

Designing the product

» Lesson overview

In previous lessons, students developed an understanding of the basics of the water cycle and water supply, treatment and distribution. They also gained an appreciation of the types of water-saving behaviours they can promote to other students, their families and the community. In this lesson, students work in teams to plan their promotional product.

» Lesson objectives

In this lesson, students explore the use of a design folio to design a technology product.

» Equipment

For the class

- one enlarged copy or overhead transparency of 'Designing the product' (Resource 8)

For each team

- one copy of 'Designing the product' (Resource 8)

For each student

- student journal

» Preparation

Source promotional products or digital images of promotional products that support public awareness campaigns such as Waterwise, road safety, water safety, Keep Australia Beautiful, or the 2&5 fruit and vegetable campaign <www.gofor2and5.com.au/campaign.aspx?c=5&a=28&s=71&t=131&n=102>. Some posters and other products are downloadable from the internet. Resource centre staff will be able to help with this task.

» Lesson steps

1. Ask students to use their journals to review what they have so far learned about water in their local area. Refer to the KWL chart in Lesson 3. Ask students to suggest ideas they can add to the 'what we Learned' section of the chart.

Review the students' understanding of how water is managed sustainably in your local area.

2. Ask the question: 'Who is responsible for managing our water resources?' Allow the students to brainstorm their ideas with the class, then classify the types of agencies or people that might be responsible. Focus on the levels of responsibility for water management. These levels could include:
 - individual
 - family
 - school
 - community
 - local council
 - state government
 - federal government
 - private entities.
3. Explain that in this lesson the students will receive a design challenge to tackle sustainable water management at an individual and community level.
4. Using the enlarged copy of 'Designing the product—Waterwise: Saving water for the future' (Resource 8), tell students that they will be working in teams to design a Waterwise promotional product. Explain that the purpose of the activity is to encourage families to be more water-efficient.
5. Ask students to identify a variety of advertisements (print, radio, television media or billboard) that they have seen or heard in the past 24 hours. Write a list of products or types of product on the board.

Prompt the students to identify a range of advertisements, such as television ads, posters, leaflets and newspaper and radio ads.

6. Ask the students to pick out examples of public awareness campaigns such as those promoting road safety and healthy nutrition.
7. Ask the students to list some of the differences between the public awareness campaigns and the other marketing campaigns represented in the list on the board. You would be looking for ideas such as ‘doesn’t sell a product to make money’ or ‘it helps people and communities’.
8. Provide time for pairs of students to look at the examples of promotional products. Ask them to identify features of the products, such as the:
 - purpose of the product
 - possible needs, wants or interests of the audience
 - features that make the product interesting
 - features that detract from the product’s appeal
 - type of information included
 - colour scheme
 - layout.

Have them record their ideas in their journal and then share their ideas with the whole class.

Introduce students to the Technology ‘aspects of appropriateness’ that influence product design and creation. These ‘aspects of appropriateness’ (functions, aesthetics, ethics, culture, available finances and resources, and sustainability) are part of the Technology Essential Learnings within the ‘Technology as a human endeavour’ strand. An explanation of them can be found on page 7 of the *Technology Sourcebook Guidelines* at www.qsa.qld.edu.au/downloads/syllabus/kla_tech_sbg_01.pdf. Note that the ethical appropriateness also

includes issues to do with intellectual property and copyright. In this context, if students are using symbols, images or music from another person or existing campaign it is ethical to seek permission from or acknowledge the original author or copyright holder.

Discuss the aspects of appropriateness with students. Ask them to consider which aspects were relevant to the examples of promotional products they viewed.

With students, identify three or four aspects of appropriateness relevant to the promotional product they will design and produce. These aspects could include aesthetics, ethics, culture, and available finances and resources. Tell students that they will be expected to evaluate their product against the agreed aspects.

Display questions as a prompt for students to evaluate the promotional product. Some sample questions about the aspects of appropriateness could include:

- Function—Does the product work?
- Aesthetics—Is the product eye-catching and appealing to look at or experience?
- Ethics—Is the product fair, honest and respectful? Does it use stereotypes?
- Culture—Is the product suitable for the target audience? What effect would it have on different cultural and ethnic groups? Has the contribution of others been acknowledged?
- Finances and resources—Can the product be created using the materials and equipment available to the class? What are the short-term costs and benefits to individuals and the environment arising from the use of the product? What are the long-term costs and benefits to individuals and the environment arising from the use of the product?
- Sustainability—Does the product use resources in a sustainable way? What are the positive and negative consequences to the environment of using the product?

