

Yesterday's news: Technology and culture

Strand

Time, Continuity and Change

Core learning outcomes

*Time,
Continuity
and Change*

- TCC 3.1** Students use evidence about innovations in media and technology to investigate how these have changed society.
- TCC 3.4** Students organise information about the causes and effects of specific historical events.

Purpose and overview

Activities assist students to investigate media inventions over time and to explore how such inventions affected societies. The focus of this module, the invention of the printing press, is investigated using evidence from various sources about innovations in media and technology.

Students gather and discuss information about the invention of the printing press. They investigate and consider the impact of such an invention on everyday life.

Students compare innovations in media and technology over time by participating in activities that simulate early printing processes and, if possible, visit a modern printing facility.

Note: This module provides an overview of activities within each phase, rather than descriptions of activities as found in other modules at this level.

Phases	Activities	Core learning outcomes	Assessment opportunities
<p>1. Tune in to how life today has been affected by the invention of the printing press</p>	<ul style="list-style-type: none"> • Ask students to brainstorm and list what they know about printing — for example, what is printed and how newspapers and books are printed. • Encourage students to begin gathering data and recording observations about print materials they encounter in their everyday lives (Resource 1). This will help them become aware of the importance and amount of printed materials they encounter on a daily basis. • Ask students to brainstorm how they will investigate the invention of the printing press and how this invention has impacted on their lives. 	TCC 3.1	Recorded data about printed materials students encounter in their everyday lives may provide some initial evidence of students' demonstrations of TCC 3.1.
<p>2. Locate, organise and analyse evidence about the causes and effects of the invention of the printing press</p>	<ul style="list-style-type: none"> • Assist groups of students to research and discuss what society was like in Europe at different times (such as the Middle Ages, the Renaissance and the Industrial Revolution) (Resource 2). • Discuss students' findings and develop a chart to show what effect inventions had on peoples' lives. • Read about and discuss Gutenberg's invention of the printing press. Ask students to identify aspects of life that may have influenced this invention. Discuss the effects this invention had on people's lives. Record ideas discussed in a table. • Assist students to use information from secondary sources to investigate stages in the development of printing. Ask them to create a flow chart that shows this development from the use of the printing block to the steam-powered printing press in 1810. • Invite groups of students to view, manipulate and discuss primary sources relating to the development of printing techniques, such as early typewriters, pens, books and printing tools (see Support materials and references for information on borrowing artefacts). Ask students to compile a profile on each piece of equipment and to determine how and why these resources were created and how they responded to the needs of early Australians (Resource 3). 	TCC 3.1 TCC 3.4	<p>Discussions about information collected during the investigation may provide evidence of students' demonstrations of TCC 3.1.</p> <p>Simple research reports that detail aspects of life during different times and how this influenced inventions may provide evidence of students' demonstrations of TCC 3.4.</p> <p>Tables displaying cause and effect information related to the invention of the printing press may provide evidence of students' demonstrations of TCC 3.4.</p> <p>Flowcharts showing significant developments in the history of printing may provide evidence of students' demonstrations of TCC 3.4.</p> <p>Profiles of early Australian printing artefacts may provide evidence of students' demonstrations of TCC 3.4.</p>

Phases	Activities	Core learning outcomes	Assessment opportunities
3. Evaluate, synthesise and report conclusions	<ul style="list-style-type: none"> • Assist students to appreciate the labour-intensive nature of early printing processes by encouraging them to enact processes such as block printing on handmade paper, relief type printing using string glued onto wooden blocks and creating positive/negative images with linotype printing. • Discuss and reflect on these early printing methods and compare them with modern techniques. This can be done by comparing processes in a variety of resources, visiting a printing facility or interviewing workers employed in the printing industry. • Ask students to write and present short reports about how modern printing technology has impacted on their lives. 	TCC 3.1	<p>Discussions with workers in the printing industry or research into modern innovations in media and technology and how these innovations have changed society may provide evidence of students' demonstrations of TCC 3.1.</p> <p>Reports that describe the impact of modern printing technology on life today may provide further evidence of students' demonstrations of TCC 3.1.</p>

Examples of opportunities to gather evidence and make judgments		
<p>TCC 3.1 Students use evidence about innovations in media and technology to investigate how these have changed society.</p> <p>Do students:</p> <ul style="list-style-type: none"> • gather data and record observations about print materials they encounter in their everyday lives? • show awareness of how important printed materials are? • locate and use evidence from a variety of sources to recreate printing processes used in the past? • compare printing processes from the past with present day printing technologies? • describe how the invention of the printing press affected methods of communication — including rapid spread of ideas, increased awareness of other cultures and issues, and access to education for more people? • look at and report on primary source evidence such as early printing artefacts and explain how they changed Australian life? • explore and reflect on some modern printing technologies, and explain the impact these have had on their lives? 	<p>Demonstrated TCC 2.1; Working towards TCC 3.1</p>	<p>Demonstrated TCC 3.1; Working towards TCC 4.1</p>
<p>TCC 3.4 Students organise information about the causes and effects of specific historical events.</p> <p>Do students:</p> <ul style="list-style-type: none"> • compile short reports and create a table of causes and effects? • create a flow chart that shows the stages in the development of printing? • skim text for ideas about life in Gutenberg's time to identify what aspects of his life during the Middle Ages impacted on this invention, and arrange this information into a table? • compile profiles about early Australian printing artefacts and understand the causes and effects of these inventions? 	<p>Demonstrated TCC 2.4; Working towards TCC 3.4</p>	<p>Demonstrated TCC 3.4; Working towards TCC 4.4</p>

