STAGE 1: RESEARCH PRACTICES
A Preparatory Course for Stage 2 Research Project

Mrs Davies & Mrs DeGraaf
2015

STUDENT WORKBOOK
## Term 2

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Activity</th>
<th>Learning Intentions</th>
<th>Subject Outline Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon 22/6 W9T2</td>
<td>Introduction:</td>
<td>9am – 2pm Seminar</td>
<td>Students will:</td>
<td>Research Approaches Topic 2: Research Methods *Folio Task 1: Research Approaches – Guest Speaker Jastrow Canlas from Flinders University</td>
</tr>
<tr>
<td></td>
<td>1. Approaches to Research</td>
<td>- Worksheets</td>
<td>- Demonstrate an understanding of why research is necessary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Ethical Research</td>
<td>- Guest speaker</td>
<td>- Understand the difference between qualitative and quantitative research processes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Designing a Research Question</td>
<td>- Group discussions</td>
<td>- Identify appropriate research processes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Brainstorming</td>
<td>- Understand the assessment for Research Practices and the Course Outline</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Formulate an area of interest for individual research</td>
<td>Research Skills Topic 1: Planning Refine a specific research question from a broad research topic Conduct honest, safe, and ethical research *Folio Task 2: Research Skills Proposal (this will formulate the draft for the student’s Stage 2 Research Project)</td>
</tr>
<tr>
<td>Wed 24/6 W9T2</td>
<td>Research Processes:</td>
<td>- worksheets</td>
<td>- participate and gain an understanding and awareness of the need to be responsible and ethical researchers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. The difference between Processes and Sources</td>
<td>- brainstorming exercises to identify processes relevant to their topic / question</td>
<td>- learn what ethical considerations need to be made when conducting research.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Course Overview</td>
<td>- exemplars of proposals</td>
<td>- Provide the teacher with an update on the interview process being undertaken</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Assessment Task 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fri 26/6 W9T2</td>
<td>Research Tools: Planning</td>
<td>Guest Speaker from BAE Systems (Mr John Davies). Students begin to create a ‘plan’. Folio Task 2: Research Skills Proposal</td>
<td>Students will:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Demonstrate an understanding of the 7 Capabilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Identify an appropriate capability/ies relevant to their proposed topic / question</td>
<td></td>
</tr>
<tr>
<td>W10T2</td>
<td>The 7 Capabilities + the Outcome</td>
<td>- Worksheets</td>
<td>- Understand how to show development of their capability</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Exemplars</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Folio Task 2: Research Skills Proposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Drafting, glossaries, photos,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week</td>
<td>Task</td>
<td>Details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| W1T3 | Recording Research: | Folios  
CH/OP Logs  
Journals  
- Exemplars  
- Templates  
- Discussion  
- Creation of own  
Students will:  
- understand how to record evidence of their own research  |
| W2T3 | Research Skills Development 1: Interviews and Experts | - Exemplars  
- Templates  
- Discussion  
- Creation of own  
Students will:  
- Understand how to gather data through interviewing  
- Begin to plan an interview with an expert associated to their question and topic that they have identified  
- Have the tools to go about conducting their first formal interview before term 4  |
| W3T3 | Research Skills Development 1: Interviews and Experts | - Exemplars  
- Templates  
- Discussion  
- Creation of own  
Students will:  
- Understand how to gather data through interviewing  
- Begin to plan an interview with an expert associated to their question and topic that they have identified  
- Have the tools to go about conducting their first formal interview before term 4  |
| W4T3 | Research Project Student Expo | |
| W5T3 | Research Skills Development 2: Survey and Questionnaire Construction | - Exemplars  
- Templates  
- Discussion  
- Creation of own  
Students will demonstrate an understanding of:  
- How to construct a survey / questionnaire  
- How to analyse data collected from surveys and questionnaires.  |
| W6T3 | Research Skills Development 2: Survey and Questionnaire Construction | |
| W7T3 | Research Skills Development 3: Bibliographies, Citations, Referencing | - Exemplars  
- Templates  
- Discussion  
- Creation of own  
Students will demonstrate an understanding of:  
- How to use SLASA online reference generator  
- How to reference Fieldwork sources  
- Footnotes vs endnotes vs intext referencing  |
| W8T3 | Research Skills Development 3: Bibliographies, Citations, Referencing | |
| W9T3 | YR 11 CHRISTIAN LIFE CAMP | |
| W10T3 | Research Skills Development 4: Limitations and Reliability of Sources | - CRAAP Test  
- Annotations  
- Worksheets  
- Locate own sources  
- ‘Women Know Your Limits’ Youtube video  
Students will demonstrate an understanding of:  
- The limitations of sources  
- What makes a source reliable  
- bias  |
| | | Research Skills Topic 2: Development  
- determine what information from a source is appropriate and relevant for a specific purpose  |
<table>
<thead>
<tr>
<th>Week</th>
<th>Task</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>T4</td>
<td><strong>Exploring Research Skills 1</strong></td>
<td>Students are to collect examples of sources (2-4) concerning their topic that draw upon both qualitative and quantitative resources. Students are to collate these sources annotating the purpose, audience, usefulness and limitations of the use of source. These annotations can include commentary on what the source is, where it was found, who the intended audience is, why the source may have been produced, how effective it is as a source, bias, reliability, currency, validity etc. Students will demonstrate an understanding of analysis.</td>
<td></td>
</tr>
<tr>
<td>T4</td>
<td><strong>Research Skills Development 5: Critical Approaches to Internet Sources</strong></td>
<td>Students will locate a variety of internet sources in relation to their chosen topic. They will demonstrate: - an understanding of how to critically analyse sources through annotations and/or a Source Analysis sheet - an ability to use search engines such as 'Google Scholar' - An ability to use a variety of search terms. Research Skills Topic 2: Development Critically approach sources on the internet.</td>
<td></td>
</tr>
<tr>
<td>T4</td>
<td><strong>Exploring Research Skills 2</strong></td>
<td>Students are to analyse one of the research instruments they have produced. They will consider the usefulness of the instrument, the purpose of the instrument, the limitations of the instrument and the appropriateness of the instrument for the student’s research question. The students are to comment on specific features of the text which may or may not include specific reference to question types, language, formatting, accessibility etc. Students will demonstrate an understanding of analysis.</td>
<td></td>
</tr>
</tbody>
</table>
| T4    |                                                                      | *SOURCE ANALYSIS TASK 1  
Analysis of Sources  
Exploring Research Skills  
Development  
Students will compile between 2-4 sources from a variety of locations, including the internet, print media and visual texts i.e. YouTube and advertising. Students will annotate these sources (up to 500 words) providing a variety of short summations referring to the usefulness and limitations of each source. |
| T4    |                                                                      | *SOURCE ANALYSIS TASK 2  
Analysis of a Research Instrument  
Exploring Research Skills  
Development  
Test conditions – timed task (90mins). A 500 word multimodal, oral or written analysis that reflects critically on the research instrument produced. Students are to indicate their understanding of the research instrument and the limitations/appropriateness for their research question. |
| T4    | Finalise ALL FOLIO TASKS + SOURCE ANALYSIS TASKS                     |                                                                      |                                                                      |
| T4    | Finalise ALL FOLIO TASKS + SOURCE ANALYSIS TASKS                     |                                                                      |                                                                      |
| T4    | EXAMS – Individual Formal Discussions at times to be arranged – submission of Folio and Source Analysis Tasks |                                                                      |                                                                      |
| T4    |                                                                 |                                                                      |                                                                      |
| T4    | Award’s Night                                                       |                                                                      |                                                                      |
## ASSESSMENT OVERVIEW

