below are to help you think about how to incorporate material you may find on the sites into your story (the section immediately below) and to tell you which keys to press in order to do it (the remaining sections).

For example, the WebElements site contains sound and movie files for each element. Taking Potassium as an example there is a [description of its properties](#) and [a movie of its reaction with water](#). Adding these – or other movies such as the [‘rainbow’](#) reaction can help make your story more interesting.

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Ways of adding sound and movies to your story

There are two main ways in which you can add sounds and movies to your worksheets (or in which your pupils can add them to their presentations):

1. You can download the file from the Internet to your own computer and create a link to it there. The section '[Downloading sounds and movies](#)' tells you how to do the first step and '[Inserting a link to another document](#)' tell you how to do the second.

The advantage of this is that access to files on your own computer (or school system) is quick and reliable.

The disadvantages of this are:

- (a) You need to download the file to your local system before you can use it. This might require negotiation with your network manager.
- (b) There are sometimes copyright issues involved in copying and downloading files. For copyright information about the WebElements site please see click [here](#).

2. You can create a link to a file anywhere in the Internet. Click [here](#) for an example. How to do this is described in the section '[Inserting a link to a web-site](#)'

The advantage of this is that it keeps the size of your document small.

The disadvantages of this are:

- (a) you have to be connected to the Internet for the link to work depending on the speed of your internet connection, it can take a *long* time for the link to become active.

It is also possible to insert movies directly into a Word file – but this tends to be unstable and makes the Word document very large, so is not described here.

Each method has its place. You (or your pupils) have to decide which is the best solution for a given purpose and situation. Thinking this through should be part of the development of their ICT skills.

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Downloading pictures, sounds and movies from the Internet

Warning!

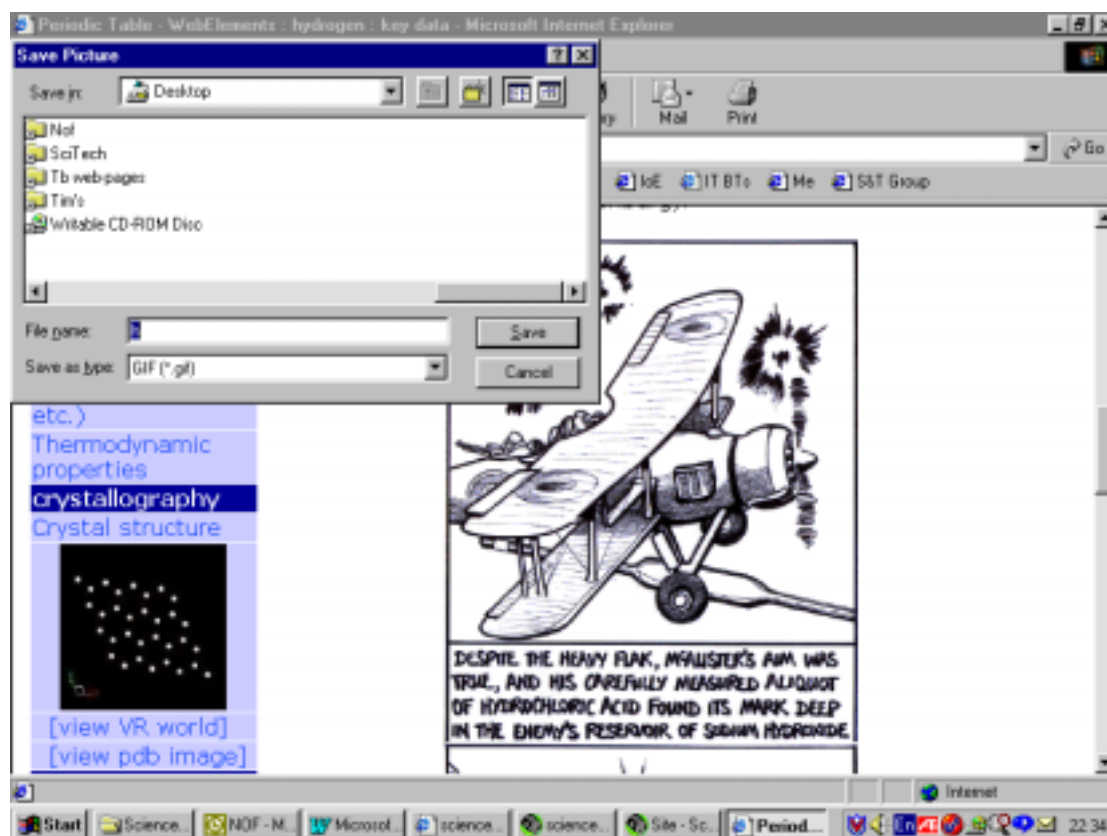
Please note that, although freely available, much of the content of web-sites is copyright – see for example the copyright notice of the [WebElements](#) site. Since today you are producing material for your own use, you are free to use what you download but it is often safer to make a link to sounds, and movies on their existing site rather than download them.