9. Divide the class into teams and hand out the 'Designing the product—Waterwise: Saving water for the future' (Resource 8). Ask the students to work through the design process and the investigation and ideation steps in the first four pages of the design folio. Model the task for the students by adding some simple ideas to the enlarged copy of Resource 8.
10. Encourage the students to analyse the results of their 'Home water use—Recording sheet' (Resource 2). Explain that this survey data will provide useful information and evidence to help them design their product. Ask the students to record in their journal their ideas, as well as the evidence from their survey data they used to arrive at a conclusion. These ideas will be used in the reflection that students write at the end of the unit.
11. The students generate a range of ideas for consideration and refine the design of their products on pages 5 and 6 of their design folio. Explain that students need to evaluate their ideas and refine their product repeatedly.

Students can evaluate their design using the following SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. Ask students to draw up the SWOT table in their student journal.

Strengths What are the best aspects of the design?	Weaknesses What will not work so well with the design?
Opportunities What might you do differently in your design?	Threats What potential problems are there with the design?

Monitor student journal responses and provide ongoing feedback. Remind students that their journal entries will be assessed at the end of unit.

Negotiate with each team to devise a workable product that can be created in the time available with accessible resources. Where possible, ask each team to organise the materials or equipment they need to complete the task before the next lesson. Collate a list of resources you need to organise on their behalf.

You might need to provide training for teams using new technology or software. If a number of classes are working on this unit at the same time, design teams working on similar projects from a number of classes could be trained by one of the teachers.

Ideation is the process of forming and relating ideas.

Resource 8

❖ Designing the product— Waterwise: Saving water for the future

Waterwise: Saving water for the future

Name: **Date:**

» Design folio

Team members

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

» The problem

Many local communities in Queensland face ongoing water shortages due to changing climate patterns, or increases in population, or both. Everyone in the communities affected will need to reduce their water usage so that they do not run out of water.

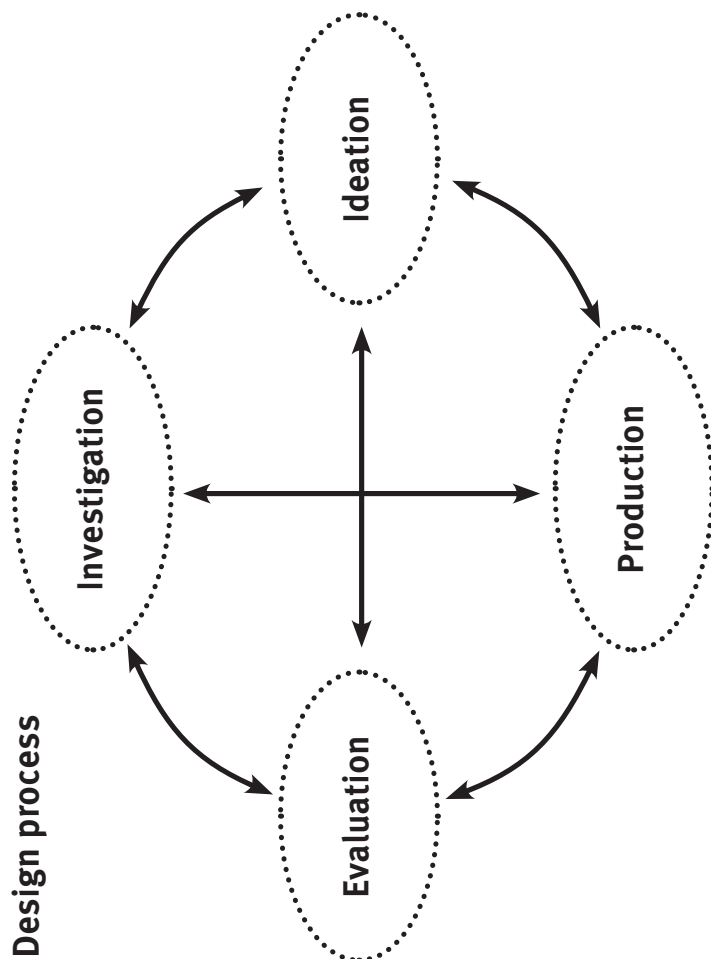
waterwise

Queensland

Resource 8 (continued)

❖ Your challenge: Promote Waterwise!

Design process



You will work in a team to design a promotional product that encourages people in your community to save water. A promotional product could include a:

