Australian made

Strand	Organiser	Level						
		1	2	3	4	5	6	B6
Technology Practice	*Investigation*							
	Ideation							
	Production							
	Evaluation							
Information	*Nature*							
	Techniques							
Materials	*Nature*							
	Techniques							
Systems	*Nature*							
	Techniques							

Purpose

The activities in this module provide opportunities for students to critically evaluate existing packaging and promotional materials and to design their own packaging or promotional materials for a real or proposed Australian product. The packaging they create should reflect Australian cultures or have an Australian theme.

Overview

The following table provides an overview of the activities in this module and the way in which these are organised into introductory, developmental and culminating phases.

Introductory	Developmental	Culminating
Examine the presentation of information in packaging and promotional materials. Analyse features of packaging. Find hidden messages. Investigate issues — intellectual property. Investigate issues — Is it Australian made? Investigate packaging shapes and sizes. Investigate packaging materials and methods. Investigate packaging design and production processes. Consider impacts and consequences of using particular materials and envision preferred futures. Match packaging to products.	Participate in group work and decision making. Conduct a safety and risk assessment. Devise text and images that could be used to promote an Australian product. Test and select materials. Create graphic designs. Create prototypes of packaging options. Develop a packaging production plan. Develop a presentation for the product launch.	Devise evaluation criteria and reflect on products and processes. Organise a product launch. Evaluate products and processes.

Core learning outcomes

This module focuses on the following core learning outcomes from the *Years 1 to 10 Technology Syllabus*:

Technology Practice

TP 3.1 Students examine knowledge, ideas and data from a range of sources and establish the relevance of this information when meeting design challenges.

TP 4.1 Students use consultative methods to gather knowledge, ideas and data when researching alternatives within design challenges.

TP 3.2 Students collaboratively generate design ideas and communicate these using presentations, models and technical terms.

TP 4.2 Students generate design ideas through consultation and communicate these in detailed design proposals.

TP 3.3 Students cooperatively develop and follow production procedures to make products that reflect their design ideas.

TP 4.3 Students identify and make use of the practical expertise of others when following production procedures to make products for specific users.

TP 3.4 Students test and judge how effectively their own and others' processes and products meet the design challenge.

TP 4.4 Students gather feedback to gauge how well their design ideas and processes meet design challenges and how effectively products meet the needs of specific users.

Information

INF 3.1 Students describe advantages and disadvantages of different sources and forms of information.

INF 4.1 Students analyse sources and forms of information and match these to the requirements of design challenges.

INF 3.2 Students select and use techniques for generating, modifying and presenting information for different purposes.

INF 4.2 Students apply techniques for transforming and transmitting information for different audiences.

Materials

MAT 3.1 Students choose materials according to various characteristics that best suit the product and user.

MAT 4.1 Students explain how characteristics of materials affect ways they can be manipulated.

MAT 3.2 Students select and use suitable equipment and techniques to combine materials accurately in order to meet design requirements.

MAT 4.2 Students employ their own and others' practical knowledge about equipment and techniques for manipulating and processing materials in order to enhance their products.

Systems

SYS 3.1 Students identify and describe relationships between inputs, processes and outputs in systems.

SYS 4.1 Students identify and explain the logic of systems and subsystems.

SYS 3.2 Students assemble and trial systems they design by considering inputs, processes and outputs.

SYS 4.2 Students incorporate feedback to refine and modify systems and/or subsystems.

Core content

The core learning outcomes are the focus for planning learning activities and assessment tasks. Students will engage with core content (see pp. 37–40 of the syllabus) when they are provided with opportunities to demonstrate core learning outcomes. While the content is listed in strands for organisational convenience, no one part of that content is to be viewed as discretely associated with a single strand.

The organisation of content within a strand should not be considered hierarchical. Any of the content can be addressed at any appropriate level; not all of the content need be addressed at every level. Core content should be selected to suit students' needs, interests and abilities and to take account of their prior knowledge and experiences.

The core content should be studied in a range of contexts. These could include personal and global contexts, as well as contexts of agriculture, business, communities, home and family, industry, leisure and recreation, and school.

Using this module

The activities in this module are designed to provide opportunities for students to demonstrate Levels 3 and 4 core learning outcomes. These activities can also provide opportunities for students to develop and demonstrate the related learning outcomes at other levels. In order to do this, teachers will need to prepare additional sets of anticipated evidence derived from the related learning outcomes at different levels. They may need to modify aspects of the activities.

This module includes a variety of sequenced activities requiring varying amounts of time. Teachers can modify the design challenge and related activities depending on the local contexts, particular needs and prior knowledge of students and the availability of materials and resources.

Advice to teachers

This module provides opportunities for students to explore the nature of packaging and promotional materials and to package and promote an existing or proposed Australian product. Students select or envisage an Australian product and design and make packaging that clearly identifies the product as Australian. The packaging should target a specific audience — local market, international market or overseas visitors — and reflect Australian cultures or have an Australian theme. The product can be an artefact, event, service or process. The range of possible variations depends on the article to be packaged, marketing strategies and how expensive and robust the packaging needs to be.

Resources

Students' creativity in demonstrating core learning outcomes in this module should not be limited by the range and scope of resources and equipment provided by the teacher. A variety of resources should be collected over time and should be safely stored and made available to students as required.

In this module, teachers and students need to collect examples of packaging and promotional materials. These might include packaging for toys, food and other household items, catalogues, brochures and advertisements. Students will also need cardboard, paper and plastic in different colours, thicknesses and textures.

