Industrial Revolution: Societies and change

Strand
Time, Continuity and Change
Place and Space
Culture and Identity
Systems, Resources and Power

Core learning outcomes

Time, Continuity and Change	**TCC 5.1**	Students use primary and secondary evidence to identify the development of ideas from ancient to modern times.
	TCC 5.2	Students represent situations before and after a period of rapid change.
Place and Space	**PS 5.3**	Students participate in geographical inquiries to evaluate impacts on ecosystems in different global locations.
Culture and Identity	**CI 5.3**	Students share their sense of belonging to a group to analyse cultural aspects that construct their identities.
Systems, Resources and Power	**SRP 5.4**	Students report on the main features and principles of legal systems in Australia.
	SRP 5.5	Students apply the value of social justice to suggest ways of improving access to democracy in Queensland or other Australian political settings.

Purpose and overview

Students work towards demonstrating the stated core learning outcomes through identifying connections between industrialism and their own daily lives and investigating historical and geographical contexts of the Industrial Revolution. Guided investigations assist them to devise research questions related to significant aspects of this revolution and to research those aspects by locating, analysing, interpreting and evaluating a range of sources. Students use historical evidence to answer the research questions and communicate those decisions to other students through a creative project. They reflect on the research findings to reveal social justice issues of gender that are related to the topic and they develop understandings of how values as well as ideas have influenced revolutions from ancient to present times. Students explore the lasting impacts the Industrial Revolution had on the Australian legal system and apply these understandings to suggest how society may be improved in future. Students cooperate to devise creative ways of communicating their findings to selected audiences inside and outside the school. They could also present a public display of their understanding of, and attitudes towards, the impact of industrialism, including its global impact.

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Phases (Minimum time recommended: 12 hours)	**Activities**	**Core learning outcomes**	**Assessment opportunities**
1. Connecting with the topic (approximately 1 hour)	1. Industrialism in our modern lives 2. Industrial regions 3. Industrial Revolution	PS 5.3	Analysing maps to create definitions of a 'region' and evaluate impacts on ecosystems.
2. Highlighting issues, framing questions (approximately 2 hours)	4. Ideas about progress, natural environments and work 5. Analysing and interpreting historical sources	TCC 5.1 TCC 5.2 PS 5.3	Analysing historical sources to frame relevant research questions.
3. Planning, investigating and making decisions (approximately 5 hours)	6. Attitude scales 7. Student research activity 8. Sharing and compiling a 'newspaper' page	TCC 5.1 TCC 5.2 CI 5.3 SRP 5.4	Creation of a presentation, including written and visual text. Small written task, peer assessment and/or observation.
4. Making links and digging deeper (approximately 3 hours)	9. The Industrial Revolution influences ideas today 10. Legal and gender issues	TCC 5.2 CI 5.3 SRP 5.4	A collage that includes historical evidence to show the development of an idea over time. An annotated timeline could complement the collage. A class forum will provide opportunities, particularly for CI 5.3.
5. Using laws to promote better industrialisation (approximately 1 hour)	11. Exploitation, industrialisation, democracy and laws 12. Improving democracy	SRP 5.4 SRP 5.5	Websites or other promotional media provide the main opportunities to demonstrate these outcomes.

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.

Resource 5

An assignment involving the creation of a written and visual learning text could provide evidence of students' demonstrations of outcomes. This assignment could require students to present the progress of their research as well as their final product and so provide for multiple opportunities to demonstrate the outcomes. See Resource 5 for an example of such an assignment.

Opportunities exist to assess the learning outcomes of many students simultaneously. If focusing assessment on small groups or individual students and/or one or two learning outcomes, then selections from the overview table may be more appropriate than a single assignment. The overview table provides examples of assessment opportunities. Other modules provide further opportunities for students to demonstrate these learning outcomes.

Assessing learning outcomes at different levels

Activities are designed primarily for students working towards demonstrations of Level 5 learning outcomes. Some assessment opportunities may be used to decide whether students are demonstrating the learning outcomes at levels before or after Level 5. To guide judgments about students' demonstrations of learning outcomes, consider whether students are:

- working towards demonstration of the Level 5 learning outcomes
- demonstrating the Level 5 learning outcomes
- demonstrating the Level 5 learning outcomes and working towards Level 6 learning outcomes.

