

School website



Strand	Organiser	Level						B6
		1	2	3	4	5	6	
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 design and construct a school website. The students consult with members of the school community to inform the development of the website.

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
Let's get started. Evaluate existing websites. Consider issues related to publishing on the Internet. Establish development teams. Map a website. Investigate users' needs and interests. Analyse home page features. Identify hidden messages.	Negotiate a site map for the school website. Design a home page for the school website. Allocate tasks. Design an icon. Design web pages. Create web pages.	Trial the website with users. Evaluate personal and team performance. Look to the future.

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.

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 develop 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

Students need to be familiar with software applications for:

- browsing the Internet
- developing graphics and animation
- authoring web pages.

Resources

Students will require access to a range of computer hardware and software such as word processing software, Internet browsers, sound and video cards, web page authoring software, graphics and sound manipulation software, digital cameras, data projectors, scanners and microphones.

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 to strands from the following key learning areas:

- The Arts
- English
- 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 technical and symbolic codes of websites; interpret literal and inferential meanings of the visual components of websites; and identify ways the visual aspects of websites can influence viewers
- **numeracy**, as students compare, measure and construct web page layouts and estimate and compare file sizes
- **lifeskills**, as students work cooperatively; develop safe work practices; and manage people, time and website assets
- **a futures perspective**, as students envision and create alternative formats for the school website and forward-cast five years to predict the features of the school website and the implications and consequences of the use of the website for members of the school community.

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

- understands the purposes of websites and how websites are developed
- understands how graphics, sound and animation files are created.

Complex thinker

- analyses and organises information
- uses a range of techniques to access and present information.

Active investigator

- researches social, cultural and ethical issues related to publishing on the Internet
- investigates and compares different features and techniques used on web pages to meet needs and interests of users.

Responsive creator

- designs and creates a school website that responds to school community needs and interests.

Effective communicator

- debates social, cultural and ethical issues related to publishing on the Internet
- describes the effects different techniques and formats for presenting information have on specific audiences.

Participant in an interdependent world

- works independently and in groups
- seeks feedback from users and acknowledges and responds to design ideas.

Reflective and self-directed learner

- evaluates web page designs for the school website
- compares initial design ideas with final website and provides 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.	Evaluate a range of websites and identify features that enhance or detract from the appeal of a website. Share information about website development and discuss how this can be used to develop their school website.	Anecdotal records: <ul style="list-style-type: none"> • observations of students' participation in activities and discussions • records of student–teacher interviews • debates about issues related to publishing on the Internet.
TP 4.1 Students use consultative methods to gather knowledge, ideas and data when researching alternatives within design challenges.	Gather specialised knowledge about website design from web-based resources or by interviewing web developers. Use interviews or surveys to consult the school community about what should be included on the website.	Technology project folios: <ul style="list-style-type: none"> • results of surveys or interviews • website evaluation sheets • analyses of information.
TP 3.2 Students collaboratively generate design ideas and communicate these using presentations, models and technical terms.	Work with peers to generate web page ideas. Prepare site maps that identify links and are labelled with correct technical terms.	Anecdotal records: <ul style="list-style-type: none"> • observations of students' participation in activities • records of student–teacher interviews.
TP 4.2 Students generate design ideas through consultation and communicate these in detailed design proposals.	Interview or survey potential users to determine the website contents and format. Communicate their website designs using annotated site maps that identify website assets.	Technology project folios: <ul style="list-style-type: none"> • draft site maps • annotations that explain design decisions. Oral presentations.
TP 3.3 Students cooperatively develop and follow production procedures to make products that reflect their design ideas.	Negotiate a site map and website development plan and allocate tasks. Follow the site map and development plan to cooperatively develop components of the website.	Anecdotal records: <ul style="list-style-type: none"> • observations of students' participation in activities • records of student–teacher interviews.
TP 4.3 Students identify and make use of the practical expertise of others when following production procedures to make products for specific users.	Identify members of the local community (peers or adults) with expertise in website design, web page authoring, photography, graphics, sound and/or video manipulation. Seek advice from these people throughout the website development process.	Technology project folios: <ul style="list-style-type: none"> • annotations of site maps • personal work log. Oral presentations.

[This table spreads to the next page.]