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Downloading pictures

If you see a picture on an Internet site that you wish to download, then move the mouse over it, click with the **right** button and select the option 'Save Picture As...'

You should get a dialogue box on your screen similar to that shown below.



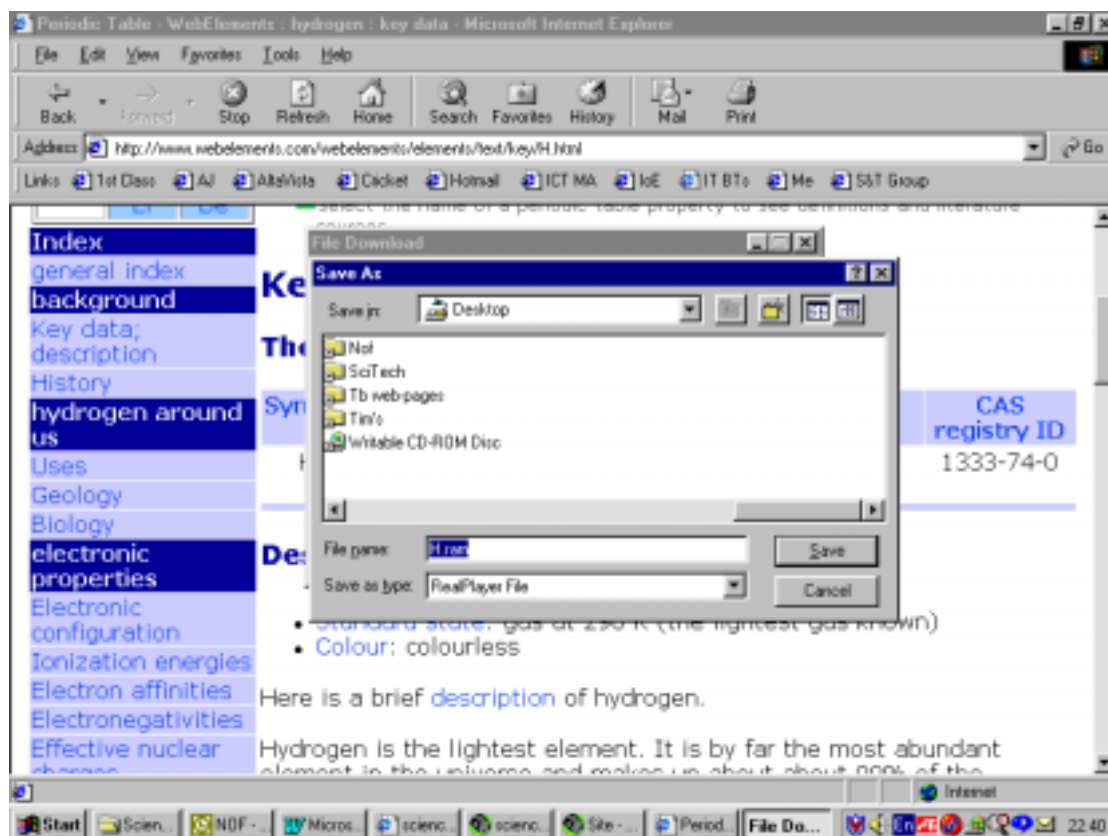
You then just type in the file name you wish to call the picture by and select the location where you wish to save it.

