

# Year 7 Sustainability Project

## **How can we make our community more sustainable?**

The Sustainability Cross-Curriculum project is a compulsory project for all Year 7 students.

The project will be facilitated by several days of activities that will build student knowledge about sustainability as well as ongoing lessons during your BTM periods. Your Cross Curriculum Project will be completed in groups of no more than 4 students.

Year 7 students will attend the Youth Eco Summit or complete a related set of activities. At this event you will attend a range of workshops where you will learn about sustainability in a range of different situations. This event will be held on October 22.

Your first point of contact for the Cross Curriculum Project will be your BTM teacher. If you have any questions that your BTM teacher can't answer, see Miss Swanson in the Social Science staffroom.

### **Schedule overview:**

**Week 1:** Project introduction and a discussion about “Working in Groups” (page 8 and 9 in your booklet)

**Week 3:** Wednesday - Sustainability activities – Youth Eco Summit or school-based Sustainability activities

**Week 3:** “Project background – What is sustainability?” and “Research techniques” Choose your subject areas, and complete the Working in Groups tasks that weren’t finished in Week 1. Your teacher will tick off that pages 3-13 are complete.

**Week 5:** “Acknowledging Sources”. Pages 14 and 18 will be used throughout the project and your teacher will check these every so often. You will also use this lesson for researching your topic.

**Week 7:** “Evaluation” – your teacher will check that your group has begun their planning for the Evaluation part of the task.

**Week 9:** Hand in “Evaluation “ task. Work on your project

**Week 10:** Presentation of projects

You will also be given extra time to work on your projects outside of the BTM period sometime after Week 5.

### **Class discussion: What have you already learnt about Sustainability?**

Think about the activities you have undertaken already – either at the Youth Eco Summit or during the school-based activities. How have these activities helped you understand the idea sustainability?

## Project background

**Main inquiry question:**

How can we make our community more sustainable?

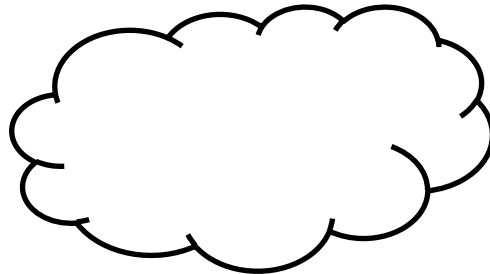
**Examine the definitions of sustainability below:**

"An ability or capacity of something to be maintained or to sustain itself. It's about taking what we need to live now, without jeopardising the potential for people in the future to meet their needs." Land Learn NSW

"A widely accepted definition of sustainability is to "...meet the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission, 1987)." University of Queensland

"...quality of life; fairness and equity; participation and partnership; care for our environment and respect for ecological constraints - recognising there are 'environmental limits'; and thought for the future and the precautionary principle." Global footprints

As a class, brainstorm ideas related to sustainability.



Now write your own definition of sustainability (write it in your own words).

.....

.....

.....

**Consider:**

How does the idea of sustainability relate to you, your school and the community? Do you feel that it is an important idea?

.....

**Fill in the table below:**

How does sustainability relate to....

...me?	...my school?	...my community?

**Class activity:**

Play a game of charades in your group. Act out words related to sustainability.

**Your sustainability project**

In completing your project you will be asked to incorporate information and processes from a number of different subject areas. Examine the following pages which will give you some ideas about how sustainability relates to each subject area from Science, TAS and Geography. In your group you should try to settle on one particular concept or topic that you would like to investigate.

What concept or topic will your group be focusing on?

.....

Describe your concept or topic in a sentence or two.

.....

.....

.....

What subjects does this relate to (minimum of two)? Explain how it relates to these subjects.

.....

.....

.....