<table>
<thead>
<tr>
<th>Name of Assessment (Assessment Type)</th>
<th>Description of Assessment (a description of the flexible, and where appropriate, negotiable, ways in which students show evidence that demonstrates their learning against the performance standards, including to the highest standard)</th>
<th>Assessment conditions as appropriate (e.g. task type, word length, time allocated, supervision)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOLIO TASK 1 (20%)</strong>&lt;br&gt;Quantitative and Qualitative Methods Workshop Exploring Approaches to Research Research Methods</td>
<td>Students will participate in a workshop presented by an invited guest researcher. The workshop will teach students how to identify different types of research methods used. Students will respond to the workshop through the completion of various worksheets that will ask them to demonstrate their understanding of various research methods.</td>
<td>Workshop length 90mins. Worksheet responses as distributed by the presenter.</td>
</tr>
<tr>
<td><strong>FOLIO TASK 2 (20%)</strong>&lt;br&gt;Writing a Proposal Exploring Research Skills Planning</td>
<td>Students will identify, in consultation with their teacher and through discussion with their peers, an individual research question. They will prepare a report about their chosen question identifying what the broad topic is, the specific research question, a set of guiding questions, appropriate research methods, ethical considerations and a timeline (management plan).</td>
<td>500 word multimodal, oral or written report.</td>
</tr>
<tr>
<td><strong>FOLIO TASK 3 (30%)</strong>&lt;br&gt;Creation of a Research Instrument Exploring Research Skills Development</td>
<td>Students present 2 research instruments that have been created for the purpose of researching their chosen topic. These instrument(s) are to be designed and implemented by students who will use them to gain insight into their topic. Students will conduct the research using these instruments, applying their skills in the area.</td>
<td>Instruments may include, but are not limited to; survey, interview, observation, experiment, practical application (as appropriate to their research area). Student application of skills will be assessed through the creation and use of 2 research instruments.</td>
</tr>
<tr>
<td><strong>SOURCE ANALYSIS TASK 1 (15%)</strong>&lt;br&gt;Analysis of Sources Exploring Research Skills Development</td>
<td>Students are to collect examples of sources (2-4) concerning their topic that draw upon both qualitative and quantitative resources. Students are to collate these sources annotating the purpose, audience, usefulness and limitations of the use of source. These annotations can include commentary on what the source is, where it was found, who the intended audience is, why the source may have been produced, how effective it is as a source, bias, reliability, currency, validity etc.</td>
<td>Students will compile between 2-4 sources from a variety of locations, including the internet, print media and visual texts i.e. YouTube and advertising. Students will annotate these sources (up to 500 words) providing a variety of short summations referring to the usefulness and limitations of each source.</td>
</tr>
<tr>
<td><strong>SOURCE ANALYSIS TASK 2 (15%)</strong>&lt;br&gt;Analysis of a Research Instrument Exploring Research Skills Development</td>
<td>Students are to analyse one of the research instruments they have produced. They will consider the usefulness of the instrument, the purpose of the instrument, the limitations of the instrument and the appropriateness of the instrument for the student’s research question. The students are to comment on specific features of the text which may or may not include specific reference to question types, language, formatting, accessibility etc.</td>
<td>A 500 word multimodal, oral or written analysis that reflects critically on the research instrument produced. Students are to indicate their understanding of the research instrument and the limitations/appropriateness for their research question.</td>
</tr>
<tr>
<td>TIME</td>
<td>TOPIC</td>
<td>LEARNING INTENTION</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>L1 (9-9.30)</td>
<td>Room 207</td>
<td>Demonstrate an understanding of why research is necessary</td>
</tr>
<tr>
<td></td>
<td>Introduction – Attitude Determines Your Outcome (excuse the pun!!! 😊 )</td>
<td>Understand how to approach research</td>
</tr>
<tr>
<td></td>
<td>Room 207</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.30-10.15am</td>
<td>Guest Speaker: Jastrow Canlas</td>
<td>Demonstrate an understanding of ethical research</td>
</tr>
<tr>
<td>Room 207</td>
<td>“My research falls within the realm of neurobiology and I’m interested in the perception of pain, specifically chronic pain. In particular, we are interested in the role of this particular enzyme (sphingosine kinase isoform 2) in persistent pain.”</td>
<td></td>
</tr>
<tr>
<td>10.15 -10.35am</td>
<td>Ethical Understanding (one of the 7 Capabilities)</td>
<td>The dos and don’ts of Research</td>
</tr>
<tr>
<td>Room 207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RECESS (10.35-10.55am)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L3 (10.55-11.20)</td>
<td>Room 207</td>
<td></td>
</tr>
<tr>
<td>L4 (11.25-12.20)</td>
<td>Room 207</td>
<td>Formulate an area of interest for individual research</td>
</tr>
<tr>
<td>Room 207</td>
<td>Getting Started - Topic ideas + Newspaper Articles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Mind Maps + Lotus Diagrams</td>
<td></td>
</tr>
<tr>
<td>L5 (12.20-1.00pm)</td>
<td>Room 207 + 206</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Question Design and Initial Investigation</td>
<td></td>
</tr>
<tr>
<td>LUNCH PROVIDED THEN DISMISSAL at 2pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td>Research Processes 1. The difference between Processes and Sources 2. Course Overview 3. Assessment Task 2</td>
<td>Understand the difference between qualitative and quantitative research methods</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>Friday – Planning – Excel as a Research Tool – Guest Mr John Davies</td>
<td></td>
</tr>
</tbody>
</table>
Individual Activity: Source Analysis
‘The Optimist vs the Pessimist’ Youtube Clip
Watch ‘The Optimist vs the Pessimist’ on the Youtube (https://www.youtube.com/watch?v=gtMiw_YPUIU) and then answer the following questions.
1. What type of source?
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
2. What are the two acronyms used in the clip?
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
3. To what extent is the information reliable?
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
4. How could you use this information to further your research?
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
Individual Activity: Source Analysis
‘The Gratitude Experiment’ WellCast Youtube Channel

Watch ‘The Gratitude Experiment’ on the WellCast Youtube Channel (https://www.youtube.com/watch?v=U5IZBjWDR_c) and then answer the following questions.