Materials and equipment required for creating packaging might include cutting tools; lettering stencils; sheets of clear plastic film such as overhead transparencies; patterns and nets of different types of packaging; rulers, pens, paint and pencils; adhesives, glue guns and glue.

Students who wish to use vacuum-forming packaging techniques will require access to a stove, vacuum cleaner, forming box, forming frame and sheets of vacuum-forming plastics.

Evaluation of a unit of work

After completion of a unit or units of work developed from this module, teachers collect information and make judgments about:

teaching strategies and activities planned or selected to allow students to demonstrate the core learning outcomes

future learning opportunities for students who have not yet demonstrated the core learning outcomes and to challenge and extend those students who have already demonstrated the core learning outcomes

the extent to which activities matched needs of particular groups of students and reflected equity considerations

the appropriateness of time allocations for particular activities

the appropriateness of resources used.

Information from this evaluation process can be used to plan subsequent units of work to support future student learning. The evaluated units of work may also be adapted prior to their reuse. For further information, refer to the 'Curriculum evaluation' section of the sourcebook guidelines.

Links

Links to other key learning areas

Activities from this module can be used as part of an integrated unit that makes links to other key learning areas. When incorporating this module into an integrated unit of work, teachers can select activities that provide opportunities for students to demonstrate learning outcomes from other key learning areas and identify anticipated evidence of students' demonstrations of these learning outcomes. It is important, however, that the integrity of the processes and concepts within key learning areas is maintained.

This module has links the following key learning areas:

- The Arts
- English
- Health and Physical Education
- Languages other than English
- Mathematics
- Science
- Studies of Society and Environment.

Contributions to the cross-curricular priorities

This module contributes to students' development of the cross-curricular priorities:

- **literacy**, as students examine language features and the technical and symbolic codes used in packaging and promotional materials; interpret literal and inferential meanings of the visual components of these materials; and identify ways the visual aspects of these materials can influence viewers
- **numeracy**, as students compare, measure, construct and use two- and three-dimensional shapes; estimate and measure dimensions of packaging; estimate and calculate costs of packaging
- **lifeskills**, as students work cooperatively; develop safe work practices; and manage people, time and physical resources
- **a futures perspective**, as students envision alternatives for packaging and promoting products and events; and predict implications and consequences of mass production of particular forms of packaging.

The valued attributes of a lifelong learner

The overall learning outcomes of the Queensland Years 1 to 10 curriculum contain elements common to all key learning areas and collectively describe the valued attributes of a lifelong learner. The following points, adapted from the syllabus, indicate how various activities in this module might contribute towards the development of these attributes.

Knowledgeable person with deep understanding

- selects materials to create packaging based on knowledge of their properties
- identifies and understands issues related to information on packaging and in promotional materials.

Complex thinker

- compares packaging materials and processes
- identifies misleading information on packaging and promotional materials.

Active investigator

- investigates the accuracy of packaging and promotional information
- researches the use of particular materials for packaging and projects the impacts and consequences of their long-term use.

Responsive creator

- generates design ideas for logos, slogans and/or jingles
- designs and makes packaging and promotional materials for an Australian product.

Effective communicator

- identifies incorrect or misleading information, and devises ways of communicating accurate information about products
- matches the presentation of information to specific audiences.

Participant in an interdependent world

- works independently and in groups, and acknowledges the design ideas of others.

Reflective and self-directed learner

- evaluates personal and team performances
- compares initial design ideas with final products and gives reasons for differences.

Assessment strategies

The assessment opportunities outlined in this module are examples of how to assess students' demonstrations of the identified learning outcomes. As often as possible, negotiate assessment with students and support a variety of ways of demonstrating the learning outcomes. Reflect with students on evidence gathered when making judgments about their demonstrations of learning outcomes. Some students may require more time and/or other contexts in which to demonstrate these learning outcomes. Other modules may provide such time and/or contexts.

Suggestions for gathering information about student learning are provided in the activities section of this module. The anticipated evidence column in the table below provides descriptions of what students may do in order to demonstrate the learning outcomes. The table is neither exhaustive nor mandatory. Once sufficient evidence has been collected, judgments can be made about students' demonstrations of learning outcomes.

Core learning outcomes	Anticipated evidence	Sources of evidence
TP 3.1 Students examine knowledge, ideas and data from a range of sources and establish the relevance of this information when meeting design challenges.	Examine information from the Internet, local business and libraries about packaging and promotional materials and processes used to create them, and select ideas that are relevant to their chosen product. Explore the consequences and impacts of packaging and promotional practices and identify implications for their designs.	Anecdotal records: • observations of students' participation in discussions and group work. Technology project folios: • Student resources 1, 2, 3 and 4 • packaging nets • forward-casting.
TP 4.1 Students use consultative methods to gather knowledge, ideas and data when researching alternatives within design challenges.	Consult with people who create or use packaging products and target audiences to compare and evaluate a number of design options.	
TP 3.2 Students collaboratively generate design ideas and communicate these using presentations, models and technical terms.	Collaborate with peers to generate ideas for packaging and promotional materials, and negotiate options. Use drawings, prototypes and mock-ups to communicate design ideas. Use relevant technical terms when describing or annotating designs.	Technology project folios: • annotated designs • results of investigations into packaging types and processes. Prototypes of packaging. Mock-ups of promotional materials.
TP 4.2 Students generate design ideas through consultation and communicate these in detailed design proposals.	Uses consultation with 'experts' and potential users to generate designs. Include a rationale for their design ideas in detailed design proposals.	
TP 3.3 Students cooperatively develop and follow production procedures to make products that reflect their design ideas.	Work cooperatively to develop procedures for creating packaging and producing promotional materials. Follow production plans safely to create packaging and/or promotional materials that reflect their designs.	Technology project folios: • graphic designs • prototypes and mock-ups • production plans • packaging or promotional materials.
TP 4.3 Students identify and make use of the practical expertise of others when following production procedures to make products for specific users.	Consult with peers or adults with expertise in, for example, photography, graphics, sound or video manipulation. Use advice from others when following their production procedures production procedures.	