<p>TP 3.4 Students test and judge how effectively their own and others' processes and products meet the design challenge.</p>	<p>Determine criteria for evaluating their web pages. Test hyperlinks and web applications Evaluate the effectiveness based on test results.</p>	<p>Anecdotal records:</p> <ul style="list-style-type: none"> • observations of students' participation in site tests and trials. <p>Technology project folios:</p> <ul style="list-style-type: none"> • students' records of site tests in their Technology project folios • website evaluation forms • analyses of information gathered.
<p>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.</p>	<p>Invite potential users to trial the website and use their feedback to evaluate the effectiveness of its design and how well it meets the needs of the school community.</p>	
<p>INF 3.1 Students describe advantages and disadvantages of different sources and forms of information.</p>	<p>Describe the benefits and disadvantages of using still and moving images, sound and animation on the website. Justify their choice of colour schemes, including text-background combinations by identifying benefits and disadvantages of various combinations.</p>	<p>Anecdotal records:</p> <ul style="list-style-type: none"> • observations of students' participation in activities • notes from student-teacher interviews. <p>Technology project folios:</p> <ul style="list-style-type: none"> • annotations on printouts of screen layouts and graphic and animation designs. <p>Web pages.</p>
<p>INF 4.1 Students analyse sources and forms of information and match these to the requirements of design challenges.</p>	<p>Analyse a variety of website assets (graphics, video, sound and animation) and select or create assets that match the needs and interests of the school community.</p>	
<p>INF 3.2 Students select and use techniques for generating, modifying and presenting information for different purposes.</p>	<p>Use software to manipulate text, icons, sound and still and moving images to achieve specific effects. Customise the screen layout to appeal to specific user groups.</p>	<p>Anecdotal records:</p> <ul style="list-style-type: none"> • observations of students' participation in activities • records of student-teacher interviews. <p>Technology project folios:</p> <ul style="list-style-type: none"> • references to the selection and manipulation of graphics, sound and animation. <p>Web pages. Oral presentations.</p>
<p>INF 4.2 Students apply techniques for transforming and transmitting information for different audiences.</p>	<p>Use a range of techniques to prepare text, images and sound for web pages aimed at different audiences.</p>	
<p>SYS 3.1 Students identify and describe relationships between inputs, processes and outputs in systems.</p>	<p>Create a site map that identifies relationships between website components such as web pages, hyperlinks, graphics, images, animations and sound files.</p>	<p>Anecdotal records:</p> <ul style="list-style-type: none"> • observations of students' participation in activities • records of student-teacher interviews. <p>Technology project folios:</p> <ul style="list-style-type: none"> • site maps of existing websites • annotated site maps of the school website.
<p>SYS 4.1 Students identify and explain the logic of systems and subsystems.</p>	<p>Explain how menus aid site navigation. Devise a navigational system for the website that incorporates elements such as rollovers, menus and hyperlinks.</p>	
<p>SYS 3.2 Students assemble and trial systems they design by considering inputs, processes and outputs.</p>	<p>Insert web page assets such as graphics, text, images, sound and links. Test the links and the operation of sound and images.</p>	<p>Anecdotal records:</p> <ul style="list-style-type: none"> • observations of students constructing websites and inserting and testing links. <p>Technology project folios:</p> <ul style="list-style-type: none"> • identification of links between web pages and web page assets. <p>Web pages and website.</p>
<p>SYS 4.2 Students incorporate feedback to refine and modify systems and/or subsystems.</p>	<p>Use information gathered by testing links and trialling the website navigation systems to improve the usability of the website.</p>	

Background information

Terminology

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

anchor	frame	PC
animation	gif file (*.gif)	png file (*.png)
assets	graphic	rollover
background	hard drive	scanner
bmp file (*.bmp)	highlight	search engine
bookmark	home page	server
browser	html code	site map
CD-ROM (drive)	http	template
crop	hyperlink	text
data projector	hypertext	text box
directory	images (still and moving)	upload
domain	java	URL
download	java script	video
email	jpeg file (*.jpg)	wav file (*.wav)
file extension	layout	web page
file format	link	website
floppy disk (drive)	menu	World Wide Web
folder		

School authority policies

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

School authority and school policies related to students' use of the Internet will be of particular relevance to some of the activities that follow. It is essential that teachers and student observe these policies when undertaking Internet activities.

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:

- be involved in consultation, design and development activities
- work individually or in groups to create web pages for a school website
- value diversity of ability, opinion and experience in negotiating website content
- value diversity of language and cultural beliefs in selecting website content
- support one another in their efforts
- become empowered to communicate freely
- negotiate and accept changes to website designs.

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

Some students with disabilities may need assistance and/or adaptive technology to participate in some activities. Advice should be sought from their support teachers.

Activities

Introductory activities

Focus The introductory activities focus on introducing the design challenge, discovering what students know about websites and critically evaluating existing school websites. Students consider issues related to publishing on the web, form web development teams and investigate the needs and wants of the school community.

Design challenge

Design, develop and maintain a website for the school.

Teaching considerations Students should develop their Technology project folios throughout the project. Encourage students to record a journal entry in their folios at the end of each session. Entries should be brief and should include results of investigations, decisions arising from investigations, descriptions or sketches of design ideas, reflections on project progress, modifications made to designs and the reasons for these, and plans for future sessions.

Students might need to devise booking systems to enable them to share resources and equipment.