## How does sustainability relate to my subjects?

TAS



**You may like to:**

- Explore some issues related to the sustainability of resources in the metal industry.
- Explore some issues related to the sustainability of resources in the timber industry.
- Consider examples of non-renewable resources in the metal industry.
- Consider some examples of renewable resources in the metal industry.
- Consider some examples of non-renewable resources in the timber industry.
- Consider examples of renewable resources in the timber industry.
- Rate the role of recycling in metal and timber industries.
- Determine the effects of the metal and timber industries on the environment.
- Explain how pollution is linked to metal-based industries.
- Explain how recycling addresses the issue of pollution in metal-based industries.
- Assess the environmental implications of the production and use of manufactured boards.
- Decide whether some timber products are more sustainable than others. Why.
- Debate whether timber and metals industries have legal and ethical obligations which relate to sustainability.

Don't be limited by this list, you might think of other ways that sustainability is linked to TAS.

## Science



You may like to:

- Explain why some of the Earth's resources are considered renewable and some non-renewable
- Give reasons why some resources are non-renewable resources, including metal ores and fossil fuels
- Explain how people use a variety of natural and made resources extracted from the biosphere, atmosphere, lithosphere and hydrosphere
- Rate strategies used by people to conserve and manage non-renewable resources, e.g. recycling and the alternative use of natural and made resources
- Evaluate different viewpoints people may have in making decisions about the use of a major non-renewable resource found in Australia.

Don't be limited by this list, you might think of other ways that sustainability is linked to Science.

## Geography



You may like to:

- Assess the importance of the physical elements of environments: air, flora and fauna, soil, solar energy, water
- Infer how human elements of environments impact on sustainability: agriculture, industrial, settlements, economic, political, social cultural.
- Consider the relationship between urbanisation and sustainability.
- Classify water as a renewable, non-renewable or continuous resource.
- Examine the distribution of global water resources.
- Explore the availability of fresh water resources.
- Investigate current and potential sources of freshwater for human use.
- Investigate the cultural and spiritual significance of water to an Aboriginal or Torres Strait Islander community.
- Explain how water movement through the environment connects people.
- Assess the environmental, social and economic effects of water movement as it connects places.

Don't be limited by this list, you might think of other ways that sustainability is linked to Geography.

## Working in groups

### Who are the members of your group?

Write down the names and email address of each of your group members.

.....  
.....  
.....  
.....

### How can you be a good group member?

- put forward ideas and explain them clearly
- listen to other peoples' point of view
- express how you feel but don't attack others
- ask questions to find out more about other's ideas and encourage others to express their feelings
- maintain a positive attitude and encourage your other group members to do the same
- be sensitive to other peoples' feelings

### Will you be a good group member?

What skills and characteristics do you have which will make you a good group member?  
Create a list.

.....  
.....  
.....  
.....

### Working effectively in your group

To ensure that your group is productive you must maintain a good group dynamic. To do this you need to have a number of important skills within your group.

**Solve common group work problems:** Before you begin your group work, create a set of group rules. These may include things like: everyone must contribute, listen to each other, and show group members respect. It is up to you what your group rules are, but if you take some time to develop a good set of group rules you group work should be more effective over the course of the project.

**Learn how to provide constructive feedback:** Don't make comments about another person, rather make comments that relate to the task that they are working on. For example, don't say, "You are lazy", instead say "We really need the piece of writing you are working on". Provide feedback early so that the person doesn't feel like they have wasted a lot of time. Try to give positive feedback as well as negative feedback.

**Have detailed discussions:** In group discussions, take it in turns to speak. If your group is having trouble coming up with ideas you may need to spend more time reading, brainstorming, making notes and reflecting on the topic or problem. Consider spending some time working individually and then coming back to the group discussion.



**Manage the group:** An important part of managing your group is to create and stick to work plans. Create a flow chart of all of the different parts of the project that need to be completed. Each of these parts will require your group to complete a list of specific jobs (typing notes, brainstorming ideas, etc). Create a detailed list of all the jobs that need to be done and allocate the jobs to group members. Be sure that no individual group member is overburdened with too many jobs to do.

**Practicing group work:**

- Play Pictionary using words related to sustainability. Provide constructive criticism to the group members that draw the pictures.
- Imagine that you were going to make a model of the Eiffel Tower. Create a flow chart showing all the different parts to making the model. Create a list of jobs that would have to be done to complete the model.

**The end product....**

In your group you need to think about what the overall aim of your project will be. The options to choose from are below. Place a tick next to the one your group has chosen.