TP 3.4 Students test and judge how effectively their own and others' processes and products meet the design challenge.	Devise criteria and tests for evaluating the effectiveness of packaging and promotional materials and processes used to create them. Use these criteria and tests to evaluate the effectiveness of their own and others' packaging and promotional materials and production procedures.	Technology project folios: • evaluation criteria • feedback from potential users • self- and peer-evaluation.
TP 4.4 Students gather feedback to gauge how well their design ideas and processes meet design challenges and how effectively products meet the needs of specific users.	Determine how well their designs for packaging and promotional materials meet the design challenge and the needs of users by gathering feedback from potential audiences. Use feedback from others to reflect on the effectiveness of their packaging production procedures.	
INF 3.1 Students describe advantages and disadvantages of different sources and forms of information.	Describe advantages and disadvantages of accessing information about intellectual property from different sources. Describe advantages and disadvantages of techniques used to present information on packaging and promotional material.	Anecdotal records: • observations of students' participation in discussions and group work. Technology project folios: • representations of forward-casting • annotated designs.
INF 4.1 Students analyse sources and forms of information and match these to the requirements of design challenges.	Examine the forms of information used in packaging and promotional materials for products aimed at similar markets, and evaluate the suitability of ideas for packaging and promoting their product. Select information forms such as graphics, video, sound and animation that match their design requirements.	
INF 3.2 Students select and use techniques for generating, modifying and presenting information for different purposes.	Generate, manipulate and present text and images for their packaging or promotional materials in print or electronic formats. Devise ways of supporting their promotional materials through the use of sound. Modify the presentation of information to appeal to target audiences.	Technology project folios • packaging designs • production plans • promotion plans. Packaging. Promotional materials.
INF 4.2 Students apply techniques for transforming and transmitting information for different audiences.	Use computer equipment and related techniques to record images and sound and manipulate them for use in their promotional materials. Use a range of techniques to transmit visual and auditory information so that it will appeal to their target audiences.	
MAT 3.1 Students choose materials according to various characteristics that best suit the product and user.	Identify the characteristics of materials that make them suitable for packaging their product. Select packaging materials that enhance the appeal of their product.	Technology project folios: • records of tests of materials • packaging designs • production plans.
MAT 4.1 Students explain how characteristics of materials affect ways they can be manipulated.	Use understandings of the characteristics of materials to identify ways to cut, shape, join or combine them.	

MAT 3.2 Students select and use suitable equipment and techniques to combine materials accurately in order to meet design requirements.	Combine materials accurately to, for example, create a pleasing effect or provide greater protection for the product.	Anecdotal records: • observations of students working with materials and equipment. Technology project folios: • annotated packaging designs and production plans. Packaging prototypes.
MAT 4.2 Students employ their own and others' practical knowledge about equipment and techniques for manipulating and processing materials in order to enhance their products.	Confer with people with specialised knowledge about suitable equipment and techniques for manipulating materials with precision. Select equipment that allows them to manipulate materials with precision to create effective packaging.	
SYS 3.1 Students identify and describe relationships between inputs, processes and outputs in systems.	Identify inputs, processes and outputs on diagrams of packaging processes. Record, model, demonstrate or explain how promotional materials are produced.	Anecdotal records: • observations of students' participation in activities and discussions. Technology project folios: • systems diagrams • futures wheel • forward-casting.
SYS 4.1 Students identify and explain the logic of systems and subsystems.	Analyse packaging processes and explain the purpose and sequence of components. Identify and explain the purposes of routines in packaging processes.	
SYS 3.2 Students assemble and trial systems they design by considering inputs, processes and outputs.	Identify and order components of their packaging processes. Assemble and trial their packaging processes.	Technology project folios: • steps, diagrams and/or flow charts of the packaging process • product evaluation reports • self-evaluation. Packaging prototypes. Anecdotal records: • observations of students' presentations at product launch.
SYS 4.2 Students incorporate feedback to refine and modify systems and/or subsystems.	Explain how subsystems can enhance the efficiency or effectiveness of packaging processes. Modify packaging processes in response to information gathered during trials. Annotate their production procedures with suggestions for modifications.	

Background information

Terminology

In this module, students have opportunities to become familiar with and use the following terminology:

advertising
audience
copyright
font
graphics
intellectual property
layout
marketing
mass production
patent
point-of-sale promotional materials display
trade mark
target market
vacuum

School authority policies

Teachers need to be aware of and observe school authority policies that may be relevant to this module.

Safety policies will be of particular relevance to some of the activities that follow. It is essential that teacher demonstrations and student activities are conducted according to procedures developed through appropriate risk assessments at the school.

In this module, teachers may need to consider safety issues relating to:

- cutting and joining materials
- vacuum-forming processes.