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Downloading sounds and movies

To download a sound or movie, move the mouse over the link to the sound or movie, click on the **right** button and select the 'Save Target As...' option. You then just type in the name you wish to call the file and set the location where you want to store it. Do not change the 'Save As Type' option – otherwise the saved file may be unusable.

The screen shot below shows this procedure for saving the description of Hydrogen from the WebElements site.



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Inserting Links

Inserting a link to another place in the same document

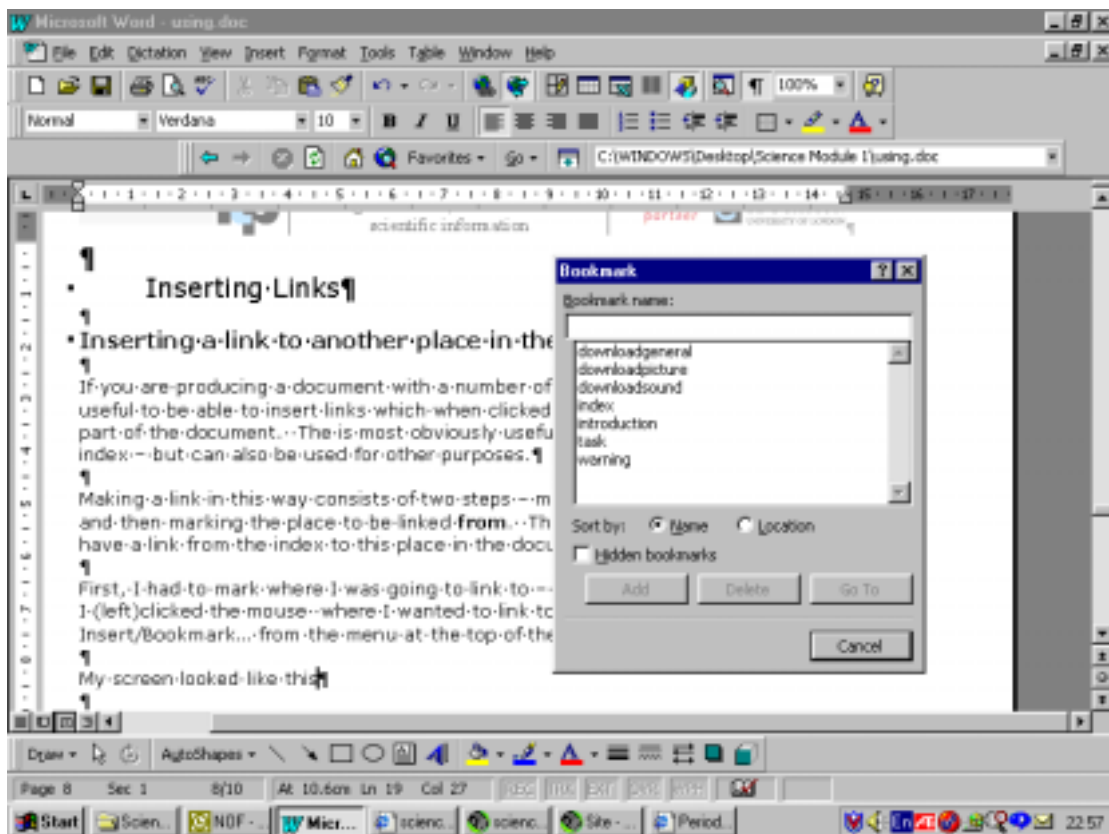
If you are producing a document with a number of parts – such as this one – it is useful to be able to insert links which when clicked on, take the reader to another part of the document. This is most obviously useful in making and returning to an index – but can also be used for other purposes.

