

# Guide to Research

*Here at the Otago Museum's Search Centre, we're all about research, which means being able to find and use information. Often, however, the process of doing this turns out to be a lot more complicated than it sounds, which is why we've put together this handy guide to help you out.*

## Why Research?

Many people believe that research is something that is only undertaken by people like scientists, but in fact, absolutely anyone can carry out research in order to answer specific questions, complete projects and assignments, find out more about something interesting, or increase their general knowledge.

## The Research Process

All too often we find a topic of interest and start collecting every little bit of information there is to find about it. This leads to 'information overkill', with so much 'stuff' we don't know what to do with it all. Suddenly our interesting topic has become an overwhelming obstacle! The answer is to break the process down into five logical steps.

## Step 1: Identify Your Topic

The first, and most important step is to find a focus and limit your search to one aspect. To do this we need to identify something specific that we want to find out about. Many people find that the easiest way of doing this is to 'brainstorm' your ideas on paper, beginning with the broad topic that you are interested in and then subgrouping until you have reduced the size of your search. Each time you make a subgroup, choose only one pathway as this will help you to focus your research.

## Step 2: Write Your Focus Question

The next step is to take the topic of interest that you have identified from your brainstorm in step 1, and turn it into a question, eg. "How cars are made" = "How are cars made?" This helps to focus your research even further by making it clear what exactly it is you intend to answer.

## Step 3: Gather Your Information

This is the main part of the research process and usually the most exciting! Armed with your research question from step 2, you are now in a much better position to decide what information you need and what is not directly relevant. There are many different ways to gather information and these will vary depending on your particular focus, but here are a few ideas to get you started:

- Observe or experiment - remember to record your observations!
- Talk to professionals who may be able to help you (for example, museum and library staff, scientists, academics and other relevant local specialists)
- Refer to work that other people have already done on your topic. This can include:

**Books:** you can check out the many wonderful and helpful books at the Otago Museum's Search Centre, or do a subject search on your local library catalogue to find the books best suited to your topic.

**Journals and magazines:** these can contain some very informative articles, but these articles can sometimes be quite tricky to find, so make sure you ask your librarian for some help with this.

**CD ROMS:** computers can also be a great source of information - why not take a look at the great educational CD ROMS and encyclopaedias that we have at the Search Centre?

**Internet:** this can be a valuable tool as well, although you need to be very careful that the information you find here is accurate and reliable. Sites with ".edu" or ".ac" in their web address are good ones to start with, as these are legitimate academic sites set up by universities and other educational providers.



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No matter what sources you use to gather your information, there are certain pointers to always keep in mind:

- Stick to your research question! Don't get sidetracked or 'bogged down' with irrelevant material. If you find something really interesting that isn't directly related to your current research, you can always go back to it at another time as a whole new research project.
- Remember to check your facts - not everyone who writes about something knows what they're talking about! A good way to do this is to check where they got their information from, which you can do by taking a look at their footnotes or endnotes and bibliographies. Also take note of the dates of publication for your material - is it the most up to date information you can find on your topic?
- Take good notes on your information as you collect it. This will make your job much easier when you come to process your information.

## Step 4: Process Your Information

This step can be a bit tricky, as you now have to make sense of all the information you have gathered. It may help to make a 'mind-map' in the following way:

- i. Write down on paper every piece of information that you have found out.
- ii. Now highlight all the bits that are key points (the information that is directly relevant to your question).
- iii. Highlight in a different colour all the supporting points (this is the information that backs up your key points by explaining them a bit more, or providing some additional in-depth information).
- iv. Now try to link all your points together, number and group them into a logical order that addresses your question.

## Step 5: Present Your Information

The mind-map that you have just made is the basis of your research, but it's not much good unless other people can follow it and understand

what you've done. Here are some handy tips to help you with the last step in the process:

- Decide who will be reading your information - how should it be presented to best reach this audience?
- Don't just copy down other people's ideas - make sure you understand what you're trying to say, and say it as clearly and concisely as you can. This will make it a pleasure to read or listen to.
- Don't be afraid to disagree with what others may write about your topic. If you have read all the information you can find and have a different theory, that's fantastic! This is what research is all about. Just make sure you reason through what you say so that others can follow your logic and understand your ideas. If you want to use other people's ideas, that's fine too - you can either quote them directly, or reword what they have said. You just have to remember that either way, you must always provide a reference to their work to show that you are not just stealing their ideas (this is called plagiarism).
- Always back up what you say. Forming your own conclusions demonstrates that you understand the information, but you have to show where you've come from in order to be taken seriously.
- Order your material in a logical fashion - have an introduction, a main body of information and a conclusion.

Remember that this process is just one way to go about research, but there may be other methods that work better for you. Give it a go and see what you come up with!

## Need more information? Check out these helpful websites:

Research and Project Writing:

<http://www.ipl.org/div/aplus/>

<http://www.crlsresearchguide.org/>

Referencing and Citation:

<http://www.mdx.ac.uk/WWW/STUDY/Refer.htm>

<http://www.mdx.ac.uk/WWW/STUDY/Refer.>