Equity considerations

This module provides opportunities for students to increase their understanding and appreciation of equity and diversity within a supportive environment. It includes activities that encourage students to:

- work individually or in groups to design packaging and promotional materials for an Australian product
- value diversity of ability, opinion and experience in consulting with others about packaging solutions
- value diversity of language and cultural beliefs evident in the contributions made by people from various cultures to Australia's heritage
- support one another in their efforts
- become empowered to communicate freely in group work and consultation activities
- negotiate the selection of design options
- accept changes to designs that are based on research, investigations and consultation.

It is important that these equity considerations inform decision making about teaching strategies, classroom organisation and assessment.

Some students with disabilities may need assistance with some activities. Advice should be sought from their support teachers.

Activities

Introductory activities

Focus

The introductory activities focus on the investigation of information, materials, systems and issues related to the design and development of packaging and promotional materials.

Teaching considerations

These activities include links to The Arts, Health and Physical Education and Studies of Society and Environment. Before beginning the unit, create the handling collections listed in the Resources section below. Seek contributions for the handling collections from parents/carers and community members.

Encourage parents/carers to be involved in their children's research and to discuss ideas with them. Invite community members with specialised expertise to participate in class activities or advise students about their design ideas.

Resources

Technology project folios

Rulers, tape measures, and/or arbitrary units or equipment for measuring

Handling collections of:

- household products and related packaging or promotional materials
- commonly used and interesting packaging
- packaging displaying logos or statements that indicate the product is made in Australia
- packaging for toys or health-related products

Student resource 1 (Packaging — Identifying common features)

Student resource 2 (Packaging — Analysing features)

Student resource 3 (Hidden messages — What's in the packaging?)

Access to the Internet, newspaper/magazine articles and library resources

Activity 1

Examine the presentation of information in packaging and promotional materials

Technology Practice (Investigation), Information

Links to English:

Ludwig, C. 2000, Why Wait?: A Way into Teaching Critical Literacies in the Early Years *(pp. 7–25)*

Explain that the purpose of the activity is to examine the presentation of information on packaging or in promotional materials. Provide students with Student resource 1. Lead a class brainstorming session to identify common features used to convey information on packaging or in promotional materials. These might include text, cartoons, photographs, puzzles and competitions, bright colours, logos, brand names, tunes and slogans. Students add these to Student resource 1.

Students work in pairs or small groups to examine the packaging in the handling collection and select three products. They list the purpose/s of the features evident on the packaging on Student resource 1 and report their findings to the class.

Students identify the most common features and discuss the purposes of these features — for example, persuade users to buy, indicate contents or ingredients, provide warnings or indicate suitability for particular purposes or age groups. Students identify unusual features and discuss why these were used and how users might respond to them.

Activity 2

Analyse features of packaging

Technology Practice (Investigation), Information

Explain that the purpose of the activity is to analyse the features such as text, images and symbols found on packaging and in promotional materials.

Provide students with Student resource 2. Students work in groups to analyse the features found on packaging and in promotional materials. Students record their responses on Student resource 2.

Students consider the purposes or purposes of each feature and why particular colours, text sizes and positions were used. They should also look for examples of:

- common ways of representing particular information
- misleading information
- bias in the information.

Provide time for students to report back to the class and discuss their findings.

Activity 3

Find hidden messages

Technology Practice (Investigation), Information

Links to:

*HPE **PH 3.4** Students assess the reliability of sources of information relating to health products and services.*

*SOSE **C I3.2** Students identify stereotyping, discrimination or harassment to develop a plan that promotes more peaceful behaviours.*

*The Arts **ME 3.3** Students examine and compare the particular languages used to construct various representations across media forms and genres for specific purposes.*

Select an example of packaging for a toy or health-related product from the handling collection.

Lead a class discussion that considers the following questions:

- Who do you think is the target market for the product?
- What evidence can be found in the packaging or promotional material to support this?
- What other promotional materials are used or could be used to advertise this product?
- What information is printed on the packaging? Who do you think is the intended reader of this information?
- Is the information on the packaging related to the product, the package or the target market? Why do you think this?
- Why do you think different types of print are used for the different types of information of the packaging?
- What warnings are printed on the packaging?
- What image of the product is being conveyed by the packaging or promotional material?
- What other images could be conveyed and how?
- Is there evidence of stereotyping or discrimination in the packaging or promotional materials?
- Who might benefit from the way the product is packaged?
- Who might be disadvantaged by the way the product is packaged?

Students examine the external appearance of other packaging. They discuss the different types of information found and record their responses on Student resource 3. Students are introduced to the terms, target market, audience and attributes to complete this activity.

Activity 4

Investigate issues — intellectual property

Technology Practice (Investigation), Information

Links to SOSE:

***SRP 3.5** Students explain the values associated with familiar rules and laws.*

Discuss the need for processes and practices related to intellectual property.

Ask students to suggest possible sources of information about intellectual property — for example, relevant government departments, the Internet, friends or family.

Students discuss:

- benefits and disadvantages of each source — ease of access and reliability
- keywords that could be used to locate this information on the Internet.

Students collect examples of trademarks and present them in their Technology project folios. They research and present the meanings of the terms ‘intellectual property’, ‘trade mark’, ‘patent’ and ‘copyright’.

Activity 5

Investigate issues — Is it Australian made?