1. What was the main point of the source?

2. Write down at least 3 Key Ideas that you learnt from the source.

3. What type of source is this?

4. Who is the author / producer? (this could be an individual or an organization)

5. Why was the source produced?

6. When was the information published and is the content current?

7. To what extent do you believe the information presented? Why / why not?

8. How does this source correlate (agree with / connect) with the previous one?

9. What could you do to further check the reliability of the information presented?

10. What can you do with the information to further develop your own project?
11. To what extent do the ideas presented in these two sources correlate with the beliefs of Christians? Refer to the quotes below from the Bible (a religious text = a source).

Proverbs 17:22 New International Version (NIV)
22 A cheerful heart is good medicine,
   but a crushed spirit dries up the bones.

Philippians 2:14-15 New International Version (NIV)
14 Do everything without grumbling or arguing, 15 so that you may become blameless and pure, “children of God without fault in a warped and crooked generation.”[c] Then you will shine among them like stars in the sky

Colossians 3:23 New International Version (NIV)
23 Whatever you do, work at it with all your heart, as working for the Lord, not for human masters,
The Importance of Research - Mr DeGraaf’s Cars!

List at least 5 other reasons why research is important in society...

__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
### FOLIO TASK 1 (20%) Exploring Approaches to Research – Research Processes

**TASK DETAILS:** For this activity, you will need to listen to the guest speaker to fill in the table below. You may need to ask the guest questions to find out the information that you need to complete the worksheet. This is an individual task.

<table>
<thead>
<tr>
<th>Guest Speaker’s Name:</th>
<th>Qualifications and Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation and Company / Employer:</td>
<td>Specific Research Question:</td>
</tr>
<tr>
<td>Broad Topic of Research:</td>
<td></td>
</tr>
<tr>
<td>Research Processes used:</td>
<td>Main Research Process:</td>
</tr>
<tr>
<td>Ethical Considerations made during research and in planning research:</td>
<td></td>
</tr>
<tr>
<td>Outcome – what are you hoping to achieve through conducting your research?</td>
<td></td>
</tr>
</tbody>
</table>
Ethical Considerations

How would you define the term ethics?

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________

Betta Splendens (Siamese Fighting Fish)

Have a look at the following website http://betta-splendens.wix.com/research-project. This is the outcome of a Research Project.

What do you think the student needed to consider in terms of ‘ethical research’? Make a list here of at least 5 things that you would need to consider.

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
In some SACE subjects you will carry out research.

This may take a variety of forms, such as a research project, an interview, a discussion, an experiment, an essay, or an investigation.

When conducting research you must be honest and ethical. You need to follow these guidelines:

1. Be sensitive to other people’s feelings.
2. Respect the dignity and worth of all people involved in your research. Be aware of their age, gender, cultural or language background, disability, or socio-economic status.
3. Make sure that people who give you information understand what your research is about and what you want them to do. Make sure that people who give you information understand how the information you get from them will be used.
4. Make sure that you get their permission to use the information that you gather.
5. Make sure that you gain appropriate permission from your school and parent or legal guardian.
6. Keep confidential any personal, identifying information and information that may not have been intended for other people.
7. Use information from the research only for the purpose for which you asked permission.
8. Acknowledge other people’s words and ideas, and make sure that the work you produce is your own.
9. Take careful consideration of any legal, cost, or safety matters when you are deciding on your topic or question.
10. Take careful consideration that your research question or topic is appropriate and not offensive to the participants or your supervisors.
11. Have your research questions approved by your teacher before you start your research.
12. Make sure that you feel safe at all times. Do not put yourself at risk. If you have any concerns it may be wise to take an adult with you.
C. ETHICAL RESEARCH AND THE RESEARCH PROJECT: WHAT DOES THIS MEAN IN PRACTICE?

Every person involved in research activities needs to be protected from harm.

INTEGRITY AND HONESTY

RESPECT FOR OTHER PEOPLE
D: Ethical considerations: classroom topics for discussion

What specific ethical considerations may be involved in:

1. Interviewing other Year 12 students about a topic
2. Filming people you don’t know and using the footage in a documentary
3. Filming people you do know and using the footage in a documentary
4. Using a well known logo on a poster
5. Undertaking a specialist diet to research the effects upon the human body
6. Teaching younger students a particular skill e.g. skateboarding
7. Quoting people you interview
8. Using other Year 12 students as a trial participant or tester
9. Using YouTube clips to make a ‘mashup’
10. Publishing your Research Project online
11. Interviewing residents of an Elderly Care Home
12. Conducting surveys with people you don’t know
13. Interviewing people who have English as their second language
14. Taking Year 8 school students to the zoo
15. Asking one group of students for information about another group of students
16. Conducting observational research in a kindergarten
17. Using another student’s work in your research project
18. Using ‘Facebook’ for your research
19. Using somebody’s idea about a research method
20. Using the machines in the Design and Technology rooms for your research
21. Using animals in your research
22. Having research topics related to ‘crime’ or ‘extreme sport’
23. Downloading pictures from the Internet
24. Using a personal letter as a source for your research
25. Asking very personal questions of people
26. Using your work from another subject in your research project
27. Using ‘cut and paste’ extracts from the Internet
28. Involving someone with a mental illness in your research
29. Interviewing someone from a particular religious background
30. Your reaction to someone who no longer wishes to be part of your research
31. Conducting research within a business
32. Conducting a scientific experiment
**Ethical Consideration Activity**

You will be allocated to a small group and assigned specific topics for discussion from the list on the previous page. In your group, talk about the following:

1. what are the ethical issues?
2. How can you mitigate (overcome / solve / manage) these ethical issues? Be specific.

Write your responses in the table provided below. Elect one person from your group to feedback your discussion to the rest of the class.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Ethical Issues</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ideas for Research

My notes on how to choose a good research topic!
Mind Maps and Lotus Diagrams

Mind Maps and Lotus diagrams are useful tools to organizing thoughts about a topic and exploring ideas.