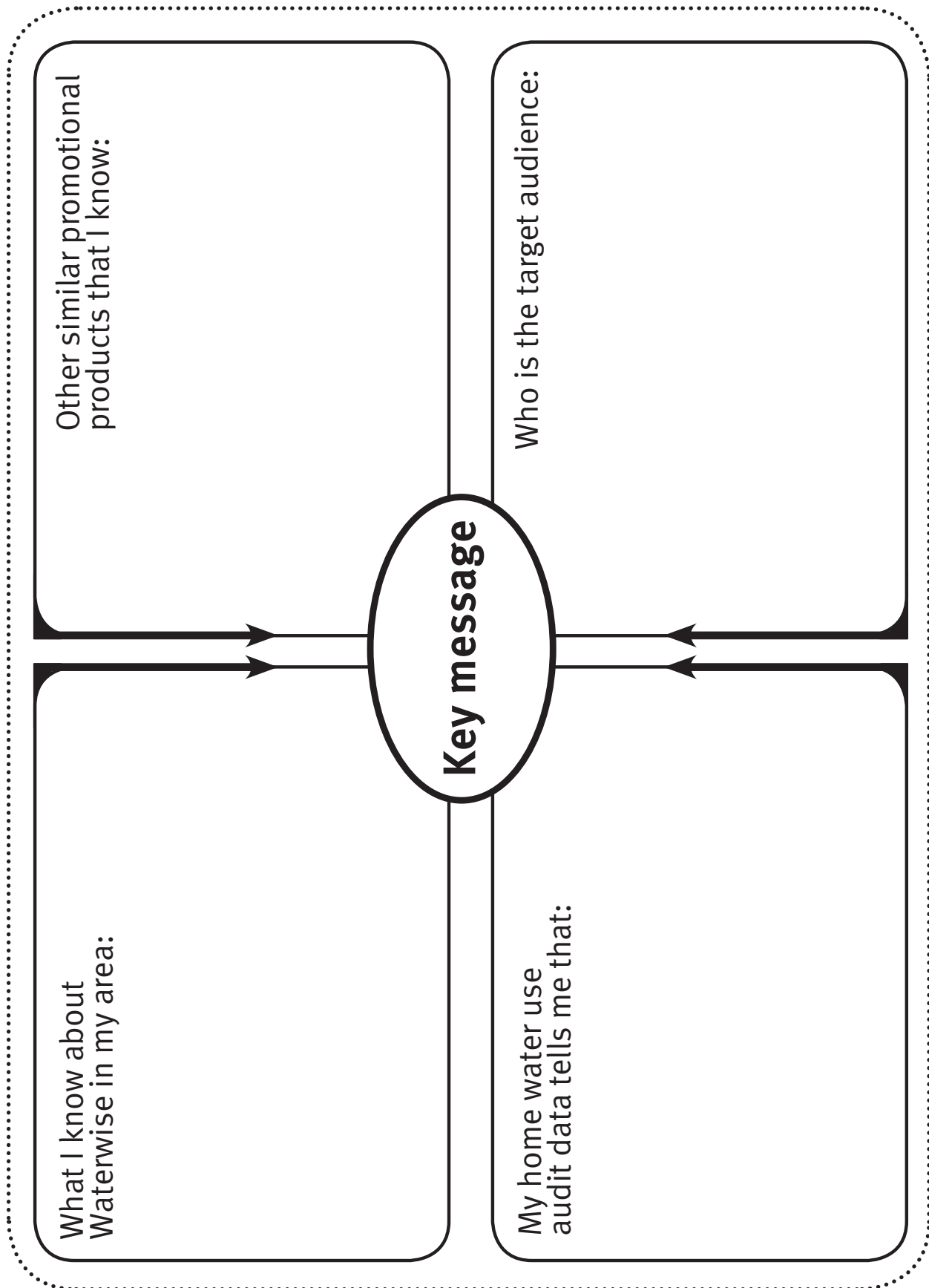
- community announcement or jingle for radio or the school public address system
- magazine or television advertisement for the community or school newsletter
- claymation segment
- brochure
- PowerPoint presentation
- jingle in which the student uses the melody of a popular song and changes the lyrics to a Waterwise message (use Whizzy's jingle as an example)
- dance sequence to accompany the jingle, which the student could perform at assembly
- television advertisement to be played at assembly
- combination of all of the above, which could be collated for a school assembly or community education program.

» The process

- **Investigate** how governments and other teams design promotional products to 'sell' a beneficial idea. Research the background to water supply and distribution in your area and survey the families in your class to find out how they are saving water and what their attitudes to water conservation are.
- Collect **ideas** that could solve the problem.
- **Produce** your solution.
- **Evaluate** your product. Is it successful yet, or do you need to go through the process again?

Resource 8 (continued)

Investigation



••• Ideation

What slogan or title will we use for our product?-----> Can it use less words?

» Ideas

-
-
-

What key message will our product deliver?-----> Is the meaning clear?

» Ideas

-
-
-

What layout will we use for our product?-----> Is the layout visually appealing?

» Ideas

-
-
-

Resource 8 (continued)

More ideation

» Sketch some ideas for a layout, outline or storyboard » Pick your best one and enlarge it on another sheet

Can it be bigger?

Can it be simpler?

Resource 8 (continued)

❖ Production

» Create the promotional product to specifications negotiated with your teacher. List the specifications here.
Refer to Lesson 8, Step 8, for ideas about specifications.

Resource 8 (continued)

❖ First product evaluation

<p>» What we could have done better ...</p>	<p>» Some things we learned by doing this ...</p>
<p>» The best things about our products are ...</p>	<p>» Difficulties we had with this challenge were ...</p>