- Design a city or town showing how you could incorporate a range of different sustainable technologies and techniques which would maintain a growing population for 50 years.
- Create a 5 minute video about sustainability in the Epping community.
- Develop a visual representation of a design using graphics programs. Import the graphics into augmented reality software to represent the design in the location or to augment the information in certain contexts.
- Create an app to teach the community about sustainable practices they can implement in their home.
- Create a multi-level game which explores the consequences of not using sustainable practices in the Epping community.

## Research Techniques

When undertaking research begin with the following questions:

- What do I know about this topic?
- What do I want to know about this topic?
- Why am I interested in this topic?
- What do I need to research this topic?

Think about the topic you have chosen and complete the table below individually:

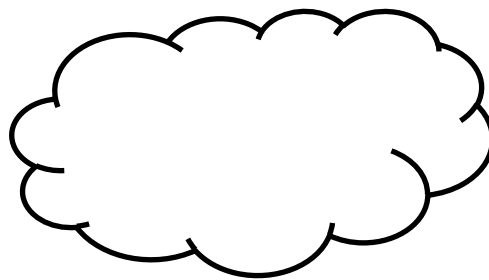
What do I know about this topic?	What do I want to know about this topic?	Why am I interested in this topic?	What do I need to research this topic?

Have a quick discussion with your group members to compare answers.

### Search engines – Why don't you google it?

A search engine is a program that finds relevant sources (articles, websites, etc.) based on your search term. Google is one of the most popular search engines used to research topics for school assignments. There are a range of other search engines which will provide you different sources than the ones you can find using Google.

Brainstorm the risks of just relying on one search engine to find all your information.



Some other search engines you could use are:

Google Scholar is at [www.scholar.google.com.au/](http://www.scholar.google.com.au/)

Duck Duck Go is at [www.duckduckgo.com](http://www.duckduckgo.com)

Iseek is at <http://education.iseek.com>

OJOSE is at <http://www.ojose.com>

Dogpile is at <http://www.dogpile.com>

Yippy is at <http://yippy.com>

## Your sustainability project: Planning your research:

Create a research plan for your group. In your plan consider the following:

- What information do you need?
- When will you need each piece of information?
- Who will be responsible for each task?
- Are there certain tasks that need to be completed in a certain order? Which tasks will need to be completed first? What order should the rest of the tasks be completed in?

What information do you need?	
When will you need each piece of information?	
Who will be responsible for each task?	
Are there certain tasks that need to be completed in a certain order? Which tasks will need to be completed first? What order should the rest of the tasks be completed in?	

## Developing a Research Plan

As part of your plan develop a calendar which shows a timeline to completion. Make sure that you allocate more time for complex tasks and less time for simple tasks.

Week	Tasks	Person responsible
3		
4		
5		
6		
7		
8		
9		
10		

When you have put together your plan, have a conference with your teacher to see whether it is feasible (whether it will work).

## Research Scaffold

Before you can become too involved in your project you need to read widely. Each person in your group needs to read five articles that relate to the topic of sustainability. You will be required to take notes about the article. You will use your notes later in the project. You should record the site that you visited, the date you viewed the site and a series of summary dot points.

Title	Date accessed	Summary dot points

## Acknowledging Sources

It is important that you come up with your own ideas when completing any projects. If you use another person's ideas you should acknowledge them. You can use other people's ideas to support your ideas, but don't present other people's work as your own.

In the preparation of your project you should refer to a wide range of sources. As you examine a source you should consider how it will be useful to your project. Use the sources scaffold to summarise the important information from each source.

**What types of sources need to be acknowledged?**



**Why do we need to acknowledge sources?**

You should acknowledge sources to:

- Demonstrate that you are honest and ethical. Doing the right thing in this way is called academic integrity.
- Support your arguments. If you show that you have read a wide range of sources, this shows the reader that you have taken a range of different perspectives into account. It helps to show the reader the train of thought you have followed in developing your ideas.
- Enable the reader to check your sources. Sometimes the reader may want to check the facts in one of your sources. If your work is particularly good, someone may want to continue your research and may use the sources for further investigation.
- Avoid plagiarism. If you cite all the sources you have used then develop your own ideas you will not be claiming someone else's ideas as your own.
- Fulfill your legal obligations. It is important to recognise and acknowledge the author's original ideas. The author has legal ownership of their product that must be acknowledged.