A free online application for creating a Mind Map is bubbl.us – use your College gmail account to log in. See p.22-24 for examples of Mind Maps.

On the next page, a Lotus diagram can be used. Note that the coloured boxes connect to each other, so whatever you write in the yellow box stays the same in the next yellow box.

Small Group Discussion: Planning a Research Topic and Question

You will be allocated to a Yr 12 student in groups of 2-3. Feel free to ask the Yr 12 student questions about how they developed their research topic and questions and how their research question was refined. Utilise the brainstorming tools (Mind Map and Lotus Diagrams) to start organizing your ideas for a research topic and question.

More inspiration can be found on p.26-34.

By the end of this session, you should have some idea of a research topic and question that meets the following criteria:

- specific
- current
- researchable
- allows for a VARIETY of Research PROCESSES to be employed

If you don’t understand what this all means, ask a year 12!
They are here to cheerfully and willingly help you. 😊
FOLIO TASK 2 (20%)

Writing a Proposal
Exploring Research Skills - Planning

When choosing a topic for investigation for your Research Project, it is important to consider whether or not your ideas are:

1. Appealing
2. Realistic (timeframe, expertise, skills, ethical clearances...)
3. New (you are not just finding out information that you already know!... it must be about something that is new to you...)

BRAINSTORMING (or sometimes known as mind-mapping) are good exercises to help you decide on not only a topic, but a specific area for research and how you will go about researching (refer to previous activity). The key to successful brainstorming is to NOT DISCOUNT any ideas that come into your mind. You should set yourself a time limit for brainstorming. The time limit should be short to avoid over-thinking ideas.

TASK DESCRIPTION:

Create a written draft proposal of a research question and topic that shows refinement of the topic and thought about the various aspects of planning a Research Project.

TASK DETAILS:

READ ALL OF THESE INSTRUCTIONS CAREFULLY BEFORE STARTING...

1. In order to choose a topic and refine a question, you should do at least two brainstorms and put these into your folio. Use the A3 paper provided to this.
2. The first brainstorm should be about a TOPIC. When you have brainstormed your topic, look at what you have written – decide which ones are appealing, realistic and will give you a chance to discover NEW information. Mark these ones clearly on your brainstorm.
3. Select one of the topics and complete a second brainstorm. During this brainstorm you should write down all the ideas that you have about this topic, questions you have, facts you know...
4. From this second brainstorm, conduct some brief, preliminary research on several ideas that have come out and begin to formulate a question based on what you have written down. Write down your main question and then brainstorm (yet again) what you need to investigate in order to address this question, what research methods are going to be helpful and any contacts / sources of good information that you have discovered in your initial research. If you get stuck and there are no juices flowing about this topic, then go back to your first brainstorm and start again!
5. Complete the template attached – this forms the basis of what is known as your proposal. Select an appropriate capability that would be explored and developed in your project - tick the box of the one that applies the most (see definitions on the following page and then give a brief reason as to why you think this capability fits in with your project idea. Leave the ’ethical considerations’ AND ’outcome’ part until later.
6. Show your question and idea to your teacher and peers. Get other people’s opinions about what you should do as they may have an idea that you hadn’t considered. Write this feedback on your template – make further refinements (changes) where necessary.
7. An example of this process has been provided for you after the following template. Some ideas for research project topics and questions are included on the next few pages after the template and exemplar. These may inspire you in the development of your own topic. You may like to use / choose one of these or come up with your own.
PRESENTATION REQUIREMENTS:

3 x A3 brainstorming sheets in folio with annotation down the bottom as per exemplar

2 x A4 pages of a draft proposal including timeline using the template provided (this can be downloaded from Weebly).

LEARNING REQUIREMENTS:

- Demonstrate knowledge and understanding of research approaches
- Develop specific research skills

ASSESSMENT DESIGN CRITERIA:

KU2 Knowledge and understanding of research approaches.

D1 Development of specific research skills.
Capabilities...

Literacy
In Research Project B, students develop their capability for literacy by, for example:
• communicating with a range of people in a variety of contexts
• asking questions, expressing opinions, and taking different perspectives into account
• using language with increasing awareness, clarity, accuracy, and suitability for a range of audiences, contexts, and purposes
• accessing, analysing, and selecting appropriate primary and secondary sources
• engaging with, and reflecting on, the ways in which texts are created for specific purposes and audiences
• composing a range of texts — written, oral, visual, and multimodal
• reading, viewing, writing, listening, and speaking, using a range of technologies
• developing an understanding that different text types (e.g. website, speech, newspaper article, film, painting, data set, report, set of instructions, or interview) have their own distinctive stylistic features
• acquiring an understanding of the relationships between literacy, language, and culture.

Numeracy
In Research Project B, students develop their capability for numeracy by, for example:
• using appropriate language and representations (e.g. symbols, tables, and graphs) to communicate ideas to a range of audiences
• analysing information displayed in a variety of representations and translating information from one representation to another
• justifying the validity of the findings, using everyday language, when appropriate
• applying skills in estimating and calculating, to solve and model everyday problems using thinking, written, and digital strategies
• interpreting information given in numerical form in diagrams, maps, graphs, and tables
• visualising, identifying, and sorting shapes and objects in the environment
• interpreting patterns and relationships when solving problems
• recognising spatial and geographical features and relationships
• recognising and incorporating statistical information that requires an understanding of the diverse ways in which data are gathered, recorded, and presented.

Information and Communication Technology Capability
In Research Project B, students develop their capability for information communication and technology by, for example:
• understanding how contemporary information and communication technologies affect communication
• critically analysing the limitations and impacts of current technologies
• considering the implications of potential technologies
• communicating and sharing ideas and information, to collaboratively construct knowledge and digital solutions
• defining and planning information searches of a range of primary and secondary sources when investigating research questions
• developing an understanding of hardware and software components, and operations of appropriate systems, including their functions, processes, and devices
• applying information and communication technology knowledge and skills to a range of methods to collect and process data, and transmit and produce information
• learning to manage and manipulate electronic sources of data, databases, and software applications
• applying technologies to design and manage projects.

Critical and Creative Thinking
In Research Project B, students develop their capability for critical and creative thinking by, for example:
• thinking critically, logically, ethically, and reflectively
• learning and applying new knowledge and skills
• accessing, organising, using, and evaluating information
• posing questions and identifying and clarifying information and ideas
• developing knowledge and understanding of a range of research processes
• understanding the nature of innovation
• recognising how knowledge changes over time and is influenced by people
• exploring and experiencing creative processes and practices
• designing features that are fit for function (e.g. physical, virtual, or textual)
• investigating the place of creativity in learning, the workplace, and community life
• examining the nature of entrepreneurial enterprise
• reflecting on, adjusting and explaining their thinking, and identifying the reasons for choices, strategies, and actions taken.

