

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

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**Cambridge ICT Starters
Next Steps**

Scheme of Work

4283
Exploring The Internet
Stage 2 Module



UNIVERSITY *of* CAMBRIDGE
International Examinations

Introduction

In this module students build on their searching skills so that they are able to make use of the internet for information gathering. They also learn how to use standard features of browser software in order to help collect, store and retrieve information. Students should be able to recognise links and navigation options on a web page and be able to use them to find the information they need. The aim is to give students sufficient skills to be able to use the internet safely and efficiently for simple information gathering. Students should be starting to identify by themselves which search results are useful and which should be rejected.

What is Assessed in This Module?

Students will demonstrate how to:

- use internet tools to find information
- use web browser software
- use search engines
- evaluate relevance and usefulness of material
- store and retrieve information
- save, bookmark and print web pages
- copy and paste information from a website
- save URLs and objects from a website
- use extended search skills

To Start This Module You Will Need

- any browser software can be used for this module. Student machines will also need to have a connection to the internet
- a text application like Notepad or Word so that students can copy and paste their search results into a document
- a selection of prepared web links on a topic of interest
- other prepared search topics

Underpinning Knowledge

Before commencing this module it is recommended that students can:

- recognise and use navigation options on web pages, like buttons, menus and hyperlinks
- copy information from one application and paste it into another

General Principles and Procedures

The following are further suggestions and considerations:

- copyright issues: this will vary from country to country but students should be made aware, at an appropriate level of detail, of any ruling which may affect what they are able to copy and how they can use it. Students should also be encouraged not to plagiarise whole portions of text which they have gathered from the internet – but to rephrase in their own words
- safety notes: many schools will have an Acceptable User Policy (AUP) regarding internet use and students should have this explained at an appropriate level of detail before using the internet. Similarly, appropriate screening/filtering should take place to ensure that unsuitable sites are not accessed by the students
- ensure students have copies of any school procedures for logging on or obtaining user accounts to the Internet
- for schools on a network it may not be obvious to students that an internet connection is active when they are using the internet. This might need to be mentioned so that students do not assume that every machine they use will be able to connect to the internet automatically

- if students are using a machine with a dial-up connection, they may need assistance to connect and disconnect in order to work on the internet (students' ability to do this is not assessed in this module)
- students should be helped to understand how the internet functions, so that they can appreciate, for example, how URLs work as addresses and why some information may not be useful or trustworthy
- this module is ideal to link to other areas of the curriculum such as Science, Geography or Literature because students benefit from having a reason for searching
- providing meaningful and real context is important – students will be more able to select appropriate keywords and useful results if they are working on a topic of interest and relevance
- search engines can be difficult to use if a topic or question is ambiguous or has several different interpretations - 'surfing' can mean surfing a web page or surfing on a surfboard
- it is recommended that teachers try out searches before presenting them to students to check for appropriateness and problems which may be encountered. Students should not have to sift through too many irrelevant items before they find good information
- questions and research topics should not be too open-ended. Students will benefit from being clear about the information they are looking for
- encourage exploration, experimentation and discussion of findings in lessons so that students can learn from each other

Scheme of Work

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan One			
<ul style="list-style-type: none"> • recognise the components of the Internet • use browser software • bookmark web pages • navigate to URLs 	<ul style="list-style-type: none"> • before beginning this module, discuss procedures for students accessing the Internet and the rules for using it. Go through the school Acceptable User Policy (AUP) clearly explaining outcomes for inappropriate use of the Internet. Ensure students have copies of any school procedures for logging on or obtaining user accounts to the Internet • students work in pairs to view the web pages: <ul style="list-style-type: none"> - use these web pages to find information about the topic • students make notes about their findings from each URL and decide whether it is a useful link or not • students bookmark their best 3 URLs and decide which was the worst 	<ul style="list-style-type: none"> • a list of 10 prepared URLs on a topic of interest. The majority of the links should provide useful information on the topic but some should be better than others – include at least one link with information on the topic which is too complex and at least one totally irrelevant link. (the URLs can be provided as hyperlinks in a document or email or as URLs to type into the browser) 	<ul style="list-style-type: none"> • it is likely that many students will have used the Internet but few will use it effectively to gather and use appropriate information • it is important to focus on using effective information gathering skills like skimming and scanning text for information and selecting relevant information • buddy students who have used the Internet before with those who have not. The new learner uses the keyboard; the experienced learner verbally (no hands!) assists • once all the URLs have been loaded encourage students to use Back and Forward navigation buttons to skip between pages