## Plagiarism

Plagiarism is using the work or ideas of others in your own work without acknowledging where you found it.

In creating a project it is important that you develop skills and knowledge of your own as well as referring to other people's work. Plagiarism involves taking someone else's work and pretending it is your own. It is dishonest and can result in serious consequences. Examples of plagiarism include paying someone to do an assignment for you, copying sections of someone else's assignment or copying and pasting sections of text on a website or in an article into your own work. Plagiarism can be easily detected by using online programs such as Google to search for similar text on websites, but there are many other ways that teachers can detect if a student has plagiarised.

How to acknowledge sources

For the purpose of the Sustainability Cross Curriculum Project you will need to keep a record of the sources that you use throughout the project. As you look at different sources you should record details of where the information is found. Let's examine some common mistakes students make and explore ways we can still use the same information but acknowledge the sources we've used.

### In-text citations

*A student wants to discuss someone else's idea.*

You have a fantastic idea, but it is very similar or builds upon an idea you have read about. Is it better to hope that no-one notices the similarities or to be honest about the source of your inspiration? Teachers will be impressed if you can show the source of your inspiration. It will show that you have completed research and thought about weaknesses, improvements needed, or even just thought about the issue from a different perspective. This indicates that you have put time and effort into the preparation of your project. An in-text citation is used when you paraphrase (or summarise) the idea of another person. In the sentence where you have summarised the idea you need to include the author's name, followed by the year of publication followed by the page. This information is shown in brackets or parentheses. The youtube video show variations on in-text citations:

<https://www.youtube.com/watch?v=fLLIYxeGls>

### Direct quotations

*A student decides to "cut and paste" information from a website into their assignment.*

You find a paragraph of information that is very relevant to your topic. You want to say exactly what the article says. How can you get around this issue without plagiarising? Teachers often see examples of this in assignments and it is very easy to pick. The spacing, font and style of the text might be different from the rest of the assignment, or it might use words that the student would be unlikely to use. You can still use the section of text, but include it as a direct quotation. A direct quotation is when you copy the author's words directly from the text and use that exact wording in your assignment or essay. If you use a part of a sentence, or a section of text less than 40 words you can just include it in the paragraph. If it is longer than 40 words, it should be a separate paragraph that is indented. This means that you move the margins in for that particular section of text. You need to

include quotation marks at the beginning and end of the text, and include the author's surname, the year of publication and the page number in brackets after the quote.

### Reference lists

At the end of your project you need to show all of the sources that you have used. You need to include information such as the author, publication date, title, and place of publication and publisher. You may include additional information depending on the type of source. Your reference list should begin on a new page and the sources should be listed alphabetically based on the author's surnames. You should use the title "References" rather than "Bibliography".

For an example you can view a sample reference list here:

<http://libguides.murdoch.edu.au/content.php?pid=63242&sid=466317>

## Using Sources

### Planning your reference list

**Reminder:** Each of your references should be set out as follows:

Author, publication date, Title, Place of Publication, Publisher

For example a Year 9 Commerce text book would be recorded:

Chapman, S. and Freak, M., 2009, New Concepts in Commerce – Second Edition, Milton, John Wiley and Sons Australia.

Use this planner to help you complete your reference list. You will need to type up your reference list to hand in. You can print off as many copies of this planner as you need from the Sustainability Cross Curriculum website.

#### Source 1:

Author – .....  
Publication date – .....  
Title – .....  
Place of publication – .....  
Publisher - .....

#### Source 2:

Author – .....  
Publication date – .....  
Title – .....  
Place of publication – .....  
Publisher - .....

#### Source 3:

Author – .....  
Publication date – .....  
Title – .....  
Place of publication – .....  
Publisher - .....



**Source 4:**

Author – .....  
Publication date – .....  
Title – .....  
Place of publication – .....  
Publisher - .....