**Personal and Social Capability**
In Research Project B, students develop their capability for self and society by, for example:
• developing a sense of personal identity
• reviewing and planning personal goals
• developing an understanding of, and exercising, individual and shared obligations and rights
• participating actively and responsibly in learning, work, and community life
• establishing and managing relationships in personal and community life, work, and learning
• developing empathy for and understanding of others
• making responsible decisions based on evidence
• working effectively in teams and handling challenging situations constructively
• building links with others, locally, nationally, and/or globally.

**Ethical Understanding**
In Research Project B, students develop their capability for ethical understanding by, for example:
• identifying and discussing ethical concepts and issues
• considering ethical and safe research processes, including respecting the rights and work of others, acknowledging sources, and observing protocols when approaching people and organisations
• appreciating the ethical and legal dimensions of research and information
• reflecting on personal ethics and honesty in experience and decision-making
• exploring ideas, rights, obligations, and ethical principles
• considering workplace safety principles, practices, and procedures
• developing ethical sustainable practices in the workplace and the community
• inquiring into ethical issues, selecting and justifying an ethical position, and understanding the experiences, motivations, and viewpoints of others
• debating ethical dilemmas and applying ethical principles in a range of situations.

**Intercultural Understanding**
In Research Project B, students develop their capability for intercultural understanding by, for example:
• identifying, observing, analysing, and describing characteristics of their own cultural identities and those of others (e.g. group memberships, traditions, values, religious beliefs, and ways of thinking)
• recognising that culture is dynamic and complex and that there is variability within all cultural, linguistic, and religious groups
• learning about and engaging with diverse cultures in ways that recognise commonalities and differences, create connections with others, and cultivate mutual respect
• developing skills to relate to and move between cultures
• acknowledging the social, cultural, linguistic and religious diversity of a nation, including those of Aboriginal and Torres Strait Islander societies in Australia
• recognising the challenges of living in a culturally diverse society and of negotiating, interpreting, and mediating difference.
DRAFT PROPOSAL (Part A)

<table>
<thead>
<tr>
<th>TOPIC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>QUESTION</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOCUS QUESTIONS</th>
<th>1.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td></td>
<td>3.</td>
</tr>
<tr>
<td></td>
<td>4.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WHAT I HOPE TO LEARN / DISCOVER</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>RESEARCH METHODS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALITATIVE</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>QUANTITATIVE</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAPABILITY/IES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tick all the boxes that apply.</td>
<td></td>
</tr>
<tr>
<td>□ Literacy</td>
<td></td>
</tr>
<tr>
<td>□ Numeracy</td>
<td></td>
</tr>
<tr>
<td>□ Personal and Social</td>
<td></td>
</tr>
<tr>
<td>□ Ethical Understanding</td>
<td></td>
</tr>
<tr>
<td>□ Intercultural Understanding</td>
<td></td>
</tr>
<tr>
<td>□ Information and Communication Technology</td>
<td></td>
</tr>
<tr>
<td>□ Critical and Creative Thinking</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ETHICAL CONSIDERATIONS</th>
<th></th>
</tr>
</thead>
</table>

<p>| OUTCOME |  |</p>
<table>
<thead>
<tr>
<th>PLAN</th>
<th>JOURNAL (What I did...)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEK 1</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 2</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 3</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 4</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 5</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 6</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 7</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 9</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 10</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 11</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 12</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 13</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 14</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 15</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 16</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 17</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 18</td>
<td>□</td>
</tr>
<tr>
<td>WEEK 19</td>
<td>□</td>
</tr>
</tbody>
</table>
Ideas such as weather, rainforests, planets, cats and life are related to environmental and sustainability issues and ideas. Fairy floss, carnivals and cookies can be linked to health and nutrition issues. I am going to explore the idea of fairy floss further and see if I can develop a research question about this that is interesting.
EXEMPLAR BRAINSTORM 2 – TOPIC QUESTIONS AND IDEAS

My idea for a question is –

“How can the humble side-show carnival fare of Fairy Floss be made as a delicious and nutritious substitute for teenagers?”

This is appealing to me because I like to eat and create new ideas with food but am also conscious of unhealthy eating habits amongst teens. I also like to watch cooking shows like Master Chef and I am inspire by chefs like Heston Blumenthal and Jamie Oliver. It would be realistic to investigate Fairy Floss and health/nutrition as I have contacts who are health professionals, I could also speak to some friends who are professional chefs.
EXEMPLAR BRAINSTORM 3 – FOCUS QUESTIONS

I brainstormed my main question to work out what I would need to find out in order to address my question. I then did some initial research to find some contacts that could be used to help in my project, e.g. I could contact Pina from ‘Slush-a-licious’ (a local party hire company who hires out fairy floss machines) about how fairy floss is made and also a confectioner such as Lewis Confectionery in Adelaide who specialize in making confectionary for the health food market. A clinical dietician and nutritionist such Nick Wray, may also be helpful in answering questions about sugar in diets. Renowned nutritionist Dr Rosemary Stanton and her books may also be helpful as well as the sugar free diet author (Sarah Wilson). Furthermore, I could contact a chef like Jamie Oliver and Heston Blumenthal for ideas about how to re-design fairy floss to make it a ‘healthier’ option for eating.
## EXEMPLAR DRAFT PROPOSAL (Part A)

### TOPIC
Fairy Floss

### QUESTION
“How can the humble side-show carnival fare of Fairy Floss be made as a delicious and nutritious substitute for teenagers?”

### FOCUS QUESTIONS
1. Is sugar really responsible for health problems in teens? How unhealthy is fairy floss to eat?
2. How is Fairy Floss made? Is it expensive to make?
3. Can the techniques of spinning sugar be adapted to other ingredients to get the same texture but better nutritional value?
4. How many teens like fairy floss and what is it that they like about it?

### WHAT I HOPE TO LEARN / DISCOVER
I hope to re-invent Fairy Floss into a new and healthier snack for teens that tastes just as good and has greater nutritional value.

### RESEARCH METHODS

#### QUALITATIVE
- Nutritional books by Dr Rosemary Stanton
- Diet books by authors such as Sarah Wilson
- Interviews (primary sources) with experts in making Fairy Floss such as Pina from Slush-a-licious and an expert confectioner from Lewis Confectionary, and also clinical dietician and nutritionist Nick Wray.
- Interviews with chefs such as Jamie Oliver and Heston Blumenthal (if possible).