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan One Continued			
	<ul style="list-style-type: none"> • student pairs team up with another pair and discuss their selections of good and poor websites and decide on a top 3. Groups should be able to justify their choice based on their evaluations and discussions • class discussion: <ul style="list-style-type: none"> - can we agree unanimously on which are good and poor websites? - why is it that only some of the information on the internet is useful? - why is the information on the internet not always correct? • class tasks: <ul style="list-style-type: none"> - how many different ways can you find to store useful information from a webpage for use later? - how many ways to retrieve web pages that you have viewed before but not saved? 		<ul style="list-style-type: none"> • students should be encouraged to use a variety of ways to locate a web page: hyperlinks, copy and pasting the URL, typing URL address • during this session discourage students from 'free' searching – restricting them to selected URL's will help with the objectives of this session • try to introduce internet terminology in a real context, e.g. explaining what a URL is and how it works when they are using it • different ways to store useful information from a webpage: <ul style="list-style-type: none"> - print - save whole web page - bookmark web page - copy/paste to another document - save link • different ways to retrieve previously viewed web pages: <ul style="list-style-type: none"> - history - back/forward buttons - URL/address bar will show old addresses visited

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Two			
<ul style="list-style-type: none"> • use browser software • use copy/paste to save text into another document • select relevant information from web pages • use web page features to find information 	<ul style="list-style-type: none"> • teacher demonstrates features which help users scan pages and find information quickly on web pages e.g. hyperlinks, buttons, headings, menus, ctrl F (Find) • students use the links to answer the questions <ul style="list-style-type: none"> - what is the Internet? - when and where did it begin? - why do people use the Internet? • students will use the following steps: <ul style="list-style-type: none"> - for each of the questions, copy and paste all useful information from the web pages into a Word document - save and print the document - use a highlighter pen or marker to highlight the information which is most useful out of what has been collected for each question • class discussion to collate the answers to the 3 questions 	<ul style="list-style-type: none"> • teacher prepared list of websites to search for information about the internet (with sufficient information to answer the questions set) 	<ul style="list-style-type: none"> • during this session discourage students from 'free' searching – restricting them to selected URLs that will help with the objectives of this session • if students are using a search engine for this task, they will benefit from also being given keywords for the search • trying out searches in advance will help avoid students being overloaded with irrelevant results • ctrl key + F to find a particular word on a web page • links for the session can be saved to work offline, so that no internet connection is needed

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Three			
<ul style="list-style-type: none"> • use a search engine • select good keywords • copy URLs into a document • summarise contents of a webpage in relation to a search topic 	<ul style="list-style-type: none"> • students pick 5 keywords they could use to find information about the research topic given. For example: 'How is the Indian Festival of Holi celebrated?', they could choose keywords: Holi, India, Indian, festival, Asia • students use their keywords to perform searches using a given search engine. They follow links that are produced from the search and copy any good URLs they find into another document next to the appropriate keyword and write a one sentence summary (or notes) to explain what useful information the website gives. Students do this for all five keywords. • students evaluate their results: <ul style="list-style-type: none"> - what did I find out about the topic? - can I answer the question? - which keyword worked best to find the information I wanted? • class/group discussion: <ul style="list-style-type: none"> - did anyone find the perfect website for the information we needed? - what keyword was used to find it? - what have we learned about keywords? - do keywords retrieve the same results in different search engine? 	<ul style="list-style-type: none"> • teacher prepared list of suitable Search Engines • research topic of interest for the search 	<ul style="list-style-type: none"> • up until now students have been using 'known' websites. Another way of finding information on the web is by using Search Engines to find the 'Unknown'. There are a number of different Search Engines and each has its own particular way of searching its database to retrieve and display information. Students will soon discover how frustrating it is to retrieve too much information so it is essential that they pick a Search Engine and learn how to Search on it