**Source 5:**

Author – .....  
Publication date – .....  
Title – .....  
Place of publication – .....  
Publisher - .....

## Evaluation - Week 5

An important part of the Cross Curriculum Project is that you incorporate information from a range of different subjects. You must choose to include information based on at least two subjects. You can get some inspiration from the subjects towards the beginning of the booklet.

An evaluation is a judgement about something. When you complete your project, it is important that you don't just list information and write a description. An evaluation means that you need write some basic information about a topic, but then you also need to make a judgement about it. This might involve selecting the most sustainable product or the best solution to a problem.

You have already chosen a general topic or concept for your project. An example might be resources, water or timber. This topic will provide a focus for your end-product (game, app, video, etc).

**Task: Evaluate how your end-product will make our community more sustainable.**

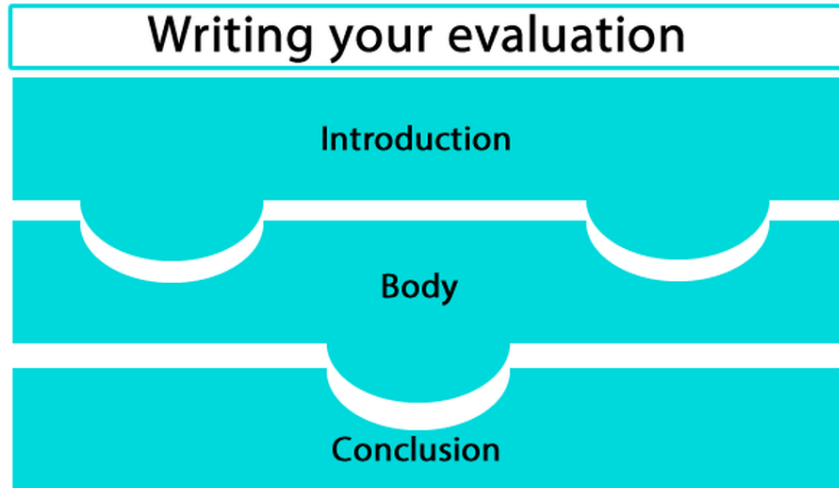
In answering this question consider:

- How sustainable is your community at present?
- How will your end-product make your community more sustainable?
- How well does your end-product incorporate information from a range of subjects?
- How well do the topics and subjects you've chosen relate to the idea of sustainability?

Only one evaluation needs to be submitted per group. You should all contribute to the writing of the evaluation. Use the drafting page to formulate your ideas, but you will need to type up the final copy.

**Writing your evaluation**

Your evaluation should be set out with an introduction and conclusion and several body paragraphs.



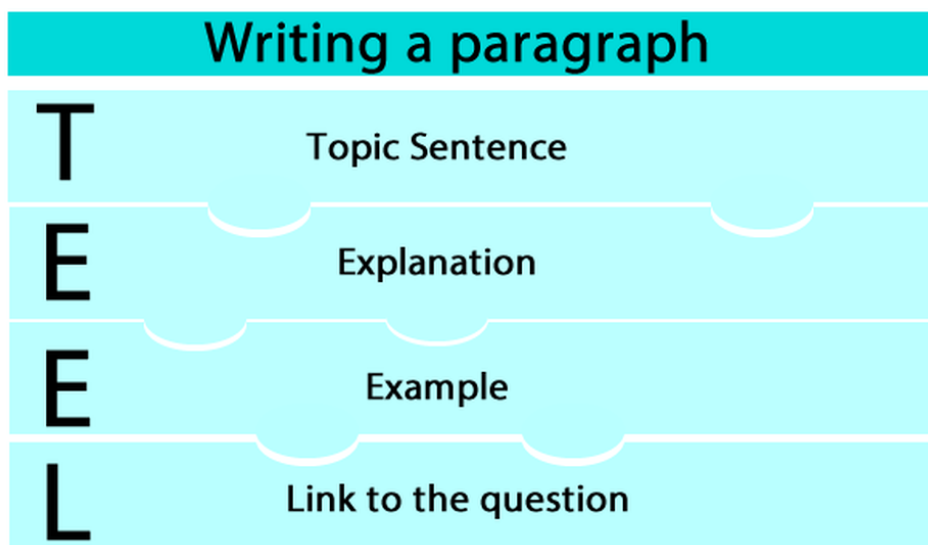
### Writing your introduction

Your introduction should:

- be general
- outline the main themes of the report
- use geographical terms, and
- use key terms from the question.