Making a link in this way consists of two steps – marking the place to be linked to and then marking the place to be linked from. The pictures below show how I have a link from the index to this place in the document.

Step 1

First, I had to mark where I was going to link to – in this case the heading above. I (left)clicked the mouse where I wanted to link to go to and then selected Insert/Bookmark... from the menu at the top of the page.

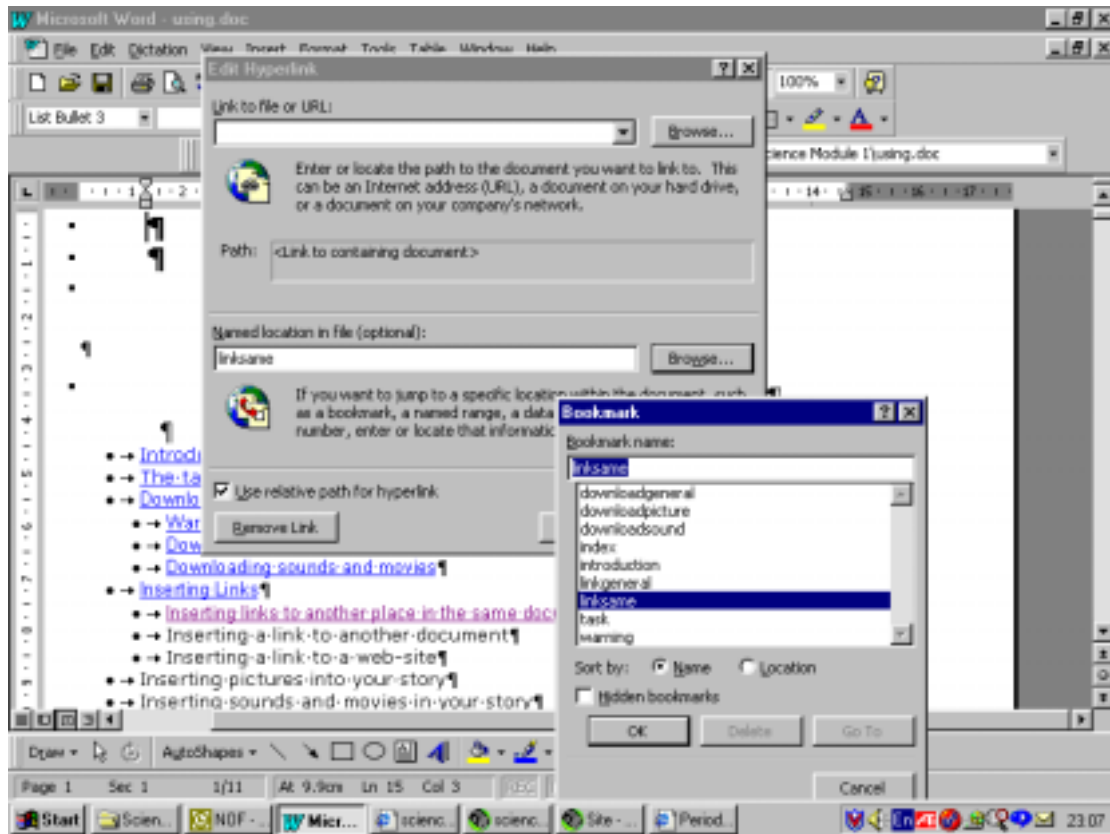
My screen looked like this



I then typed the name I wish to give to this link (in this case 'insertinglinks' and clicked Add...

Step 2

To make the link to this bookmark from the index, I selected the text I wished to link from and then selected Insert/Hyperlink from the menu above. I then clicked on the 'Browse' button next to 'Named Location in File' and chose the bookmark I wanted to link to from the list offered. My screen is shown in the picture below.