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Four			
<ul style="list-style-type: none"> • perform searches on a research topic • select and use keywords • copy URLs into a document • copy an image from a webpage into a document • select useful information • bookmark web pages 	<ul style="list-style-type: none"> • students produce a one page leaflet on a research topic e.g. Giant Redwood trees. To include: <ul style="list-style-type: none"> - a paragraph or bullet points about the topic - a picture - URLs of web pages used to provide information 	<ul style="list-style-type: none"> • research topic of interest 	<ul style="list-style-type: none"> • producing a topic which has a specific and defined end result will help the student produce good keywords and select appropriate information • defining the end goal (e.g. a single page document with 1 paragraph about the topic and a picture), will also help students decide which information to select

Assessment Ideas

To show how the Assessment Idea fully incorporates the Learning Objectives tested, the Assessment Idea is cross-referenced with the Learning Objective table below.

Assessment Idea

Students are provided with a research question which allows them to make a sensible extended search.

Students open a new word document for recording their results. Students use a search engine to find useful information. (1, 2, 6) They save at least one of the useful web pages and bookmark another. (3) Students select one or two short paragraphs of text from the web pages they have visited which best covers the research topic and paste this into their document. (2, 4) (Teacher note: The document does not need to be tidied up). They Save and print the document. (3) Students then select an image related to the research topic and copy this into their document. (5) They copy the URL's of the 3 most useful sites they have visited into the document, (5) making a short comment about what the links contain in relation to the research topic (6) and why they were considered good. (2)

Stage 2 Module – Exploring the Internet	
1	Use internet tools to find information
2	Evaluate relevance and usefulness of material
3	Store and retrieve information
4	Copy and paste information from a website
5	Save URLs and objects from a website
6	Use extended search skills

Teachers should retain the following evidence for moderation:

- copy of assignment question
- students printed/saved document
- screen grab or teacher evidence for book-marked and saved web pages

Resources

Search Engine Watch - A web site about using search engines. There are details of the major search engines and kid-safe services.

<http://www.searchenginewatch.com>

WebWise - The Internet Made Simple By the BBC - Sections include 'Basics', a glossary of Internet related terms, frequently asked questions, archived guides, features and columns, as well as case studies of Internet use.

<http://www.bbc.co.uk/webwise/index.shtml>

What Is?Com - Definitions and explanations of information technology words and concepts.

<http://www.whatis.com>

Internet Searching - Webguide - describes a range of search engines and how they can assist the location of information on the Internet.

http://www.edgazette.govt.nz/webguide/78_8/

Introduction to the Internet - Webguide - Provides a collection of web sites which give general information about the Internet. Includes instructions on how to use search engines, guides to surfing around the Internet and links to sites providing monitoring software for safe surfing.

http://www.edgazette.govt.nz/webguide/78_4/

Yahooligans The Web Guide for Kids - The web site of Yahooligans, a web guide for children.

<http://www.yahooligans.com/>

SofWeb - An initiative of the State of Victoria Department for Education, Employment and Training, Australia. It provides detailed information on topics such as connecting to the Internet, web publishing, searching, Internet safety and Internet communication

<http://www.sofweb.vic.edu.au/internet/intro.htm>

Cinderella Goes to School

This page of the Education World website presents a collection of online quests and activities using Cinderella as a theme.

http://www.educationworld.com/a_curr/curr372.shtml

The Good, the Bad, and the Ugly

Provides a comprehensive list of criteria to use for evaluating a website for suitability, with examples to support each criterion.

<http://lib.nmsu.edu/instruction/eval.html>

An Introduction to Web Research - ICT Learning Experience

Introduces students to accessing and processing information from the Internet. A sample research project website is provided. This directs students' research. Students are also encouraged to interact with others using email. Teachers' notes such as developing web research projects are included. Developed by Te Rapa Cluster as part of the ICT Professional Development Clusters Project.

http://www.tki.org.nz/r/ict/ictpd/web_research_e.php

Gwen Gawith is a good starting point for books on research techniques.

Ripping Into Research - Longman Paul

Information Alive - Longman Paul

Action Learning - Longman Paul

Power Learning - Mills.