### Writing your body paragraphs

Use the TEEL model to help you write each paragraph. Each paragraph should be about one main theme. The *Topic sentence* should be a general statement that gives the reader an idea of what the paragraph will be about. The *Explanation* expands on the topic sentence and provides detail about the paragraph theme. Provide an *Example* that supports the main themes of your paragraph. Lastly, write a sentence that provides a *Link* to the question. This sentence will use key terms from the question.



### Writing your conclusion

The conclusion should:

- refocus the reader on the question
- bring together all of the main points of the evaluation, and
- provide a brief summary of the report.

Use the scaffold on the next couple of pages to plan out your writing. Remember that only one evaluation needs to be completed per group, but everyone in the group needs to contribute. You should type up your evaluation when you have finished it.

### Introduction

.....  
.....  
.....  
.....  
.....

**Paragraph 1 topic:** .....

Topic sentence: .....

.....

Explanation:.....

.....

Example:.....

.....

Link to the question: .....

.....

**Paragraph 2 topic:** .....

Topic sentence: .....

.....

Explanation:.....

.....

Example:.....

.....

Link to the question: .....

.....

**Paragraph 3 topic:** .....

Topic sentence: .....

.....

Explanation:.....

.....

Example:.....

.....

Link to the question: .....

.....

**Paragraph 4 topic:** .....

Topic sentence: .....

.....

Explanation:.....

.....

Example:.....

.....

Link to the question: .....

.....

### **Conclusion**

.....

.....

.....

.....

.....

### **Editing your work**

Spend some time editing your work. Check that it conveys the main messages that you want to get across. Consider the following checklist:

- My sentences contain a verb and a noun.
- I have spelled all words correctly.
- I have used capital letters for proper nouns.
- I have used capital letters for the beginning of all sentences.
- I have completed all sentences with a full stop.
- I have used commas, questions marks, exclamation marks and full stops in appropriate places.
-

### Report Marking Criteria

Grade	
<b>A</b> Excellent	<p>Makes a judgement about how the end-product will make the community more sustainable.</p> <p>Effectively incorporates detailed information about sustainability.</p> <p>Provides a well-structured and sequenced piece of writing.</p> <p>Effectively uses paragraphing to structure information and partition ideas.</p> <p>Effectively uses correct and appropriate punctuation, grammar and spelling to support meaning.</p>
<b>B</b> High	<p>Provides some arguments about how the end-product will make the community more sustainable.</p> <p>Includes information about sustainability.</p> <p>Provides a well-structured and/or sequenced piece of writing.</p> <p>Somewhat effectively uses paragraphing to structure information and partition ideas.</p> <p>Mostly uses correct and appropriate punctuation, grammar and spelling to support meaning.</p>
<b>C</b> Sound	<p>Provides information about how the end-product will make the community more sustainable.</p> <p>Includes some reference to sustainability.</p> <p>Basic attempt at structuring/sequencing writing.</p> <p>Basic attempt at paragraphing to organise ideas.</p> <p>Uses basic punctuation, grammar and spelling to support meaning.</p>
<b>D</b> Basic	<p>May or may not provide some links between the end-product and the idea of sustainability.</p> <p>May or may not refer to sustainability.</p> <p>Writing may or may not be structured and or sequenced.</p> <p>May or may not use paragraphing.</p> <p>May or may not uses correct and appropriate punctuation, grammar and spelling.</p>
<b>E</b> Elementary	<p>No/limited information about the link between the end-product and the idea of sustainability</p> <p>No/limited reference to sustainability.</p> <p>No/limited structuring or sequencing.</p> <p>No/limited use of paragraphing.</p> <p>Limited use of correct and appropriate punctuation, grammar and spelling.</p>

### **Creating your project or end-product**

There are a range of different ways that you may choose to present your Cross Curriculum Project. Think about what your strengths are as a group. Visit the website for each project to learn more about the steps involved, to find links to resources and scaffolds to help you complete your project.