Encourage students to share their expertise as buddies or mentors.

Resources Technology project folios and a floppy disk per student.
Computers with Internet connection and, if possible, a data projector.
Student resource 1 (Getting started).
Student resource 2 (Website evaluation).
Student resource 3 (Analysis of home page features).
Student resource 4 (Home page — Hidden messages?).
Teacher resource 1 (Website evaluation considerations).
Cardboard or paper and pens to create a wall chart.
Articles about issues related to publishing on the Internet.
Multiple copies of a printout of a home page.
Spreadsheet software.

Activity 1

Let's get started
Technology Practice (Investigation)

1. Organise for a member of the school administration team to invite the class to be in charge of the school's website development for the next term or semester.
 2. Inform the students that it will be their responsibility to design or redesign the school website or particular pages within the website.
 3. Distribute copies of Student resource 1.
 4. Allow time for students to discuss what they already know about web page design and what they might need to know, their personal interests and strengths, what they would like to learn more about, and people they would like to work with. Ask students to identify people at home or school who might be able to provide technical advice. Students record this information on the resource sheet.
 5. Collect Student resource 1 and review student responses. Use the information to inform your planning and the formation of web development teams.
 6. Return the sheets to the students to be kept in their Technology project folios.
-

Activity 2

Evaluate existing websites
Technology Practice (Investigation, Evaluation)

1. Explain that this online session will allow students to consider the purposes of websites and to investigate the type of information and services they provide.
2. Provide time for students to look at websites designed for their age group. Discuss the features of the websites and compile a list on a wall chart.
3. Using a data projector, if available, examine a school website and discuss:
 - the purpose of the site
 - possible needs, wants and interests of the website's users
 - features that make the site interesting
 - features that detract from the site's appeal.
4. Encourage students to comment on the type of information included, the colour schemes, consistency of layout, menu structures, presentation features, levels of information and use of hyperlinks.
5. Generate a website evaluation form or use Student resource 2. Using these forms, students work in pairs or small groups to evaluate two or three school websites. (Advice for teachers about website evaluation considerations is provided on Teacher resource 1.) Remind students to keep the evaluation sheets in their Technology project folios. Discuss their results as a class group.

Activity 3

Consider issues related to publishing on the Internet
Technology Practice (Investigation), Information

1. Explain that there are social, cultural and ethical issues related to publishing on the Internet that students need to be aware of when designing the school website.
2. Students brainstorm issues related to publishing on the Internet such as:
 - plagiarism
 - volume of information on the website
 - censorship and control of information
 - privacy
 - currency and accuracy of information.
3. Where possible, provide students with copies of articles that explore relevant issues.
4. Discuss the issues and create a concept web that depicts issues related to the development, maintenance and use of school websites.
5. Assist students to select issues for debate and form debating teams. Issues selected might include publishing photographs and personal details on the website, maintaining the accuracy and currency of the website, and censorship of the school's website content.
6. Provide time for students to prepare arguments for their debates.
7. Conduct debates during class time. Following each debate, assist students to identify implications for the school's website.
8. Negotiate a set of website development principles and display them in the classroom.

Activity 4

Establish development teams
Technology Practice (Production)

1. Explain that the students will be working in teams on sections of the website. Negotiate with students to form development teams. Encourage students to work with people who have different skills but similar interests.
2. Provide opportunities for each group to use the Internet to find information about website design and share what they find with the class.
3. Discuss the steps involved in designing web pages and the different roles involved.
4. Assist students to negotiate roles and responsibilities for team members. Stress that each team member should have opportunities to undertake a variety of roles. Possible roles include:
 - **Writers** (all students) — Contribute content ideas for the website.
 - **Proofreaders** (all students) — Conduct initial proofreading and light editing of text.
 - **Graphic artists** (all students) — Contribute graphic design ideas for the website.
 - **Audio/visual director** — Coordinates the use of animation, graphics and sound.
 - **Text editor** — Edits and proofreads text.
 - **Format director** — Liaises with other group members to ensure consistency across pages and appropriateness of the material.
 - **Resource manager** — Books and collects resources and negotiates the use of space and resources with other groups.
 - **Web manager** — Ensures all group members contribute, secures teacher assistance and manages resources.

Activity 5

*Map a website
Technology
Practice
(Investigation),
Information,
Systems*

1. Explain that the purpose of this activity is to explore the structure of a school website. Explain that a website is like a house. Like the rooms in a house, each page has a particular purpose. The hyperlinks are like doorways.
2. Using a data projector, if available, examine the structure of a school website.
3. Assist students to map the site on a chart or the board. Choose symbols to indicate links between screens and annotate printouts of web pages with information about the contents. Create a legend of these symbols and display it in the classroom.
4. Discuss issues related to accessing information on the website such as the number of clicks required to reach the relevant web page, the type of menu system and other features or devices used to aid navigation.
5. Students map another website and include information about menu items, links, content and features of each page. They comment on the site in terms of screen layout, menu structures and accessibility of information.