Technology Practice (Investigation), Information

Links to SOSE:

***C I3.1** Students identify the contributions of diverse groups, including migrants and Indigenous peoples, to the development of their community.*

Discuss the advantages and disadvantages of promoting a product as Australian made or Australian owned. Investigate rules associated with labelling products as Australian made or owned. Discuss whether advertisements and packaging accurately portray items as Australian made. Identify examples of misleading packaging or labelling. Propose alternative designs that would be more accurate.

Students collect examples of packaging or promotional materials that display logos or statements that might lead consumers to believe that the product was made in Australia. Discuss the meanings of these statements and devise categories of products. Create a chart that illustrates the categories.

Students investigate the origins of brand names and names of companies. Identify those that reflect the multicultural nature of Australian society.

Students research the contributions Australians, including migrants and Indigenous peoples, have made to Australian inventions and the development of Australian companies.

Students record their findings in their Technology project folios.

Activity 6

Investigate packaging shapes and sizes

Technology Practice (Investigation), Information

Links to Mathematics

Provide opportunities for students to look at the handling collection in pairs or groups of three. Students select and examine a range of examples, comparing their purposes, shapes and sizes.

Students examine examples of products and packaging and discuss similarities and differences. Students might consider:

- the shape of the product
- the shape of its packaging
- the most commonly used shapes in packaging and why these shapes are popular
- unusual shapes used for packaging and why these may have been used
- the dimensions of the product and of its packaging
- the meaning of over-packaging
- why manufacturers package products in boxes that are considerably larger than the contents.

Students collect or create nets for a range of packaging shapes. Students developing promotional materials for an event might create a net of a kit or folder for these materials.

Activity 7

Investigate packaging materials and methods

Technology Practice (Investigation), Materials, Systems

Links to Mathematics and English

Students collect examples of packaging that use unusual materials and combinations of materials. Students:

- compare the purposes, shapes and designs of packaging
- unfold or deconstruct examples of packets and boxes
- discuss similarities and differences in the materials used and the construction of packaging types
- create packaging nets based on the designs they have explored
- develop instructions for constructing packaging from nets

Students might consider:

- the materials used to create packaging
- what materials and colours are commonly used on packaging and why?
- the common combinations of materials used in packaging — for example, why some boxes have cut-out shapes with plastic inserts?

Students research methods for producing packaging, processes used to package products and substances, and processes for sealing packaging. Students should record the results of their investigations in their Technology project folios.

Activity 8

Investigate packaging design and production processes

Technology Practice (Investigation), Systems

Links to:

*HPE **PH 3.5** Students describe features of places where they live, work and play that influence the health of themselves and others, and propose ways they can help people who are responsible for keeping these places healthy.*

Students investigate how packaging is designed and created in industry. This might include inviting guest speakers to visit the class, organising visits to business or industry locations and/or interviewing people with specialist knowledge.

Students:

- brainstorm occupations related to the design and production of packaging, and health and safety issues related to those occupations
- report on occupational specialisation in the packaging industry
- examine mass production and small-scale production methods
- prepare diagrams illustrating production and packaging processes
- label the diagrams to identify inputs, processes and outputs.

Students consider the cultural, economic, environmental, ethical and social appropriateness of using particular materials and processes.

Activity 9

Consider impacts and consequences of using particular materials and envision preferred futures

Technology Practice (Ideation), Materials, Systems

Links to The Arts, English and SOSE

*SOSE **SRP 3.2** Students create a representation of occupational specialisation and interdependence in an industry from the past, present or future.*

Provide students with Student resource 4. Students work in groups to create a futures wheel that identifies issues or problems related to using a particular material for packaging and promotional purposes.

Each group selects one material and discusses and/or researches the impacts or consequences using this material may have for people and environments.

Students envisage the possible impact of continued use of the material for five, ten and twenty years.

Each group:

- describes the material
- suggests a range of possible short- or long-term solutions
- selects a preferred solution
- predicts by forward-casting five, ten and twenty years ahead in relation to implementing the preferred solution
- compares the results with the Student resource 4 and discusses whether the proposed solution is a preferred future.

Activity 10

Match packaging to products

Technology Practice (Ideation, Evaluation), Materials, Systems

Students select one form of packaging and list a range of products that could be packaged in it. Students should base their suggestions on the suitability of the material to the nature of the product.

Students select a product and suggest alternative methods of packaging it. In their Technology project folios, students draw diagrams or flow charts to illustrate how the product would be packaged and record their reasons for matching the product with the particular type of packaging.

Students choose a preferred packaging method. In their Technology project folios, they:

- list and describe the materials needed
- describe or illustrate a process for packaging the product
- justify their choice of materials and packaging process based on the nature of the product and the properties of the materials.

Assessment

Sources of evidence could include:

- observations of students' participation in discussions and activities
- students' analyses of existing packaging as described in their Technology project folios
- packaging nets
- futures wheels and representations of forward-cast
- systems diagrams or flow charts of packaging processes
- observations of students' participation in discussions and activities.

Developmental activities

Focus

Design challenge

Design packaging or promotional material for an Australian product (artefact, event, service or system). The packaging or promotional material should target a specific audience — local market, international market or overseas visitors. It must be easily recognisable as Australian. It might reflect Australian cultures or have an Australian theme.

The developmental activities focus on the design and production of packaging and promotional materials.

Teaching considerations

The following activities can be adapted for students who choose to design promotional materials for a local or well-known Australian event such as the Gympie Muster, Woodford Folk Festival, RAQ Awards or the AFL Grand Final instead of creating packaging for an artefact.