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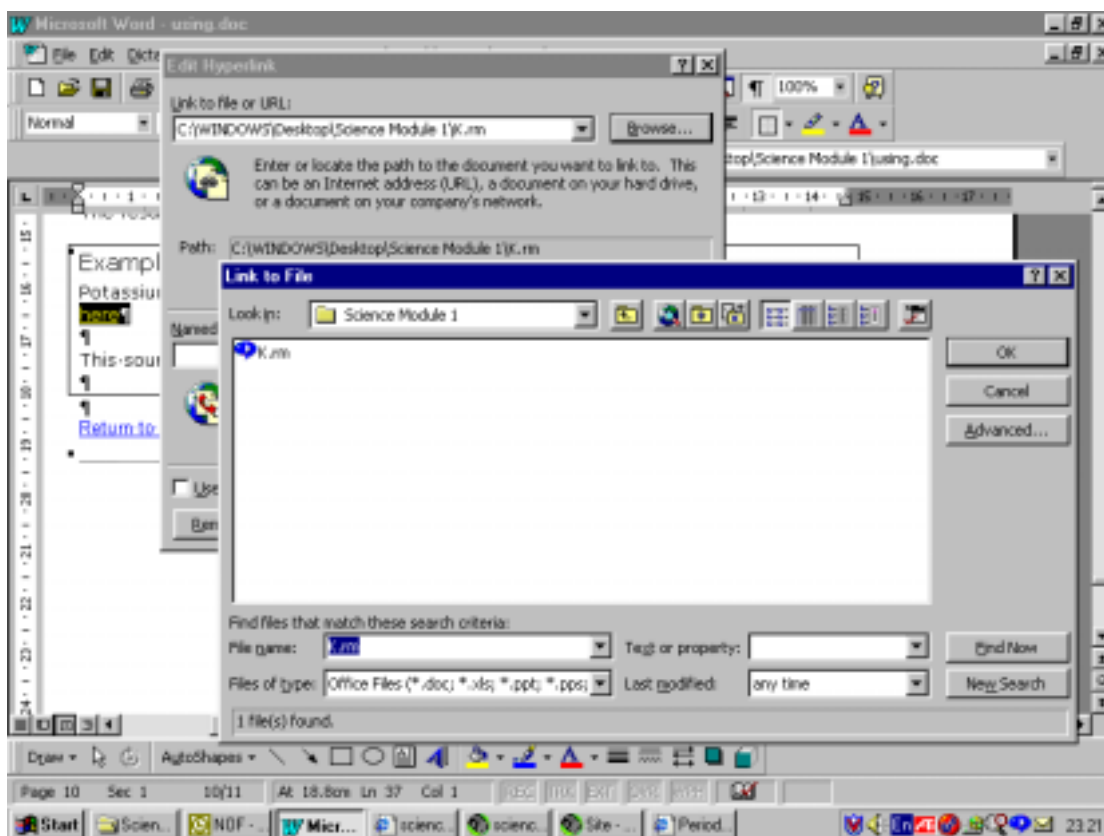
Inserting a link to another file on your computer – including sounds and movies

You can link files together in Word so that when you click on the link in one document another document on your computer opens. This second document can be another Word file but need not be. More interestingly it can be a sound file or a .movie. The procedure is very similar to 'Step 2' above.

To insert a link to another file on your computer, first select the text you want to be the link, and go to Insert/Hyperlink and 'Browse' for the file to which you want to link. The only difference to the previous example is that this time you use the 'Browse' button opposite the 'Link to File or URL:' box.

e.g. In the example below, I am linking the word 'here' to a sound file (downloaded from the WebElements site) describing the properties of Potassium. So I have highlighted 'here' and selected Insert/Hyperlink.

Then I 'browse' for the file on my hard disc. The picture below shows what my screen looked like.



The result is shown below. Click on 'here' to see what happens.