Activity 6

*Investigate
users' needs
and interests
Technology
Practice
(Investigation),
Information,
Systems*

1. Discuss the purpose of the school website and identify potential users.
2. Assist students to devise a survey or write interview questions for potential users of the school website. They might ask questions such as:
 - How often do you access the Internet?
 - Who should have access to the school website?
 - What information and services should be provided on the school website?
 - How should these be presented?
3. Conduct a survey or interview potential users, including parents/carers, other students and school staff. Collate the results of the survey and determine the most appropriate way to present the data. This might involve using spreadsheets. Assist students to use their results to identify the information and services that the school community wants on the website.
4. Create a chart that identifies the knowledge, skills and equipment required to devise the website and where students might access these.

Activity 7

*Analyse home
page features
Technology
Practice
(Investigation,
Evaluation),
Information*

1. Explain that the purpose of this activity is to examine ways of presenting information on a home page. Distribute copies of Student resource 3.
2. Explain that the home page is the first page of a website that the reader should go to. Ask students to examine a number of home pages and then complete Student resource 3.
3. Lead a class brainstorming session to identify features that are commonly used on home pages to convey information. These might include large text, small text, graphics, animations, advertising, special offers, photographs, puzzles and competitions, logos, brand names and slogans.
4. Students analyse a specific feature of homepages. Encourage the students to consider the purpose of the feature and why particular sizes, colours and positions were selected for the feature.
5. Provide time for students to report back to the class and discuss their findings. Students identify common ways of presenting particular types of information

Activity 8

Identify hidden messages

Technology Practice (Investigation), Information, Systems

Links to The Arts:

ME3.3

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

1. Select a home page. Print it and make copies for each group.
2. Lead a class discussion that considers the following questions:
 - Who do you think is the target audience for the website?
 - How does the way information is presented suggest that this is the target audience?
 - What type of information is conveyed using text?
 - Is the text appropriate for the target audience? Why or why not?
 - Does the text present an opinion? If so, is there evidence of bias in the text?
 - How could you verify the accuracy of the information?
 - What messages are conveyed by use of colours or images?
 - What other techniques are used to convey messages?
 - Are a variety of fonts used? Why? How does the size of font influence readers' views about the importance of the information?
 - What views are being presented by the website?
 - What other views could be presented? How?
 - Who might benefit because of the way the information is presented?
 - Who might be disadvantaged because of the way the information is presented?
3. Distribute copies of Student resource 4. Ask students to examine a range of home pages and complete the sheet.

Assessment

Sources of evidence could include:

- observations of students' participation in discussions and activities
- site maps of existing websites
- analyses of the results of the survey of potential users
- debates
- Student resources 1, 2, 3 and 4.

Developmental activities

<i>Focus</i>	The following activities focus on introducing hardware, software and peripheral devices; drafting a site map; designing icons and screen templates; manipulating graphics and photographs; and designing web pages.
<i>Teaching considerations</i>	<p>Invite people with knowledge and skills related to web development to share their expertise with the class at strategic points during the project.</p> <p>Demonstrate the use of microphones, digital camera, scanners and software for manipulating sound and images as required. Provide opportunities for students to photograph the school and school activities. Provide opportunities for students to create soundtracks of class and school performances and activities and interviews with parents/carers, staff and students.</p> <p>Create a set of directories that mirror the organisation of information on the site map. At the end of each development session students should save backup copies of their work to their floppy disks.</p>
<i>Resources</i>	<p>Computers with Internet connection and microphone and, if possible, a data projector.</p> <p>Web page authoring software — for example, Microsoft Word or FrontPage, Web Workshop.</p> <p>Clipart, sound and animation libraries and, if possible, microphones, digital cameras, scanners and software for manipulating sound and images.</p> <p>Technology project folio and floppy disk per student.</p> <p>Cardboard or paper and pens for making a chart.</p>

Activity 9

Negotiate a site map for the school website
Technology Practice (Ideation), Information, Systems

1. Explain that the purpose of this activity is to negotiate a site map for the school website.
2. Ask students to draw on their research about website design to identify conventions they might observe when designing the school website.
3. Assist them to use information gathered during interviews or surveys to list the types of information and services potential users have indicated that they would like to access via the school's website.
4. From this list, students identify the information and/or services they would like to include on the website. Discuss what students can achieve on their own and what might need additional expertise or specialised software.
5. Divide the list into two categories:
 - what is achievable in the timeframe
 - what should be left for future development.
6. Negotiate a plan for the website development and a list of information and services to be included on the school's website.
7. Students experiment with a range of ways of organising the information and services and present their ideas as site maps. Encourage students to consider the following:
 - What are most users looking for? (information or services)
 - Where will they expect to find it? (headings or categories)
 - What information should be available on the home page?
 - How are particular types of information related?
 - How many web pages will be needed and how should the pages be linked?
 - How many clicks are needed to reach each piece of information?
8. Ask groups to present their ideas for the site map to the class.
9. Assist the class to negotiate a preferred option for the site map. Use the site map to consult with potential users about the appropriateness of the website design.