Assessment

The assessment opportunities outlined 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 and the 'Levels 1 to 6 module learning outcomes maps' in the *Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines* can be used to identify these modules.

The overview table provides examples of opportunities for gathering evidence and making judgments about students' demonstrations of core learning outcomes. When making an on-balance judgment about demonstrations of the learning outcomes, consider the points in the table 'Examples of opportunities to gather evidence and make judgments'. The assessment opportunities provided are neither exhaustive nor mandatory. For further information about making judgments, consult the *Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines* and *Position and Guidelines on Assessment and Reporting for Years 1 to 10* on the Queensland School Curriculum Council website.

Using this module

The focus of this module — the invention of the printing press — links to the Level 2 Studies of Society and Environment sourcebook module *Read all about it: Participating* and the Level 2 Technology sourcebook module *School newspaper*. Although not mandatory, it is desirable that students have participated in activities from these modules as this will enable them to draw on prior knowledge and experiences.

If tours of a printing facility are not possible, printing workers such as press managers, printers and publishing assistants could be invited to speak to students about their roles and the tasks and processes involved in printing.

Background information

Terminology

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

ancient	invention	process
Bible	inventor	production
causes	linotype	pulp
century	manuscript	quills
change	'masses'	rag paper
Chinese	mechanical	records
civilisations	media	research
Classical	metal letters	Roman
codes	Middle Ages	Rosetta Stone
communication	monotype	Scientific Revolution
conclusions	natural fibres	scribes
cuneiform	needs	scrolls
effects	papyrus reeds	society
electronic	parchment	technology
elite	pictograms	wants
Industrial Revolution	printing	wood
information	printing block	writing tablets
innovation	printing press	

School authority policies

Be aware of and observe school authority policies that may be relevant to this module. If planning an excursion to a printing facility, ensure workplace health and safety policies and programs have been considered and incorporated into this planning.

Equity considerations

Activities take place in a supportive environment. They provide opportunities for students to increase their understanding and appreciation of equity through valuing diversity and challenging inequities. Activities encourage students to:

- consider and reflect on a range of viewpoints about inventions and societies in the past and now
- reflect on the negative and positive changes that technology has made to everyday lives and societies in general.

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

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

Links

Studies of Society and Environment

This module is one of a suite of modules for Levels 1 to 6. See the Queensland School Curriculum Council website at www.qscc.qld.edu.au for more information.

This module has conceptual and process links to the following modules:

- Level 2: *Read all about it: Participating*
- Level 2: *Our faces: Belonging and identities in Australia*
- Level 3: *Cattle, gold and sugar cane: Working in the past*
- Level 3: *Our future: Past and future study*
- Level 4: *Colonisation: Resources, power and exploration*
- Level 4: *Influences on me: Global media and identity.*

Other key learning areas

Activities may offer opportunities for planning across key learning areas. However, it is important that the integrity of the key concepts, organising ideas and processes within key learning areas is maintained. Depending on the context for the activities and resources, opportunities may be provided to incorporate the following links:

Possible links to *Mathematics* (in development):

- collate, sort and group data into tables according to specific criteria
- use timelines and calendars to interpret and present information from past and present times
- sequence data and information in flowchart and table formats.

Possible links to *Technology*:

- TP3.1 Students examine knowledge, ideas and data from a range of sources and establish the relevance of this information when meeting design challenges.
- TP3.2 Students collaboratively generate design ideas and communicate these using presentations, models and technical terms.
- TP3.3 Students cooperatively develop and follow production procedures to make products that reflect their design ideas.
- TP3.4 Students test and judge how effectively their own and others' processes and products meet the design challenges.
- I3.1 Students describe advantages and disadvantages of different sources and forms of information.
- I3.2 Students select and use techniques for generating, modifying and presenting information for different purposes.
- M3.2 Students select and use suitable equipment and techniques to combine materials accurately in order to meet design requirements.

Possible links to *Science*:

- SS 3.3 Students make predictions about the immediate impact of some applications of science on their community and environment, and consider possible pollution and public health effects.

Evaluation of a unit of work

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

- teaching strategies and activities used to progress student learning towards demonstrations of core learning outcomes
- opportunities provided to gather evidence about student's demonstrations of 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 so that they build on, and support, student learning. The evaluated units of work may also be adapted prior to their reuse. For further information, refer to the 'Curriculum evaluation' section in the sourcebook guidelines.