Example Link

Potassium is a very reactive metal. To hear a description of its properties, click [here](#)

This sound file is from the WebElements site <http://www.webelements.com/>

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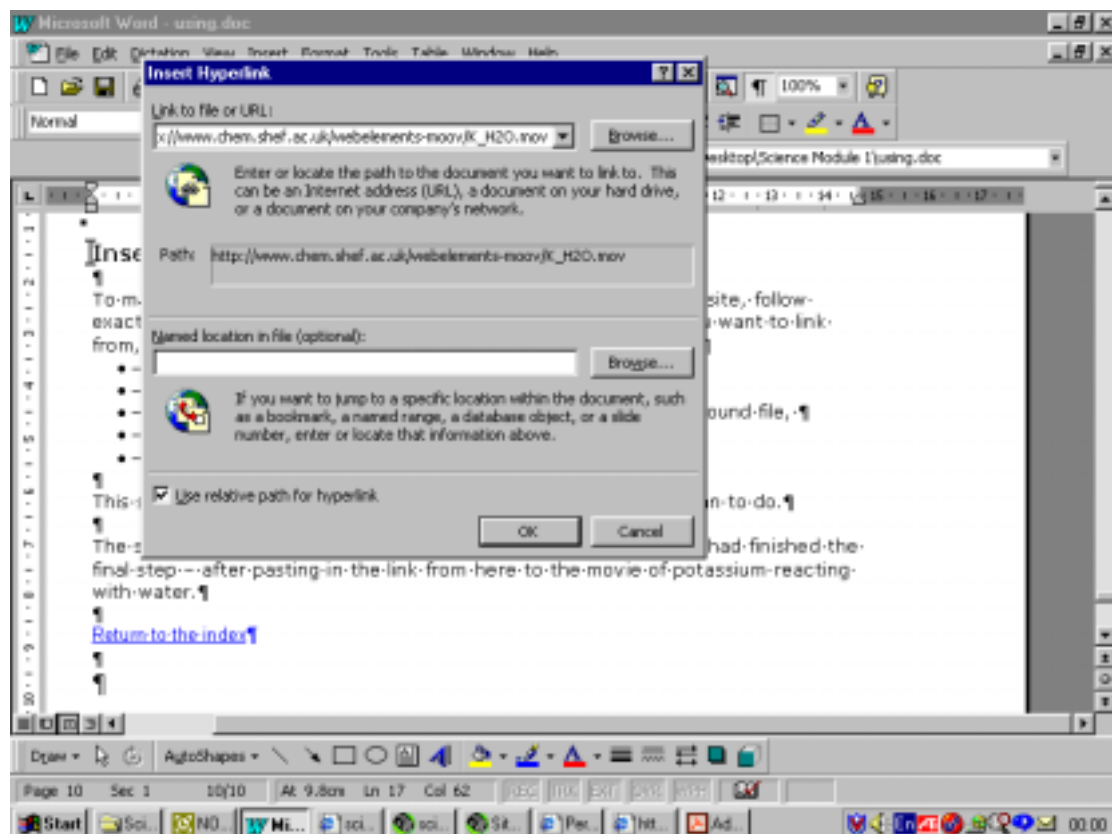
Inserting a link to a web-site (URL)

To make a link to the copy of this sound file on the WebElements site, follow exactly the same procedure as outlined, i.e. selecting the text you want to link from, and clicking on Insert/Hyperlink from the Menu, but **then**,

- open your web-browser,
- go to the site (or place on it) you want to link **from**,
- click with the **right** mouse button on the link there to the sound file,
- select the 'Copy' option and then
- paste this into the 'Link to file or URL' box.

This sounds complicated but is not – it takes longer to describe than to do.

The screen shot below shows what my screen looked like after I had finished the final step – after pasting in the link from [here](http://www.chem.shef.ac.uk/webelements-mov/K_H2O.mov) to the movie of potassium reacting with water.



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