Activity 10

Design a home page for the school website

Technology Practice (Ideation), Information, Systems

1. Introduce web page authoring software. Provide time for the students to work in pairs to familiarise themselves with the software. Ask students to refer to their list of what they needed to know in order to create a website that they generated in activity 1. Students locate these functions in the software application and experiment with them.
2. Towards the end of the session, ask the students to share what they have learnt about the package. Introduce any features that are not referred to by students.
3. Students work in pairs to design options for a home page for the school website. Invite each pair to present their work, using the data projector if available.
4. Assist the students to negotiate a preferred option for the home page and a related template for the website's other pages.

Activity 11

Allocate tasks

Technology Practice (Production)

1. Revisit the proposed site map and discuss the categories of information that will appear on the school website. Discuss the need for consistency throughout the website and negotiate common features that will be used on all the web pages.
2. Ask students to form groups and allocate the development of a particular section to each group. Record the responsibilities of each group on a chart and display it in the classroom.
3. Ask each group to think of an appropriate name for their section of the website — for example, art gallery, brainteasers, competition corner, concert hall, science and technology expo, sports hall of fame, storybook.

Activity 12

Design an icon

Technology Practice (Ideation, Production), Information

1. Explain that the purpose of this activity is for students to become familiar with a graphics package.
2. Ask students to design a range of icons that could be used to represent their section of the website on the home page menu. Specify the size and shape of icons to ensure the uniformity of menu items. Students should store their draft designs in their Technology project folios.
3. Demonstrate how to use the graphics program and then assist students to use the program to create their icons. A printed copy of the final design should be kept in their Technology project folios.
4. Incorporate the icons into the home page.

Activity 13

Design web pages

Technology Practice (Ideation, Evaluation), Information, Systems

1. Encourage each development team to consider how it wants its section of the website to function and assist them to create criteria for evaluating the section. Criteria might include:
 - Each page is clearly identifiable as part of the school's website.
 - Each page is clearly identifiable as part of our section of the website.
 - Each page loads quickly.
 - Their web pages are easy to navigate — information is easy to find.
 - Information is accurate, well presented and easy and read.
 - Icons or menu items are easy to interpret.
2. Ask the teams to create a site map of their section and to sketch designs for their web pages. Students should keep copies of the draft designs in their Technology project folios. The design for each web page should include:
 - a link to the home page
 - the negotiated features that should be common to all pages
 - menus with links to other pages
 - a banner or title that indicates what information is available on or accessed through that page
 - text, graphics, animation and/or sound features.
3. Indicate where each group should save their files in the website directories.

Activity 14

Create web pages

Technology Practice (Production), Information, Systems

1. Provide several lessons for students to refine their designs and create their web pages. They will need access to the Internet or CD-ROM libraries to select clipart, animations, backgrounds and text styles.
2. Ask students to consider how their web page could be enhanced with photographs, video or sound. Provide opportunities for students to locate, create and manipulate images and sound.
3. Link all the sections to the home page.

Assessment

Sources of evidence could include:

- observations of students' participation in discussions and activities
- Technology project folios
- site map, website assets, web pages and website.

Culminating activities

<i>Focus</i>	These activities involve evaluating and refining the website, reflecting on personal and group contributions to its development, and envisioning a website for the future.
<i>Teaching considerations</i>	<p>Arrange to have the site uploaded to the Internet.</p> <p>Invite parents/carers, staff members and students from other year levels to participate in the testing processes.</p> <p>If possible, encourage students to test their website on a range of computer systems and web browsers.</p>
<i>Resources</i>	<p>Access, at home or at school, to a range of:</p> <ul style="list-style-type: none"> • web browsers — for example, different versions of Netscape and Windows Explorer • computers. <p>Technology project folios.</p> <p>Teacher resource 2.</p>

Activity 15

Trial the website with users

Technology Practice (Evaluation, Ideation)

1. Explain that professional web developers trial their websites on a range of computer systems and use different web browsers to ensure they function correctly. Arrange for the website to be tested in this way. Assist students to devise a checklist to guide the process.
2. Students work in pairs to proofread the web pages created by other development teams and to test the links on these pages.
3. Students prepare for a trial of the website by other users by:
 - brainstorming a list of questions to ask users
 - testing their questions by participating in a role play of the trial process
 - devising a form for recording users' responses.
4. Invite groups of students, parents/carers and staff to test the website and provide feedback. Try to ensure that the trial includes users with varying degrees of experience and a range of computer systems and web browsers.
5. Students collect and analyse the feedback and use the responses from the trial to negotiate refinements. Students devise a feedback form for inclusion on the website.