#### QUANTITATIVE
- A survey with teenagers about likes and dislikes of fairy floss
- Experimentation with various methods of fairy floss making

### CAPABILITY/IES
Tick all the boxes that apply.

- [ ] Literacy
- [ ] Numeracy
- [ ] Personal and Social
- [ ] Ethical Understanding
- [ ] Intercultural Understanding
- [ ] Information and Communication Technology
- [✓] Critical and Creative Thinking

**Explain how these capability/ies are relate to your project.**

My project will require me to develop a new technique for making a fair floss type treat for teenagers. This will require me to think outside the box and problem solve. A lot of experimentation will be required in order to develop something that not only resembles fairy floss but has market-ability and nutritional value. I have not had experience in doing something like this before.

### ETHICAL CONSIDERATIONS

### OUTCOME
Some Ideas for Questions …

- What every first pet owner should know about their...
- How to raise awareness for...
- Recycling – using methane for cooking… make your own bio fuels… ‘going green’
- How to build a...
- How to make a...
- Up - cycling – turning yesterday’s rubbish into tomorrow’s fashion…
- Modern Day Slaves – has slavery really been abolished?
- First World Problems
- Is Apple really better than Microsoft?
- Nutrition and obesity – do we need a “food revolution” in Australia?
- My Story - how I came to be in Australia
- Immigration – Are off-shore processing centers ethical?
- World Poverty
- Food as a commodity
- Factory Farming
- Are TV cooking shows really helping people get back into the kitchen?
- How to grow your own veggies
- Are we a ‘throw-away’ society?
- Can we live without the Internet?
- Who was Jesus?
- Is there really a “god”?
- Was there really a ‘flood’?
- Are the stories in the Bible true?
Research Project Ideas for SACE Students

These ideas have been suggested by staff teaching in the Bachelor of Social Sciences and staff from the Discipline of Gender, Work and Social Inquiry at The University of Adelaide. We hope they are helpful to you.

Good luck.

Topics, themes and ways of researching

<table>
<thead>
<tr>
<th>Topic area</th>
<th>Issues</th>
<th>Ways of researching</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Youth</strong></td>
<td>• cyber bullying</td>
<td>• media representations through print media or television over a specified time frame</td>
</tr>
<tr>
<td></td>
<td>• suicide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• music</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• homelessness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• eating disorders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• body image</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• extreme sports</td>
<td></td>
</tr>
<tr>
<td><strong>People’s lives</strong></td>
<td>• war veteran</td>
<td>• life history (interviewing one person over a number of hours to hear their story)</td>
</tr>
<tr>
<td></td>
<td>• migrant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• worker</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• volunteer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• community leader</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• politician</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ageing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• neighbourhood</td>
<td></td>
</tr>
<tr>
<td><strong>Health and illness</strong></td>
<td>• binge drinking</td>
<td>• ethnography (learning about people in their own environments)</td>
</tr>
<tr>
<td></td>
<td>• eating disorders</td>
<td>• illness narratives</td>
</tr>
<tr>
<td></td>
<td>• mental illness</td>
<td>• analysis of medical documents (looking at how ideas of health and illness have changed across time)</td>
</tr>
<tr>
<td></td>
<td>• drug use</td>
<td>• surveys</td>
</tr>
<tr>
<td></td>
<td>• representations of health and illness</td>
<td>• statistical analysis</td>
</tr>
<tr>
<td></td>
<td>• pharmaceuticals</td>
<td>• participant observation (observing people in their everyday lives)</td>
</tr>
<tr>
<td></td>
<td>• cross-cultural concepts of health, illness and healing</td>
<td>• genealogies (family trees)</td>
</tr>
<tr>
<td></td>
<td>• gender and health</td>
<td>• newspaper searches</td>
</tr>
<tr>
<td></td>
<td>• obesity</td>
<td>• archival work</td>
</tr>
<tr>
<td></td>
<td>• indigenous health</td>
<td>• spatial mapping (hospitals, community health centres)</td>
</tr>
<tr>
<td></td>
<td>• intergenerational health</td>
<td></td>
</tr>
<tr>
<td>Risk and Health</td>
<td>Analysis of material culture</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------------</td>
<td></td>
</tr>
<tr>
<td>Biotechnologies - assisted reproductive technologies</td>
<td>Discourse analysis</td>
<td></td>
</tr>
<tr>
<td>Reproduction - teenage pregnancy</td>
<td>Content analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Photovoice (asking people to record information through photographs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Photography</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Making videos</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interviewing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focus groups</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Action research (research that often involves political/social change as an outcome)</td>
<td></td>
</tr>
<tr>
<td>Migration</td>
<td>Assessment of historical data on numbers of migrants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biographical stories</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Using interpreters and translators</td>
<td></td>
</tr>
<tr>
<td>Technologies</td>
<td>On-line surveys</td>
<td></td>
</tr>
<tr>
<td>Social networking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facebook</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twitter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender relations</td>
<td>Media representations through print media or television over a specified time frame</td>
<td></td>
</tr>
<tr>
<td>Masculinities/femininities</td>
<td>Ethnography (learning about people in their own environments)</td>
<td></td>
</tr>
<tr>
<td>Sexuality</td>
<td>Surveys</td>
<td></td>
</tr>
<tr>
<td>Food and gender</td>
<td>Statistical analysis</td>
<td></td>
</tr>
<tr>
<td>Popular culture</td>
<td>Participant observation (observing people in their everyday lives)</td>
<td></td>
</tr>
<tr>
<td>Equality in the workplace (i.e. equal pay, the &quot;glass ceiling&quot;)</td>
<td>Newspaper searches</td>
<td></td>
</tr>
<tr>
<td>Stereotypes</td>
<td>Analysis of material culture</td>
<td></td>
</tr>
<tr>
<td>Advertising (how products are advertised differently to men and women)</td>
<td>Discourse analysis</td>
<td></td>
</tr>
<tr>
<td>Media (women and men in public life and the ways they are reported, e.g. politicians)</td>
<td>Content analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interviewing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focus groups</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Visual analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Action research (research that often</td>
<td></td>
</tr>
<tr>
<td>Space and place</td>
<td>involves political/social change as an outcome</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>concept of place as the bridge between the local and global</td>
<td>oral (interviewing)</td>
<td></td>
</tr>
<tr>
<td>how place is experienced</td>
<td>written (journal writing, policy, archival search)</td>
<td></td>
</tr>
<tr>
<td>how place informs identity</td>
<td>visual (photos, drawings, art work, maps)</td>
<td></td>
</tr>
<tr>
<td>place as community</td>
<td>spatial mapping (employment, social services, infrastructure)</td>
<td></td>
</tr>
<tr>
<td>the physical place</td>
<td>monuments and public art</td>
<td></td>
</tr>
<tr>
<td>place as memory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>how places change</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

More ideas to come… watch this space!