Parents/carers with specialised knowledge or expertise may be invited to work with students and to provide technical advice or feedback on their designs.

Students will require varying amounts of time to complete the design challenge. There are additional opportunities for students to demonstrate Technology learning outcomes by planning and setting up a mock 'product expo'.

At the beginning of each session, remind students to record test results and considerations of appropriateness in their Technology project folios. Provide time at the end of each session for students to reflect on what they have learnt and to think about their requirements for the next session.

Resources

Technology project folios.

Cardboard, plastics and a range of recyclable materials.

Cutting tools, adhesives.

Computers, software and peripheral devices for manipulating photographs and generating plans, working drawings and graphic designs.

Activity 11

Participate in group work and decision making

Technology Practice (Production, Evaluation)

Links to SOSE:

***SRP 3.3** Students apply the principles of democratic decision making in cooperative projects.*

Introduce the design challenge.

Brainstorm a list of Australian products that students might like to design packaging and/or promotional materials for. Products can include artefacts, services, events or systems. Explain that students can also design packaging and/or promotional materials for an imaginary product.

Students consider common interests and collective expertise as they form groups. They undertake a guided negotiation using democratic decision-making and group processes to be used during the project. These activities are recorded in their Technology project folios.

Explain that they will need to evaluate their personal and team performances at the end of the project. Assist students to identify criteria to use in their self-evaluation and team evaluation and to record them in their Technology project folios.

Activity 12

Conduct a safety and risk assessment

Technology Practice (Production)

Links to HPE:

***PH 3.3** Students identify potentially hazardous situations and demonstrate actions to respond to unsafe and emergency situations.*

Invite the groups of students to brainstorm the resources and equipment they might need during the project. Encourage students to discuss accidents or hazardous experiences they have had in the past.

Discuss potentially hazardous situations that might occur during this project and ask students to record them in their Technology project folios. These discussions and notes might relate to storing hazardous materials and using and caring for equipment and appliances.

Assist students to plan risk management strategies for avoiding or responding to hazardous situations. These might include:

- following recommended safety procedures and production techniques
- cooperating with and supporting others
- assisting with cleaning and tidying
- reporting unsafe equipment or appliances
- using standard protective equipment.

Activity 13

Devise text and images that could be used to promote an Australian product

Technology Practice (Ideation), Information

Links to The Arts:

***VA 3.1** Students design, make and modify images and objects applying elements and additional concepts to construct intended meanings.*

***VA 3.2** Students make and display images and objects, understanding the functions of informal and formal display.*

Ask each student group to select a product to design packaging and/or promotional materials for. Remind students that they are to use an Australian theme in their packaging. Brainstorm Australian geographic and cultural icons that could be used as part of the packaging concept.

Students:

- discuss the factors that might influence the type and form of packaging or promotional materials required
- research the product to identify special characteristics
- identify the target market for the product
- investigate how similar products are packaged and promoted
- discuss what might appeal to the target market — consider themes, colours, shapes, font types, images, personalities and sounds
- collect examples of images or other media aimed at the same target market and add them to their Technology project folios
- evaluate the suitability of their ideas for packaging or promoting their product and annotate the examples
- record images and/or sounds for use in their packaging or promotional materials
- select information, photographs, graphics, video, sound and animations and manipulate them to meet their design requirements
- choose ways of graphically representing their product — for example, photographs, illustrations, plans or diagrams
- compose slogans or jingles to promote the product.

Students might create their graphic representations electronically using CAD or graphics packages or photograph manipulation software. Printouts of draft designs should be kept in their Technology project folios for future reference.

Provide opportunities for students to display their preferred ideas and seek feedback from peers. Encourage students to seek feedback from potential users of the product, such as students from other year levels, school staff, family, friends, neighbours and owners of local businesses.

Activity 14

Test and select materials

Technology Practice (Investigation),

Materials

Links to Science:

***NPM 3.1** Students examine and describe the smaller visible parts of common materials and relate these to the properties of the materials.*

***NPM 3.2** Students compare properties of materials before and after physical and chemical changes.*

***NPM 3.3** Students collect information to illustrate how combining different materials influences their usefulness.*

Discuss the purposes of:

- packaging — for example, protect products or enhance their appearance
- promotional materials — for example, provide information.

Make a list of the desirable characteristics of materials for making packaging and/or promotional materials.

Introduce the terms ‘aesthetic appropriateness’ and ‘functional appropriateness’. Discuss features of materials that might make them aesthetically or functionally appropriate for use in creating packaging or promotional materials. Devise tests to determine the suitability of a range of materials. Consider their appearance, texture, strength, durability, flexibility (for folding or shaping), transparency and water resistance. Students might also need to consider how to transfer images to the materials.

Estimate the quantity of material required for packaging their product or preparing promotional materials. Introduce the terms ‘economic appropriateness’ and ‘environmental appropriateness’. Discuss possible economic and environmental implications of mass-producing the packaging or promotional materials. Students make notes about these in their Technology project folios.

Activity 15

Create graphic designs

Technology Practice (Ideation), Information

Links to The Arts:

***ME 3.1** Students combine and manipulate media languages and technologies to construct intended meanings.*

Students generate graphic designs for their packaging or promotional materials. Students who are designing packaging for an artefact should sketch each view of the package. Encourage students to try a range of designs and consult with others about the messages conveyed by each.

In planning their designs, students should consider:

- the shape and dimensions of the product
- brand, product name and logos
- key graphical features to promote the product
- potential colour schemes
- information requirements for particular products.

