

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

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**Cambridge ICT Starters
Initial Steps**

Scheme of Work

4273
Starting Searches
Stage 2 Module



UNIVERSITY *of* CAMBRIDGE
International Examinations

Introduction

In this module students are introduced to searching. They learn to access information from the internet and/or CD-ROM's in different ways and they begin to understand how to choose the most appropriate search technique. They learn about the difference between menus and indexes and how to recognise and use different kinds of links and buttons.

What is Assessed in This Module?

Students will demonstrate how to:

- use buttons, menus, indexes, hyperlinks and other navigation items to search for and find information
- use keywords to search for information
- provide evidence of research undertaken
- select appropriate keywords
- select appropriate results

To Start This Module You Will Need

- connection and access to the internet
- curriculum-based CD-ROM information sources e.g. CD-ROM encyclopedia like Encarta
- some prepared search questions
- addresses of useful information websites

Underpinning Knowledge

Before commencing this module it is recommended that students know

- how to select icons
- how to use print-based contents pages and indexes
- that an A-Z index and contents list in a book will help them to find information
- how to use book versions of an encyclopedia (or dictionary)

General Principles and Procedures

The following are further suggestions and considerations:

- if the internet is used for this module, a simple explanation of browser software and how to use it would be useful
- any sources of digital information can be used for this module, such as CD-ROMs or information websites on the internet, but ideally a combination of many different sources would be beneficial
- when using the internet with beginners, it is often better to work within a selected website, so that students are not baffled by masses of inappropriate material
- websites can be saved offline. This will prevent inappropriate sites being visited, the need for real-time connection and will improve the speed of pages loading for centres where connections are bad
- using prepared links in a starter page or saved on the desktop will avoid students having to type long URL's
- students will benefit from comparing ICT based searches to a practical search session using reference books
- searches for this level should have specific results as an end point (like an answer to a question such as "When was <someone> born?") The questions should be picked to encourage using a range of search techniques and should be easily obtainable from the sources given to the students
- at this level the students will probably benefit more if the sources are specified rather than by searching freely on the internet or from a selection of CD-ROMs

- unless the school has filters in place, the use of search engines is not recommended at this level – students can achieve all the LO's from a more limited set of resources
- students need a reason to be searching, so providing meaningful and real contexts is important. Provide the opportunities for integration into classroom themes for relevance
- encourage exploration, risk-taking and sharing in sessions
- integrate learning from this module into classroom practice as often as possible so that students can appreciate for themselves the benefit these skills can bring

Scheme of Work

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan One			
<ul style="list-style-type: none"> handle information methodically 	<ul style="list-style-type: none"> use a current event or a theme of student interest as motivation for this work (the topic should be one which allows information to be collected from a CD-ROM) students brainstorm what they now know about the topic. Ideas are recorded in groups then shared with the class 	<ul style="list-style-type: none"> 5 W and 1 H ('who, what where, when, why and how') prompt chart for students topic information sheet class chart 	<ul style="list-style-type: none"> brainstorming: In groups of four for a short period of time (two to four minutes) take turns to make a suggestion. One of the members could record or the paper could be passed around for each person to write their suggestion. Accept all spellings, as this is a quick idea generating activity. Another person could read out the suggestions for the teacher to write on a large sheet of paper. Each group adds ones that have not been mentioned previously

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan One Continued			
	<ul style="list-style-type: none"> • teacher models use of the 'who, what, where, when, why and how' prompts to write some questions about what students would like to know or details that they need to check. Discuss the importance of using keywords when searching for information (use a highlighter pen to highlight the keywords) • teacher and students decide together which information is ready to be put on the topic information sheet • students discuss what information they need to collect – they combine this into a list • discuss what has been learned and record new learning on a chart for future reference 		<ul style="list-style-type: none"> • students will require information skills. Regardless of the format of information source (print-based or electronic) this is fundamental. A common information processing cycle format is: <ul style="list-style-type: none"> - deciding e.g. what do we know already/what do we need to know? Students use brainstorming at this stage - gather information - use information - record information - present information - evaluate (did we find out what we wanted to?) • during learning, identify the stage students are at on the information processing cycle • it is important to relate this method to classroom topics of study rather than as a theory in isolation

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Two			
<ul style="list-style-type: none"> • use buttons (back/forward arrows, scroll bars) and A-Z index to navigate around a CD-ROM encyclopedia • skim and scan information for relevance 	<ul style="list-style-type: none"> • teacher models the use of a CD-ROM encyclopedia index. Uses back and forward arrows and scroll bars to find the information to answer one of their questions • revise the CD-ROM functions and revisit the questions/brainstorm from last session • students work in groups using one of the questions from the list made in the previous activity • students report back on the information they located and this is added to the topic information chart/sheet • teacher records any new discoveries on the class chart 	<ul style="list-style-type: none"> • 5 W and 1 H ('who, what where, when, why and how') prompt sheets for each group of students • list of information needed from previous session • class chart 	<ul style="list-style-type: none"> • there are better results if students work in groups of two or three at the computers. They can support each other during the learning and it means fewer stations for the teacher to visit if in a computer lab situation. Each student has a key role e.g. 'keyboarder', 'recorder of new discoveries' and 'note taker to record relevant information' and all make suggestions to support the activity. Keep the students in these same groups and swap roles in other sessions • be aware that CD-ROM encyclopedias are just like print-based encyclopedias – there are reputable ones and there are others that are not. Apply the same selection criteria as you would if purchasing print-based encyclopedias for your library