Activity 16

Evaluate personal and team performances

Technology Practice (Evaluation)

1. Explain that the purpose of the activity is for students to reflect on:
 - the tasks they have undertaken, and identify what they have learned and what more they would like to learn
 - the tasks undertaken by the group and identify effective team strategies and strategies that require improvement.
2. Students choose partners from another web development team.
3. Provide time for the students to discuss their personal and team performances with their partner.
4. Students record their evaluations in their Technology project folios. They might use tables such as those following to organise their reflections.

Evaluating personal performance		
Task undertaken	I learned:	I would like to learn:

Evaluating team performance		
Task undertaken	What was effective?	What needs improvement?

Activity 17

Look to the future

Technology Practice (Ideation, Evaluation), Information

1. Explain that the purpose of this activity is to envision what their school website might be like in five years time and to think about how its use might impact on the school community. Refer students to the list they made in Activity 9 of aspects of the site that could be left for future development. Teacher resource 2 provides examples of issues that could be considered.
2. In groups, students:
 - suggest features that could be added to the website — for example, online book orders, online library book reservations, chat rooms and forums, learning challenges and educational competitions, links to useful study resources, tuckshop accounts, online parent–teacher interviews, video streaming of lessons
 - consider the implications and consequences for students and parents/carers of increased use of the website
 - discuss who might benefit, who might be disadvantaged and how.
3. Students copy the following table into their Technology project folios and complete it.

Features of the future		
Website feature	Who might be affected?	How?

4. Students work in groups to evaluate the proposed features. They select features to incorporate into the website and propose a five-year plan for maintenance and continued development of the website.
5. Students present their plans to the class.

Assessment

Sources of evidence could include:

- observations of students' participation in activities and discussions
- analyses of feedback gathered during the trial
- evaluation tables
- 'Features of the future' table
- plan for maintenance and continued development of the website.

Getting started**Student resource 1****What do you know about web page design?***Complete the following*

What I know and can do:	
What I might need to know and to be able to do:	How and where to find out:
I am good at, or like to:	
I would like to learn more about:	
I would like to work with:	

Website evaluation**Student resource 2**

Internet connection: Dial-in access (modem) Direct access Time taken to load: _____

Name of site: _____ Author: _____

URL: _____ Last updated: ____/____/____

Purpose: _____

Audience: _____

Browser: _____ Date accessed: _____

Features

Comment on the quality of the website's features.

Features	Comment
animation	
graphics	
sound	
video	
frames	
rollovers	
games	

Content

Information is:

- interesting
- relevant
- current
- accurate
- unbiased
- well organised

Makes correct and effective use of:

- grammar
- spelling
- punctuation
- headings and subheadings
- paragraphs

Screen layout

Use of colour is effective because it:

- is attractive/pleasing
- is relevant to content
- makes text easy to read

Layout is effective because:

- objects and text are appropriate sizes
- there is a balance of text and illustrations
- there is a balance of light and shade
- the background colour is effective but does not dominate

Navigation

Navigation of the website is made easy by:

- meaningful icons and menu items
- fast loading pages
- appropriately placed menus
- effective use of links
- consistent layout of pages
- effective use of rollovers

List additional navigation features that made the site easy to use:

Analysis of home page features

Student resource 3

Write the name of a website below. Describe the purpose of the website.

Name of website	
Purpose of website	

Look at the home page. List features of the home page in the left-hand column. These might include welcome message, graphics, animations, menus or advertising. To analyse the features, answer the questions in the other three columns.

Feature	What does it look like? Why?	Where is it located on the home page? Why?	What is the purpose?

Home page — Hidden messages**Student resource 4**

Name of website	
Purpose of website	
Who do you think is the target audience for the website?	
Why?	

Description of information feature	Intended message	Hidden change, if any

What points of view are being conveyed by the home page?

What other points of view could be conveyed and how?

Who might benefit by the way the home page is presented?

Who might be disadvantaged by the way the home page is presented?

