



Photocopy in A3 format.
Add pages as necessary.
Delete these outlined text boxes from completed
Team Design Folios.

Team Design Folio

School Team

Individual's name:

OR

Team Members' names:

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-
-

-
-
-

Design brief for the _____ Team

(to be completed by the team at the start of the project)

Design situation: School spaces are used by large numbers of people for different purposes and often consume large quantities of electrical energy. Much of this energy is obtained from non-renewable sources. By modifying the built environment, schools can reduce both the quantity of non-renewable energy used and save money.

Design Task: Design and propose modifications to a school space to make better use of sustainable energy while meeting the needs of those who use it.

Design solution: The solution will be in the form of a proposal including drawings, photos, sample materials and/or a multimedia presentation. Models may be produced as a means of communicating details of the solution but are not essential. The proposal will include information about the **existing situation** (what's happening now), the **needs of users** (who uses the space and what they need), and details of the **design solution** (all the information you will need to produce your solution including diagrams, plans and images of what the solution will look like and what it will achieve.)

Investigation of learning spaces

The learning spaces investigated were:

-used by for.....
-used by for.....
-used by for.....

The internal (inside) conditions have been controlled by the following:

-
-
-
-

Consequences

Redesign of the learning space could have the following consequences:

-
-

Criteria for success

To be successful, the redesigned learning space will:

-
-
-
-
-
-

Planning the process

The **resources** (materials, tools, equipment) needed to prepare the development proposal are:

-
-
-
-
-

The project will be limited by the amount of time available, the tools the team is allowed to use and the money available to spend on materials.

The following **people** will be available to **help our team**:

-, our teacher
-

Timeline

Our team/ I started the project on

The following dates are important for the successful completion of our project:

- Design brief researched and completed by (date?)
- School Safari completed by (date?)
- Initial design ideas and drawings completed by (date?)
- Presentation tools (models, drawings, PowerPoint etc) completed by..... (date?)
- Design proposal complete in draft form by (date?)
- The finished design proposal must be ready for presentation to a public audience on (date?)



Explore and define the task

Analysing the task – what are you are being asked to do?

- Complete the *Analyse the Design Task* worksheet called *Ecospace design task* and paste on this page.
- Play the matching game and think about what makes 'effective' learning spaces. Can you work and learn well if you are cold or hot or uncomfortable?



Explore and define the task

Analysing the task—think about how electricity is used in your school

- Complete the activities and games under the tab called *Energy and Sustainability*.
- Download and complete the 'School Energy' worksheet. Discuss how and why electricity is used to control the environment in learning spaces. Think about what your group / you could design to reduce this energy usage.



Explore and define the task

Investigate your school – plan your school safari!

- Participate in a class discussion to decide which learning spaces each team will investigate.
- Collect all the equipment you will need to record your findings on your school safari.
- Take the downloaded *School Safari* graph paper and complete a plan view sketch (see example online) of each learning space. Paste on this page.



Explore and define the task

Investigate your school – create a site map!

- Draw and label a map of your school.
- Mark the location of the learning spaces you are investigating and describe what they are used for and by whom.
- Complete both the on-line activity under *Site map* and your site plan. Paste on this page.



Explore and define the task

Consider your environment

- Complete the Australian house design matching exercise, print and paste on this page.
- Find images of traditional houses from other cultures and countries. How are they designed for the weather conditions of their environment? Print images and paste on this page



Explore and define the task

- Complete the Energy wise spaces activities online.
- Choose one of the spaces you studied in your school safari. How could passive solar design improve the conditions inside that learning space? Make a list of ideas or create a mindmap, discuss in your team and start sketching your ideas!

Energy wise spaces – find out about passive solar design and start designing improvements to your learning space



Expand your Design Brief which you created at the front of your Team Folio so you can be sure your design work will meet the identified need.

Your teacher will guide you in this area and suggest how best to record your Design Brief.

Generate and develop ideas

Develop your Design Brief

Design Task: Design and propose modifications to a school space to make better use of sustainable energy while meeting the needs of those who use it.

In your own words write a Design Brief to:

1. Explain the identified need or problem
2. Name the learning space to be redesigned
3. Outline the existing problems in the chosen learning space
4. Suggest ways to improve the learning space and/or the internal (inside) conditions.
5. Consider ways of reducing the amount of electricity used to control the internal conditions

Remember, you are developing a proposal to present to people who might be able to make your designs happen! Your teacher will help you to develop your design brief.



Generate and develop ideas

Work Scientifically

Conduct a series of scientific investigations to find new knowledge and information that will help you make informed choices when redesigning your learning space.

Each scientific investigation has a worksheet that you need to print off to help guide your inquiry process. Collect and record your data on the worksheets. What have you learned? How will this make a difference to your design choices? Attach your worksheets on this and extra pages.



Generate and develop ideas

- Create and attach a mind map of your / your team's solutions.
 - Take photos of areas needing redesign, print and modify (add your ideas)
 - Create labeled sketches
- Remember to check that the changes suit your criteria in your design brief.

Create Redesign Solutions — bring your ideas together and decide on the solution for your design proposal.

Produce Your Solution

Plan your presentation

Your presentation should be short – no longer than 10 minutes per team.

It is important to give clear information to your audience. You should:

- identify the need or problem
- present arguments (reasons) for design improvements
- identify the most appropriate presentation tools and techniques (see checklist next page for examples)
- be prepared to answer questions from the audience.

Use this page to plan the team's presentation.

Work through the online checklist to help allocate tasks to each group member, identify materials/resources needed and set deadlines for completion of each task. Remember to evaluate your plan ... Is it achievable? Does everyone have a specific role? Can we source the resources needed?

Produce Your Solution

Make Presentation Tools

As a team work out **what** your proposal needs to include and **how** you will present your ideas to your audience. Use the online activities to help you decide what works best and how to make/do them. Consider using some of the following:

- 3D models
- sketches and drawings
- posters
- pamphlet/flyers
- video
- slideshow
- oral presentation
- other ideas.

List and describe, draw or attach copies of your Presentation tools on this page.

Remember to discuss and evaluate your ideas as a team before starting.



Produce Your Solution

Present Your Ideas – the presentation!

Now that you have planned your presentation and created all of your communication devices it is time to present your proposal! Work through the online activity to get some tips on giving your presentation.

Develop a plan (timing and order) for your actual presentation – who will do and say what, how long each part will take and what order things will be presented. Make sure you collect all of your resources and presentation tools (eg drawings, models, PowerPoint) ready for the presentation.

Try to rehearse your presentation to make sure everyone is clear about their role, that you have everything needed and that the timing is correct.

Good Luck!



Final evaluation and team reflections

Here are some questions for your team to think about:

- Did the team work well together?
- Does the redesigned space meet the criteria?
- What part of the project did team members most enjoy?
- What was most difficult?
- What are the most important things team members learnt by redesigning a space and preparing a development proposal?
- What would you do differently if you were to do the project again?