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Three			
<ul style="list-style-type: none"> use find function to find key words in a page 	<ul style="list-style-type: none"> the focus of this session will be on the use of the find function (e.g. 'find' in the menu will find a key word on a page). Use either a find menu on a CD-ROM or the find function in a web page. Teacher demonstrates how to use this and locate the key words it finds students can use any of the following activities: <ul style="list-style-type: none"> scavenger hunts: students have a checklist of information to locate choose a destination for a holiday (place to live) and provide three reasons to justify that choice students then contribute to a class discussion. Teacher records any new discoveries on the class chart 	<ul style="list-style-type: none"> teacher prepared scavenger hunts class chart 	<ul style="list-style-type: none"> teachers need to know the CD-ROM well themselves in order that when a question is posed, the answer is likely to be found students will need to be reminded that a CD-ROM is just one source of information and it is a good idea to check facts from another source as well e.g. in a book

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Four			
<ul style="list-style-type: none"> • introduce icons (e.g. to open multimedia sources, X to close windows etc.) • introduce hyperlinks and buttons with webpages or hypertext or hotspots within CD-ROMs 	<ul style="list-style-type: none"> • revise the findings from last session • introduce the multimedia icons • provide students with a challenge to locate the various items or answers to a quiz. They could report back where the item was located and how they located it • introduce browser features, like links and buttons • provide students with a challenge to locate the various items or answers to a quiz. They could report back where the item was located and how they located it 	<ul style="list-style-type: none"> • multimedia quiz for students to complete in pairs for CD-ROM • multimedia quiz for students to complete in pairs for an information website 	<ul style="list-style-type: none"> • when using the internet with beginners, it is often better to work within a selected website, so that students are not baffled by masses of inappropriate material • websites can be saved offline. This will prevent: <ul style="list-style-type: none"> - inappropriate sites being visited - the need for real-time connection - will improve the speed of pages loading for centres where connections are bad • using prepared links in a starter page or saved on the desktop will avoid students having to type long URL's

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Five			
<ul style="list-style-type: none"> introduce rewriting text into own words 	<ul style="list-style-type: none"> in pairs, students create questionnaires using the CD-ROM encyclopedia as the information source or an information website. Questionnaires are swapped and completed by another pair of students 	<ul style="list-style-type: none"> CD-ROM or saved website suitable for generating simple questions 	<ul style="list-style-type: none"> at this level the students will probably benefit more if the sources are specified rather than by searching freely on the internet or from a selection of CD-ROMs providing meaningful and real contexts is important opportunity for integration into classroom themes

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Six			
<ul style="list-style-type: none"> • select keywords • search purposely 	<ul style="list-style-type: none"> • students work in pairs to choose a suitable keyword for each question. They note this down • students look at other groups choices and discuss which keyword might be best • students perform keyword searches using their own and other keywords. They record the results (answers to the questions) against each keyword • students discuss which keywords worked best and why 	<ul style="list-style-type: none"> • digital resource e.g. CD-ROM or information website • list of questions suitable for keyword searches 	<ul style="list-style-type: none"> • selecting good keywords is the key to getting good and quick search results – encouraging students to experiment and use trial and error will help them to learn for themselves which sort of keywords are likely to work • encouraging discussion and sharing of results in the class after a search for information will speed up the process of learning about keywords

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Seven			
<ul style="list-style-type: none"> • choose the most appropriate search techniques for the purpose • select appropriate results 	<ul style="list-style-type: none"> • students search on their own or in pairs for information to answer a particular question • students record the information found • students discuss as a class which information is best and which is useless and can be discarded 	<ul style="list-style-type: none"> • prepared question/s about a topic of interest or relevance to the students • information resource relating to the questions 	<ul style="list-style-type: none"> • the style of question and the quality of the resource can be engineered by the teacher to make this an easier or harder task • this process can be done often as a 5 minute class activity to find snippets of information in the context of other work e.g. what does hibernate mean? (in the context of bears)

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.

Provide the students with a multimedia CD-ROM with navigating and search facilities or a saved website. Students use the information resource to find answers to questions which can be obtained using buttons, menus or indexes (1). Students are then asked to perform a keyword search to answer a question (2). Students will write-up the results of the keyword search (3) Students will be given another question to answer by keyword search – they write down their choice of keyword (4) and a brief summary (or copy) of the first 5 results of their search (3). Students tick the results of the keyword search which were most useful and put a line through any result which could be discarded as useless. (5)

	Stage 2 Module – Starting Searches
1	Use buttons, menus and indexes to search for and navigate to information
2	Use keywords to search for information
3	Provide evidence of research undertaken
4	Select appropriate keywords
5	Select appropriate results

Teachers should retain the following evidence for moderation:

- student questions
- student answers and notes