Website evaluation considerations

Teacher resource 1

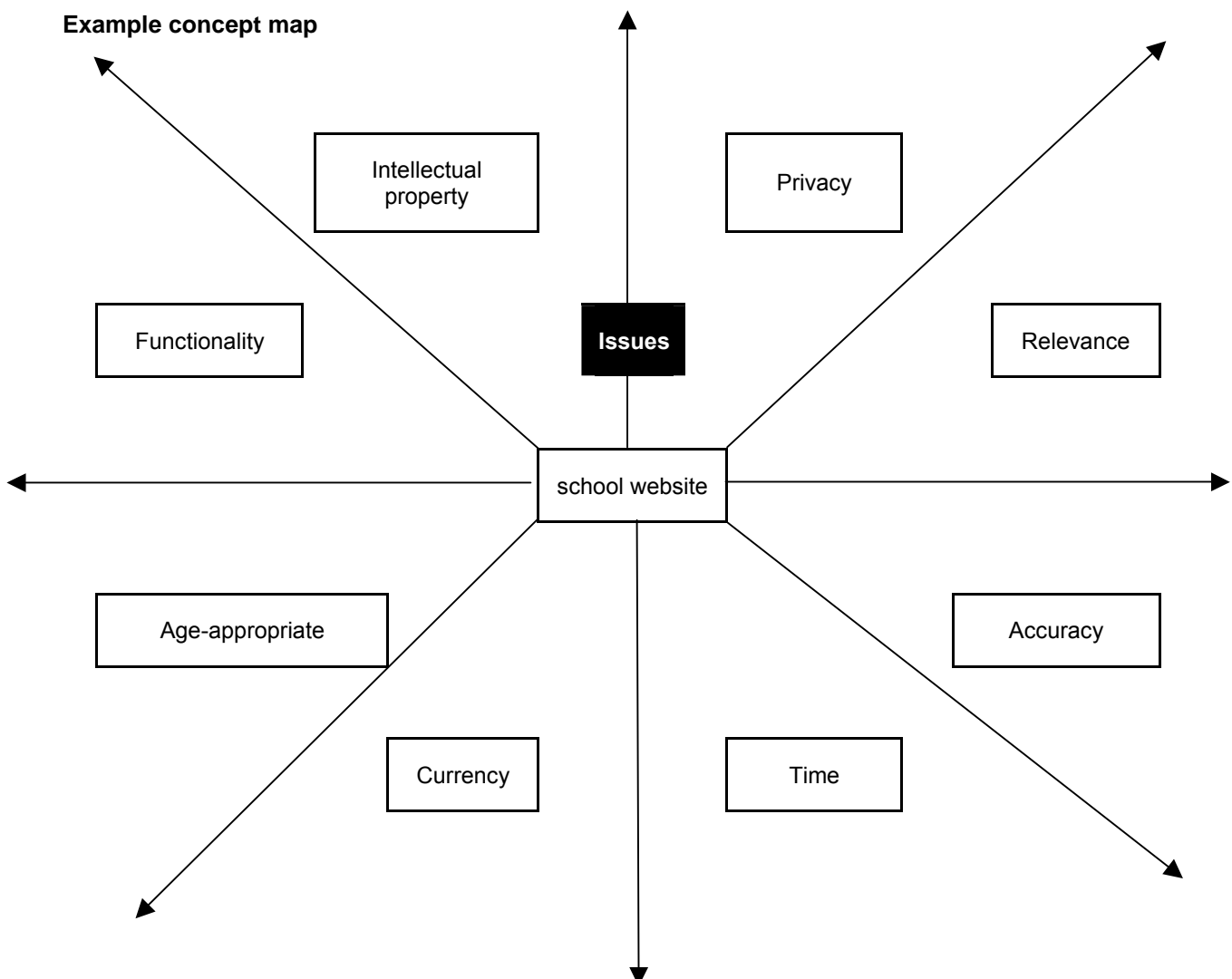
Suggestions for evaluation criteria

- Is information easy to access? Does the page take a long time to load? Is the format readable on your browser? Does the site have effective site-navigation aids? a menu system? a site map? links to the home page? Are links clearly visible and understandable? Is a consistent format used for all the pages in the site? Can the website be accessed by people with vision impairment? Are the web pages printer friendly?
- Is the information **relevant**? Did you find the information you expected? Does the title of the page match the site contents?
- Is the information **well organised** and **easy to understand**? Are the spelling, punctuation and grammar correct? Are there helpful headings and subheadings? Does the page display information in columns (tables)?
- Is the screen **layout effective and easy to read**? Does the site make effective use of:
 - background colours
 - text colours
 - text sizes
 - text types
 - animation
 - graphics
 - video
 - sound
 - frames
 - tables
 - dropdown menus
 - rollovers
- Is the information **reliable**? Are the author's name and email address on the page? What are their qualifications?
- Is the information **current**? Does the page have a publication date or 'last updated' date?
- Is the information **accurate**? Can you verify the facts by consulting other sources?
- Is the information **biased**?
- Is the information **ambiguous**?

Issues and implications

Teacher resource 2

Example concept map



Support materials

Software

Creative Writer 2, 1996, Microsoft Corporation.
 FrontPage, Microsoft Corporation.
 Microsoft Word 2000, Microsoft Corporation.
 SiteCentral, 2000, Knowledge Adventure Inc.
 Web Workshop, 1996, Sunburst.