Ideas Mind Map – Research projects

- What were the uses of traditional tools and devices used with water?
- Design/make/approach. Can you design your own tool? For water collection? For water management e.g. cleaning? For water movement or storage? For water protection? Using only natural materials.
- How have tools and technology changed over time? Change in toilets over time change in water treatment methods over time
- Design a sustainable house, garden or town
- Use of technology in water treatment and testing

- Diversity of Indigenous languages and words for water and water related topics
- Are languages important to preserve? How can we preserve them?
- Where does a language start?
- Water word lists, & dictionary available from Kaurna Pains School.

- What can water do? (solvent, wetting agent, properties of water)
- Can anything live without water? Water for life
- How do we get healthy water? Cycling of water
- Physics, chemistry and Biology of water
- Healthy water systems, managed and natural
- Water testing and water treatment – science for safe living

- Sustainability – how do we share the water? What happens if we don’t have enough? What is sustainable water use?
- Cultural and social importance of water
- What is the cost of water treatment? Wasting water? Pollution?
- Where is all the water? Where does it come from & where does it go? Can we manipulate this
- How do humans change the water cycle? People, populations, development – what impact?

- How do we communicate our feelings & thoughts about water?
  - poems, stories, reports, songs, talks
- Communicating sensitive topics through creative storytelling
- Debating and devising arguments about issues
- A day in the life of a scientist/water professional

- Change in water and wastewater systems over time/timelines
- How do I represent very large numbers? How much water does a reservoir contain
- How can we find out? Different graphs for different purposes
- Change and measurement of water (litres) flow rates, infrastructure bore diameters etc.
- How do we measure, record and compare changes in large numbers over time.
Uni SA Biology, Sustainability & the Environment


**Water in Adelaide**

“….Water - Every person and every living species on Planet Earth depends for their very existence on the presence and accessibility of this precious resource”. (Barbara Hardy 2010 in the opening lines of her Foreword to “Adelaide, Water of a City”, Wakefield Press.) Would you like to work on a water-based project with guidance from experts and the Barbara Hardy Institute?

More information on Water projects and registration

**Heavy metals & house dust**

Have you ever wondered what lurks in household dust? This is an opportunity for students to undertake projects to see just which heavy metals are contaminating the dust of their homes and other places they frequently visit.

More information on Heavy Metals in Dust and registration

**Biodiversity & vernal pools**

Our total environment is dependent on having a rich diversity of micro-organisms in the soil and in inland and aquatic waterways. Ephemeral wetlands appear and disappear with seasonal rain but provide essential nutrition for larger plants and animals, especially migratory birds. This project invites students with interests in biology and ecology to participate in identifying micro-organisms in ephemeral wetlands (vernal pools).

More information on Biodiversity in Wetlands and registration

**Nocturnal animals in the Adelaide Hills**

Would you like to work with the Australian Conservation Volunteers in identifying the nocturnal animals photographed by fixed infra-red cameras in the Adelaide Hills?

More information on Nocturnal Animals in the Adelaide Hills and registration

**Sustainable Planning**

Are you interested in how we should be planning sustainable cities of the future; cities that are not dependent on private cars for transport and cities that encourage interactive communities? This project on TODs (Transport Oriented Developments) might interest you and help you to plan your future living environment.

More information on Sustainable Planning and registration
Uni SA Computing, Maths & Engineering


**Smart mobile device security**
Dr Raymond Choo offers students a chance to become involved in a relatively new area of computing: the prevention of cyber-crime. Students should have a strong maths background and interest in computer science and forensic computing.

More information on Mobile Security and registration

**Combating cyber-crime**
Dr Raymond Choo offers students a chance to become involved in projects related to the prevention of cyber-crime including projects concerned with illegal activities that can occur through social networking with the goal of developing effective security systems. Students should have a strong maths background and interest in computer science and forensic computing.

More information on Social Networking Security and registration

**Help design solar taxis for remote Africa**
Led by Dr Peter Pudney and Dr Amie Albrecht, this project invites students with interests in maths and science to become part of real engineering project. Team members will undertake different parts of the larger project whose ultimate goal is to build solar taxis for use in remote and very disadvantaged parts of rural Africa.

More information on Designing a Solar Ambulance and registration
Uni SA Health Projects


**Health & Use of Time (HUT) Group**
Led by Professor Tim Olds, the HUT group conducts research into the relationships between how we use our time (including physical activity, sleep, television viewing, social activities and cognitive activities like doing crossword puzzles) and health outcomes (including obesity, heart disease, diabetes and mental health). The HUT Group also uses lasers to study three-dimensional body measurements.

Students who are interested in undertaking their research project in one of these areas with guidance from the UniSA team should have at least Maths Studies (completed or currently enrolled), preferably Specialist Maths. Health and Physical Education would be helpful but is not essential.

More information on HUT projects and registration

**Football United**
Led by Dr Edoardo Rosso, Football United organises special soccer programs for the Communities of Playford and Mount Gambier and in three high schools - Para Hills High School, Underdale High School and Roma Mitchell Secondary College. All programs are quite special in their own way and differ from each other in many aspects but they all target youth from disadvantaged socio-economic or multicultural backgrounds. All programs are run by volunteers in collaboration with local community organisations.

Students are welcome to work with Dr Rosso and his team to devise their own studies on subjects such as physical fitness or social benefits of team sports. You can make your own fitness measurements.

More information on Football United and registration

**Pets (and other animals) and People**
People have shared their lives with animals for thousands of years. While some of these animals are used for food, work and other functions, animals that predominately provide us with mental well-being (companionship, affection, pleasure) have long been part of this history. Dr Janette Young studies many of the social aspects of health and she would like to help any SACE students who would like to conduct their Research Project in this interest area.

More information on Pets & People and registration

**Nutrition, Family Behaviour & Health**

We hear a great deal about health and nutrition but how do average South Aussies behave and what really influences the way they live? Dr Judy Ford (Geneticist) and Mel Haynes (Chef and Nutritionist) would like to help SACE students to investigate a number of important questions that relate to nutrition, behaviour, health and health messages.

More information on Nutrition & Health and registration

**Uni SA General SACE Project Support**
There are many different ways to go about research but adhering to some general guidelines will make your journey easier. This page will be updated regularly and if you would like to make your own contributions, they would be welcome. See Research tips and tricks.