Print investigation

Resource 1

As an 'investigator', your challenge is to observe and record all the print materials you see this week. You will need to record the details in this table and bring it back to class on _____ for discussion.
 (day, date)

Day of the week	Print item	Place where seen/found	Intended audience	Use
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

Reflections on my observations:

Conclusions about the impact print materials have on my life:

My research report about life in earlier times

Resource 2

As an 'investigator', your next task is to research and write a short report on life in Europe during a particular time. For example:

- Classical or Roman times (before AD 1000)
- Middle Ages (11th–15th centuries)
- the Renaissance (15th–17th centuries)
- the 'Scientific Revolution' (17th–18th centuries)
- Industrial Revolution (18th–19th centuries)
- Mass Production/Electronic Communications era (20th century).

My report on life in Europe during _____
(period)

Draw or cut and paste a picture that depicts life in the period chosen.

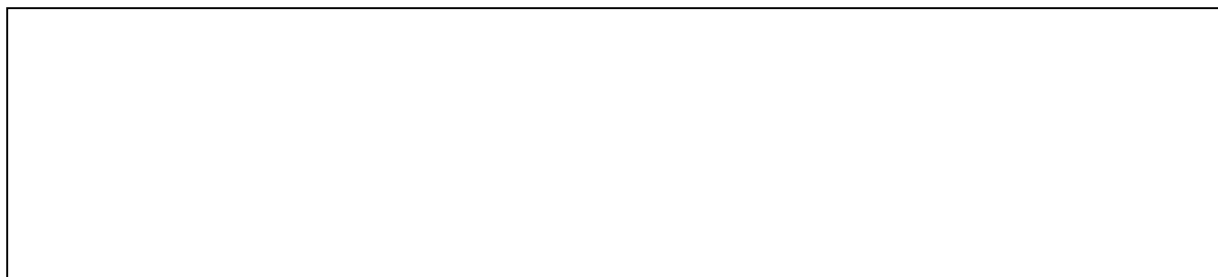


Describe features of this picture.

What features were typical of this period?

What was invented to help people in their everyday lives?

Choose an invention. Describe how it made life easier.



Profile of an early Australian printing artefact

Resource 3

Name: _____ Date: _____

After viewing the artefacts, select one of them and complete a profile of it.

Sketch the artefact

What is the artefact? _____

When was it made? _____

What was it used for? _____

Who would have used it? _____

Where would it have been used? Why? _____

What would have been used before this item was invented? _____

How did this printing artefact contribute to life in early Australia? _____

What other inventions in early Australia would have been used alongside this printing item? Why?

Support materials and references

Brookfield, K. 1993, *Collins Eyewitness Guides: Writing*, HarperCollins Publishers, Pymble, NSW.

Burns, P. 1996, *Famous Lives: Inventors*, Wayland, Hove, UK.

Burns, P. 1996, *Stepping Through History: Writing*, Wayland, Hove, UK.

Chisolm, J. 2000, *Timelines of World History*, Usborne, London.

Coppin, B., Gibson, S., Matthews, S. & Cleverly, B. 1992, *Moonlight First Encyclopaedia: The Great Inventions*, Moonlight Publishing Ltd, London.

Lafferty, P. & Rowe, J. 1993, *The Inventor through History*, Wayland, Hove, UK.

Lafferty, P. & Salariya, D. 1997, *A History of Inventions: From Abacus to Atomic Power*, MacDonal Young Books, Hove, UK.

McTavish, D. 1993, *Famous Inventors*, Wayland, Hove, UK.

Robertson, R. 1987, *Some Things Don't Change — Technology Then and Now*, Macmillan, South Melbourne, Vic.

Kits (including audiovisual)

Leyden, P. 2000, *Technology and Change*, Peter Leyden Publishing, NSW. (Set of ten photo posters with teachers' notes and student worksheets.)

Organisations

To obtain early Australian artefacts and kits about communications or 'school history', contact: *Queensland Museum Educational Loans Department*.

PO Box 3300

South Brisbane 4101

Telephone: (07) 3840 7606

Local museums may also be able to supply such resources.

Websites

(All websites listed were accessed in June 2002.)

Gutenberg.De. www.gutenberg.de/english/erfindun.htm

Provides information about and photographs of three of the earliest printing presses.

Gutenberg's Printing Press. www.sunysuffolk.edu/~amath63/print.html

Provides drawings of letterpresses and a brief summary of Gutenberg's invention.

Canadian Broadcasting Commission, CBC 4 Kids, *The History of Invention*.

<http://cbc4kids.cbc.ca/archives.html>

A student-friendly website that explores a variety of inventions that are displayed on a timeline.

This sourcebook module should be read in conjunction with the following Queensland School Curriculum Council materials:
Years 1 to 10 Studies of Society and Environment Syllabus
Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines
Studies of Society and Environment Initial In-service Materials

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