Websites

(All websites listed were accessed in December 2002)

Building a Website,

members.tripod.com/exworthy/building.htm

Links to sites with information about designing and creating websites.

An Educators' Guide to Credibility and Web Evaluation,

<http://lrs.ed.uiuc.edu/wp/credibility/>

Tips on evaluating websites.

Evaluating Information,

servercc.oakton.edu/~wittman/find/eval.htm

Checklist for evaluating websites.

Evaluating Web Information,

www.lib.vt.edu/research/evaluate/evaluating.html

Checklist for evaluating websites.

A Glossary of Internet and Web Terminology,

www.utoronto.ca/ian/books/xhtml1/gloss/gloss.html

Glossary of terms associated with website development.

A Glossary of World Wide Web Terminology,

<http://www-personal.umich.edu/~zoe/Glossary.html>

Guidelines for Web Document Style & Design,

sunsite.berkeley.edu/Web/guidelines.html

Checklist of factors to consider when creating accessible websites.

Kelly's Web Studio: Links for Kids

www.kellyswebstudio.com/studio/links/kids.html

Links to child-friendly sites with information about designing and creating websites.

Kids' Corner: Website Usability for Children,

www.useit.com/alertbox/20020414.html

Tips on making sure websites are user-friendly for children.

Thinking Critically about World Wide Web Resources

www.library.ucla.edu/libraries/college/help/critical/

Provides a brief checklist that teachers may find useful in guiding students' evaluation of websites.

Webopedia

www.webopedia.com/

Searchable glossary of terms related to developing websites.

Web Publishing for Schools

<http://education.qld.gov.au/publication/procedure/web/schools/>

Education Queensland's guidelines for publishing on the Internet.

Web Terminology

<http://clasdean.la.asu.edu/clasmasters/terms.htm>

Glossary of terms associated with website development.

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

Copyright notice

© The State of Queensland (The Office of the Queensland Studies Authority) 2002

Every reasonable effort has been made to obtain permission to use copyright material in all sourcebook modules. We would be pleased to hear from any copyright holder who has been omitted.

Copyright material owned by the Queensland Studies Authority may be copied, without written permission, only by:

- individual students, for private use and research
- schools and entities possessing a CAL education licence, but within the limits of that licence* and, if they are copying from an electronic source, within the limits[†] of the *Copyright Amendment (Digital Agenda) Act 2000*
- libraries, educational institutions, and institutions helping people with a disability, within all the limits[†] of the *Copyright Amendment (Digital Agenda) Act 2000*.

*Except that a Queensland school, accredited by Education Queensland, may reproduce the whole of a work for use by teachers, parents and educational administrators (for non-commercial, personal or educational purposes only).

[†]An example of a limit is the amount you may download and copy, as specified in s.10(2A).

No other copying may be done without the permission of the Queensland Studies Authority, PO Box 307, Spring Hill, Queensland Australia 4004, email: office@qsa.qld.edu.au.

Guidance in connection with the Copyright Amendment (Digital Agenda) Act

Libraries, educational institutions, and institutions helping people with a disability may have the right to:

- supply another library with digital copies of a work, or parts of a work that they hold, if the other library cannot get the work in a reasonable time at an ordinary price
- display digital works within their premises (e.g. on an intranet)
- make a digital copy for research or study
- for administrative purposes, make a digital copy of a work held in printed format
- make a copy of an artistic work to display on their premises if the original is lost or in danger.

To comply with subsection 49(5A) of the *Copyright Amendment (Digital Agenda) Act 2000*, anything that a library makes available on their computer system must be so arranged that it can be accessed only through a computer that cannot itself make a copy, or print out the copy displayed. This is made clear in subsection 49(5).

Direct quotation of subsection 49(5A), Copyright Amendment (Digital Agenda) Act

If an article contained in a periodical publication, or a published work (other than an article contained in a periodical publication) is acquired, in electronic form, as part of a library or archives collection, the officer in charge of the library or archives may make it available online within the premises of the library or archives in such a manner that users cannot, by using any equipment supplied by the library or archives:

- (a) make an electronic reproduction of the article or work; or
- (b) communicate the article or work.

The State of Queensland and the Queensland Studies Authority make no statements, representations, or warranties about the accuracy, quality, adequacy or completeness of, and users should not rely on, any information contained in this module.

The State of Queensland and the Queensland Studies Authority disclaim all responsibility and liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs whatsoever (including consequential loss) users might incur to person or property as a result of use of the information or the information being inaccurate, inadequate, or incomplete.

Any inquiries should be addressed to:

Queensland Studies Authority, PO Box 307, Spring Hill Q 4004 Australia

Phone: (07) 3864 0299. **Fax:** (07) 3221 2553

Website: www.qsa.qld.edu.au **Email:** office@qsa.qld.edu.au