Design a city or town showing how you could incorporate a range of different sustainable technologies and techniques that would maintain a growing population for 50 years.

For more information visit:

<http://sustainabilityccp-ebhs.weebly.com/sustainable-city.html>

OR

Create a 5 minute video about sustainability in the Epping community.

For more information visit:

<http://sustainabilityccp-ebhs.weebly.com/sustainability-video.html>

OR

Create an app to teach the community about sustainable practices they can implement in their home.

For more information visit:

<http://sustainabilityccp-ebhs.weebly.com/sustainability-app.html>

OR

Create a multi-level game which explores the consequences of not using sustainable practices in the Epping community.

For more information visit:

<http://sustainabilityccp-ebhs.weebly.com/sustainability-game.html>

OR

Develop a visual representation of a design using graphics programs. Import the graphics into augmented reality software to represent the design in the location or to augment the information in certain contexts.

For more information visit:

<http://sustainabilityccp-ebhs.weebly.com/augmented-reality.html>

### Project Marking Criteria

A marking criteria gives you an idea of how your project will be judged, or marked. As you are completing your project you should refer to the criteria to check that you have included all of the requirements of the project. If you have any questions about how the read a marking criteria you can ask your teacher.

Grade	Criteria
A Excellent	<p>Extensive preparation and planning of the project is evident:</p> <ul style="list-style-type: none"> <li>• Label or briefly describe a wide range of appropriate factors that were considered when designing the end-product.</li> <li>• Generate a wide range of creative ideas in a brainstorm</li> <li>• Detailed sketch/plan of the design using the appropriate scaffold</li> </ul> <p>An end-product demonstrating an extensive understanding of environmental and sustainability considerations and content. Effectively integrates content from at least 2 subject areas.</p>
B High	<p>Thorough preparation and planning of the project is evident:</p> <ul style="list-style-type: none"> <li>• Label or briefly describe a range of appropriate factors that were considered when designing the end-product.</li> <li>• Generate a range of creative ideas in a brainstorm</li> <li>• Detailed sketch/plan of a design using the appropriate scaffold</li> </ul> <p>An end-product demonstrating an thorough understanding of environmental and sustainability considerations and content. Effectively integrates content from 2 subject areas.</p>
C Sound	<p>Sound preparation and planning of the project is evident:</p> <ul style="list-style-type: none"> <li>• Label or briefly describe some appropriate factors that were considered when designing the end-product.</li> <li>• Generate some creative ideas in a brainstorm</li> <li>• A somewhat detailed sketch/plan of a design using the appropriate scaffold</li> </ul> <p>An end-product demonstrating a sound understanding of environmental and sustainability considerations and content. Somewhat effectively integrates content from at 1-2 subject areas.</p>
D Basic	<p>Basic preparation and planning of the project is evident:</p> <ul style="list-style-type: none"> <li>• May label or describe some factors that relate to the end-product.</li> <li>• Generate a limited number of ideas that may or may not be in the form of a brainstorm</li> <li>• Attempt at a sketch/plan of a design that may or may not be presented in the appropriate scaffold</li> </ul> <p>May or may not refer to the environment or sustainability Integrates basic content from at 1-2 subject areas.</p>
E Elementary	<p>Elementary preparation and planning of the project is evident:</p> <ul style="list-style-type: none"> <li>• May provide some limited labeling or description of factors.</li> <li>• Generate very few ideas that may or may not be in the form of a brainstorm</li> <li>• Elementary attempt at a sketch/plan of a design.</li> </ul> <p>Limited/no reference to the environment or sustainability Limited/no integration of relevant subject areas.</p>

## Individual Reflection

Share one thing you learnt.

.....  
.....  
.....  
.....  
.....

In developing your project, what worked well? What didn't work?

.....  
.....  
.....  
.....  
.....

What is one part of your work that you are proud of?

.....  
.....  
.....  
.....  
.....

What would you do differently next time?

.....  
.....  
.....  
.....  
.....