Activity 16

Create prototypes of packaging options

Technology Practice (Production, Evaluation), Information, Materials

Students use a variety of materials or combinations of materials to create a set of packaging prototypes.

Students designing promotional materials produce a set of mock-ups that present a range of approaches. Formats for promotional materials might include:

- a competition
- a point-of-sale display
- a promotional jingle or slogan
- a video or multimedia advertisement.

Where possible, students should discuss their designs with people with specialised knowledge or expertise — for example, graphic designers. Students should record the results of their consultations in their Technology project folios.

Students test or evaluate the effectiveness of their packaging options by considering, for example, how well the packaging promotes and protects the product. They evaluate their promotional materials by presenting them to a sample target audience for feedback.

Students select their preferred options for further development. They annotate their designs with reasons for selecting or discarding ideas.

Activity 17

Develop a packaging production plan

Technology Practice (Production), Systems

Students prepare proposals explaining how they would mass-produce their packaging or promotional materials. Their proposals should include:

- drawings or diagrams of their packaging or promotional materials
- a list of the materials and equipment they require
- a flow chart or sequenced set of instructions for producing the packaging or promotional materials.

Provide time for students to share and discuss their production plans with peers. Encourage students to annotate their production plans with comments and make refinements where necessary.

Students forward-cast the use of the packaging or promotional materials for five years. They predict possible benefits to manufacturers and consider impacts and consequences for people and environments.

Activity 18	Students prepare a presentation to launch their packaging or promotional materials concepts. In designing the presentation, students will need to consider their target audience and discuss how to present their ideas most effectively. Their presentations might include: • photographs of their prototypes • their proposals for mass-producing the packaging or promotional materials • results of their forward-casting in terms of benefits of using particular materials or processes.
Develop a presentation for the product launch *Technology Practice (Production), Information* *Links to The Arts:* ***ME 3.1** Students combine and manipulate media languages and technologies to construct intended meanings.* ***ME 3.2** Students present media texts to a specified audience using presentation techniques associated with particular media forms.*	

Assessment	Sources of evidence could include: • observations of students' participation in discussions and activities • interviews or consultation summaries in Technology project folios • graphic designs • results of materials tests and analyses • prototypes of packaging or mock-ups of promotional materials • proposed production plans and forward-casting

Culminating activities

Focus	The culminating activities involve students in presenting and evaluating their packaging and promotional materials.
Teaching considerations	Planning and running a mock 'product expo' will provide additional opportunities for students to demonstrate Technology learning outcomes.
Resources	Resources for setting up a 'product expo'. Packaging prototypes and promotional materials.

Activity 19 *Devise evaluation criteria and reflect on products and processes* *Technology Practice (Evaluation)*	Revise the purposes of packaging and promotional material. Assist students to devise criteria for evaluating the effectiveness of their packaging and promotional materials. Students review their own and others' packaging or promotional materials using the criteria. They use this information to brainstorm possible improvements and, where possible, refine their packaging or promotional materials. Students compare their design ideas with their final results to evaluate the effectiveness of their production procedures. Students consider how their target audience might react to their design. They use feedback from peers, family and interested community members to evaluate their packaging or promotional material.
Activity 20 *Organise a product launch* *Technology Practice (Ideation, Production), Information*	Conduct a 'product expo' where students can 'launch' their products. Encourage students to design and produce a way of gaining further feedback at the launch. For example, they might incorporate a survey into a promotional competition entry form.
Activity 21 *Evaluate products and processes* *Technology Practice (Evaluation), Materials, Systems*	Students synthesise the information collected during activities 19 and 20 and use this to prepare a product evaluation report that: • assesses the effectiveness of their packaging and/or promotional materials • reflects on the production processes used to create their product • suggests improvements that could be made to their packaging and/or promotional materials and the processes used to create them.

Assessment	Sources of evidence could include: • observations of students' participation in discussions • product launch • product evaluation reports.

Packaging — Identifying common features

Student resource 1

1. Make a list in the left-hand column of the features of the items of packaging you have looked at. Some examples are provided.
2. Select three products to examine in detail. Write the name of a product beside each number.
3. Examine the packaging of each product and identify the purpose/s of the features found on this packaging.

Feature	**Packaging or promotional material for:**		
	1:	2:	3:
Large text			
Small text			
Photograph			

Packaging — Analysing features

Student resource 2

1. Write the name of a product below and describe the type of packaging used.

Name of product	
Type of packaging	

2. Select three features of the packaging to analyse — for example, text, illustrations, symbols, photographs, cartoons.
3. Copy or paste examples of these features in the left-hand column.
4. Analyse the features by answering the questions in the other three columns.

Feature (Copy or paste the examples in this column.)	**What does it look like? Why?**	**Where is it located on the packaging? Why?**	**What is the purpose?**

Hidden messages — What's in the packaging? **Student resource 3**

Product: _____ **Brand:** _____

Who do you think is a target market for the product?

_____

Information feature (e.g. text, images, symbols)	**Audience**	**Attributes of feature (e.g. colour, style, size and type of print)**	**Message conveyed**

What image of the product is being conveyed by the packaging?

_____

_____

_____

What other images could be conveyed and how?

_____

_____

_____

Who might benefit from the way the product is packaged?

_____

_____

_____

Who might be disadvantaged by the way the product is packaged?