Library
Secondary school students are welcome to use the resources in the UniSA Library. Our library contains 700,000 books and print journals together with a huge collection of electronic resources of over 160,000 e-books, 50,000 e-journals, 23,000 e-readings and 480 databases! We have five campus libraries, at City East, City West, Magill, Mawson Lakes and Whyalla. Students undertaking the SACE Research Project may be eligible for free membership but some conditions apply. For more details check our Guide for Secondary School students.

Art History and Architecture
Associate Professor Christine Garnaut is a planning and architectural historian who is the Director of the UniSA Architecture Museum. Professor Garnaut can offer considerable support to students whose projects are based in architecture, planning and/or heritage. She has access to an extensive and specialised collection of research materials and will offer students guidance on the use of these resources.

Pathways to apprenticeships and traineeships in Woodwork and Metalwork
Many men’s sheds have metalworking or woodworking as central parts of their activities. The opportunity exists for students interested in men’s sheds, metalworking/woodworking and/or an apprenticeship to explore how men’s sheds could act as a pathway into an apprenticeship following into a trade. This may be through observing the mentoring process and designing a program that positions students within men’s sheds. Support will be provided to find men’s sheds willing to meet with SACE students, as well as providing guidance through the research process. You could perhaps find a pathway to your own future career.

Contact Luke Bain for more information.

Find an Expert
UniSA has many experts in many different fields. If you wish to interview an expert then our Directory of Research Expertise will help you find your expert. Before you approach them please read our advice on contacting and interviewing an expert.
FOLIO TASK 3 (30%)
Creation of a Research Instrument
Exploring Research Skills - Development

TASK DESCRIPTION:
Students present 2 research instruments that have been created for the purpose of researching their chosen topic. These instrument(s) are to be designed and implemented by students who will use them to gain insight into their topic. Students will conduct the research using these instruments, applying their skills in the area.

Instruments may include, but are not limited to; survey, interview, observation, experiment, practical application (as appropriate to their research area).

TASK DETAILS:
1. Now that you have decided on a topic and question to research, and identified a variety of methods to use, you need to start investigating and collecting the information for your project.
2. You must develop two research instruments that you have created specifically for the purpose of investigating your topic – one of these must be an interview. Everyone will interview an expert related to their project.
3. The second research instrument may be a survey, a journal entry, a set of observations that you have made, an experiment etc, as is applicable to your research.
4. Note that this is the DESIGN of the research instrument that is the focus here. You should get feedback from others (peers and teachers) as to how you could improve your research instrument and whether or not it will be successful. Make refinements to your research instrument according to the feedback that you get.
5. Use your research instrument to collect information, i.e. interview someone, distribute the survey etc...

PRESENTATION REQUIREMENTS:
2 research instruments in the form of Word Documents on A4 paper (printouts of surveys from web generators such as Survey-Monkey are not acceptable).

LEARNING REQUIREMENTS:
- Demonstrate knowledge and understanding of research approaches
- Develop specific research skills

ASSESSMENT DESIGN CRITERIA:
KU2 Knowledge and understanding of research approaches.
D1 Development of specific research skills.
FOLIO TASK 4 (Formative)  
*Creation of a Bibliography*  
Exploring Research Skills - Development  
**TASK DESCRIPTION:**  
Using proper formatting, create a bibliography of sources that you find and locate for your folio.  

**PRESENTATION REQUIREMENTS:**  
This should be Word Processed and no less than 1 A4 page.  
You may use an online reference generator like that found on the slsa website.  

FOLIO TASK 5 (Formative)  
*Analysis of Sources*  
Exploring Research Skills - Development  
**TASK DESCRIPTION:**  
Analyse at least three different sources (website, podcast, YouTube video, documentary, book, journal, newspaper article, academic article etc) related to your research topic. You will determine the reliability of the source, points of application to further your research and limitations that the source may have. Use the accompanying template to structure your analysis.  

**PRESENTATION REQUIREMENTS:**  
Templates can be downloaded from the weebly site and can either be Word processed or handwritten. Put these into your folio.
Source Analysis TEMPLATE
Reliability

1. How do I know this information is accurate and true? (*It is written by...They are...*)

2. What are the limitations of the source? (*think about bias, who is the author? Do they have a vested interest? Are references to other sources of information present? Does it correlate to other information you have found?*)

Relevance

What information was relevant to my project? (*summarise the main points and explain how they link to other research you have discovered*)

Application

How am I going to use this information? (*Three Questions I now have are...I need to find out....I am going to use...The sources makes reference to...source. I should...*)
## Performance Standards for Stage 1 Research Practices

<table>
<thead>
<tr>
<th>Knowledge and Understanding</th>
<th>Development</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KU1 Comprehensive knowledge and understanding of the purpose of research.</td>
<td>D1 Thorough development of specific research skills.</td>
<td>A1 Critical consideration of the appropriateness, uses, and limitations of specific sources. A2 Insightful interpretation and analysis of information and data.</td>
</tr>
<tr>
<td>KU2 Thorough knowledge and understanding of relevant research approaches for a variety of purposes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KU1 Detailed knowledge and understanding of the purpose of research.</td>
<td>D1 Effective development of specific research skills.</td>
<td>A1 Some critical consideration of the appropriateness, uses, and limitations of specific sources. A2 Effective interpretation and analysis of information and data.</td>
</tr>
<tr>
<td>KU2 Detailed knowledge and understanding of relevant research approaches for a purpose.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KU1 Knowledge and understanding of the purpose of research.</td>
<td>D1 Satisfactory development of specific research skills.</td>
<td>A1 Satisfactory consideration of the appropriateness, uses, and limitations of specific sources. A2 Satisfactory interpretation and analysis of information and data.</td>
</tr>
<tr>
<td>KU2 Knowledge and understanding of different research approaches.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KU1 Superficial awareness of the purpose of research.</td>
<td>D1 Partial development of specific research skills.</td>
<td>A1 Superficial consideration of the appropriateness, uses, and limitations of one or more specific sources. A2 Some interpretation and attempted analysis of information and data.</td>
</tr>
<tr>
<td>KU2 Some recognition and awareness of research approaches.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KU1 Basic identification of the purpose of research.</td>
<td>D1 Attempted development of some research skills.</td>
<td>A1 Basic attempt at consideration of the appropriateness, uses, and limitations of a specific source. A2 Basic attempt at interpretation of information and data.</td>
</tr>
<tr>
<td>KU2 Identification of a research approach.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>