_____

_____

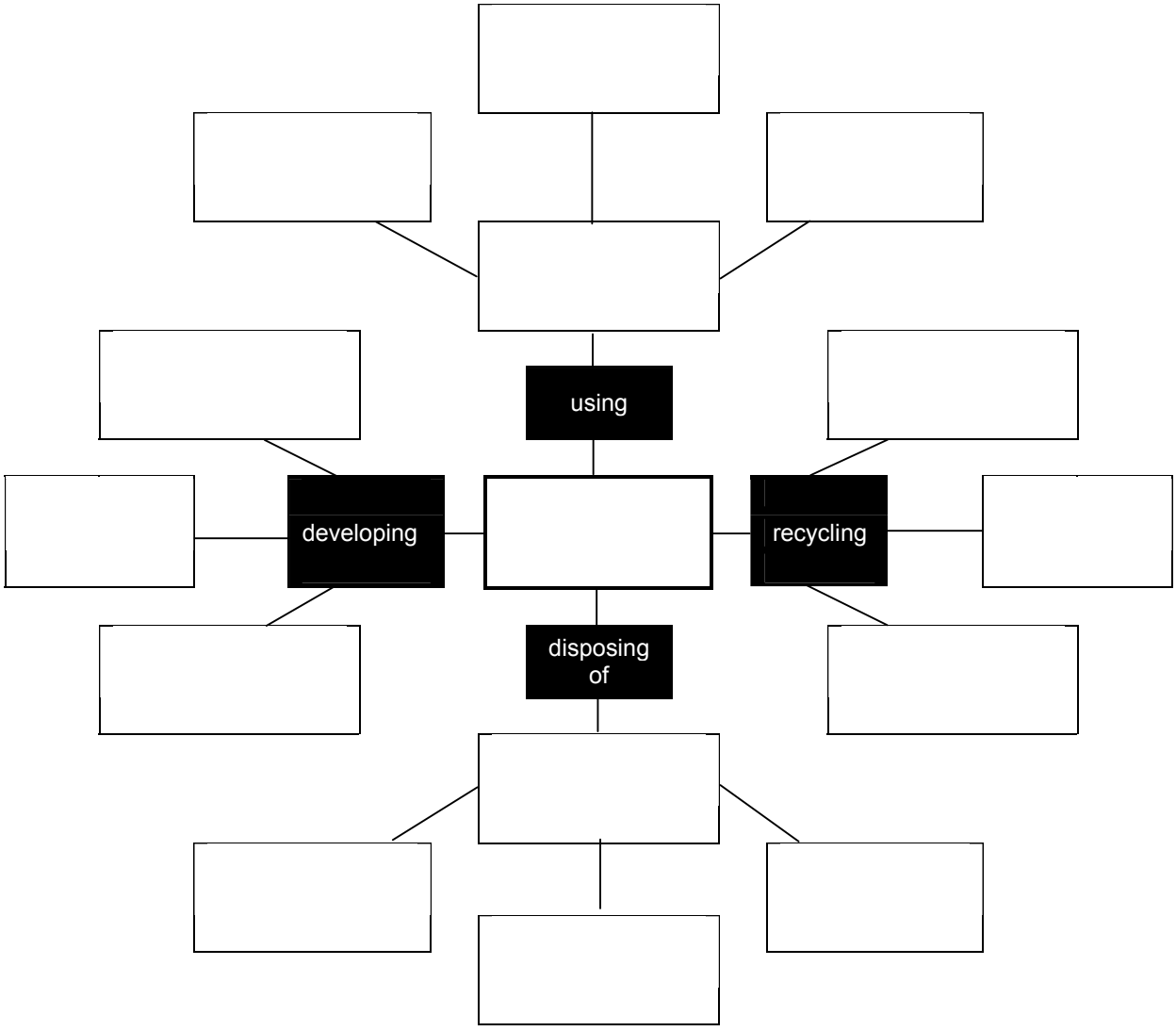
_____

Envisioning futures

Student resource 4

1. Write the name of a material used for packaging or promotional material in the middle of the concept web.
2. Describe the characteristics of the material.

3. Discuss the implications of using this material for packaging your product or producing promotional materials.
4. Add to the concept web by describing issues or problems related to developing, using, recycling and disposing of the material. Add further circles if required.



Support materials

Print

Ludwig, C. 2000, *Why Wait?: A Way into Teaching Critical Literacies in the Early Years*, Education Queensland, Brisbane.

Websites

(All websites listed below were accessed in December 2002)

Australian Chamber of Commerce and Industry,
www.acci.asn.au/
Includes link to 'Australian Made Campaign'.

Country of Origin Labelling,
www.isr.gov.au/labelling/index.html
Provides information about legislation relating to country of origin labelling.

IP Australia: Patents, Trade Marks, Designs,
www.ipaustralia.gov.au/
Includes information about intellectual property, patents and trademarks.

Kids Café — Patent Café's Space for Young Inventors,
http://kids.patentcafe.com/
Invention tools for kids.

PatentCafé: Patents, Copyrights, Trademarks,
www.patentcafe.com/
Information about patents.

Tomorrow's World: The Australian Initiative,
www.apc-online.com/twa/
Information about Australian world first and world best products.

This sourcebook module should be read in conjunction with the following Queensland Studies Authority materials:

Years 1 to 10 Technology Syllabus

Years 1 to 10 Technology Sourcebook Guidelines

Technology Initial In-service Materials

Technology CD-ROM.

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- for administrative purposes, make a digital copy of a work held in printed format
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