Learning outcomes in the syllabus at Level 4 and Level 6 could provide a guide for teacher judgments. Studies of Society and Environment learning outcomes are organised so that there is a progression in terms of concepts and processes within a strand. For example, the progression from TCC 4.2 to TCC 5.2 and TCC 6.2 involves increasing sophistication and complexity, particularly related to the concept of *changes and continuities* and the process of *creating*, though neither of these is exclusive of other concepts and processes. The elaborations provide specific content examples of how the concepts and processes may be levelled from Levels 1 to 6. See the Queensland School Curriculum Council website at www.qscc.qld.edu.au for more information.

Using this module

The activities culminate with students creating information for public display. This may provide opportunities to link with other key learning areas. Activity 7 may provide opportunities to link with English, The Arts and Technology.

Background information

Terminology

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

change	industrialism	revolution
development	manufacturing	scientific revolution
industrial	post-industrial	service industries
industrialisation	progress	

School authority policies

Be aware of and observe school authority policies that may be relevant to this module, particularly in relation to social justice.

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:

- identify groups who were advantaged and disadvantaged by industrialism
- explore the impacts the Industrial Revolution had on natural environments
- explore the roles of men and women in this revolution.

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 4: *Colonisation: Resources, power and exploration*
- Level 6: *Mass media and identities: Societies and change*.

Other key learning areas

Activities may offer opportunities for planning across key learning areas, particularly in English, The Arts and Technology. However, it is important that the integrity of the key concepts, organising ideas and processes within key learning areas is maintained.

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 students' 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.

Activities

Phase 1 Connecting with the topic

Core learning outcomes emphasis: PS 5.3

The aim of this phase is to highlight, in a simple yet significant way, the pervasiveness of industrialism in our modern lives. This could be done in a number of ways, as described in Activity 1. In Activity 2, students develop some sense of the overall historical and geographical contexts of the Industrial Revolution. This activity mainly refers to the developments in Britain during the late eighteenth century and the nineteenth century.

Activity 1 Industrialism in our modern lives

Display some everyday expressions that reflect industrial/technical ways of thinking — for example, let off steam, go off the rails, down in the dumps, all fired up, blow a fuse, get your wires crossed. Ask students to link the expression to a specific device, invention or process. Use this activity to highlight how powerfully industrialism affected everyday consciousness and language.

Discuss the continued use of the term ‘manchester’ to describe cotton goods and ‘manchester department’ to describe the section of a department store where such goods are sold. Explain that this term originated when most cotton goods came to Australia by ship, inside large crates stamped with the word ‘Manchester’, the major cotton-manufacturing centre in England.

Perhaps follow this discussion up by asking whether any locations today have a special meaning because of their association with particular products — for example, ‘Hollywood: Disney or movies’. Ask students to name Australian places that are associated mainly with the industrial production that occurs there. Ask them what impacts on ecosystems seem to be implied. Students might also like to try to invent some new technical/industrial expressions to express particular conditions or situations.

Another possibility is to ask students to draw up a diary of their typical daily activities. Next to each entry, have them list the products they use that are manufactured or processed in a factory somewhere. Again, this is designed to highlight the extent of industrial activity in modern societies. A comparison could be made with earlier times in Australian or other societies, perhaps by asking questions of parents, grandparents or elderly neighbours.

Students could identify the manufactured and processed items in the classroom and investigate their places of origin. This could be developed in the form of a drawing or plan of the room, with appropriate labelling of items.

Activity 2 Industrial regions

Present students with a number of maps of prominent industrial regions showing details of resource location, manufacturing sites, adjacent housing and transportation routes. While studying the maps, encourage students to consider what constitutes an industrial ‘region’. Ask students to list the geographical features and human activities which characterise an industrial region and to use this information to write a definition of the terms ‘region’ and ‘industrial region’. The names of famous industrial regions (Midlands, Ruhr, Port Kembla/Wollongong, Newcastle/Maitland, Duluth-Superior, Pittsburgh, Manchuria) could be introduced. Assist students to consider what activities might occur in an industrial region.

Support materials and references

Consider how a modern industrial region may have looked prior to industrialisation. Display a map or illustration of a region prior to industrialisation and discuss the differences. Consider how industrialisation changes natural and urban ecosystems. Paintings can illustrate changes — for example, J.M.W. Turner’s 1835 painting *Keelmen Heaving in Coals by Moonlight* depicts a river increasingly dominated by industry. Many of Turner’s paintings of the Chelsea section of the River Thames can be found on the Internet (for example at the National Gallery of Art, Washington).

Activity 3 Industrial Revolution

Discuss the increase in industrialisation and the period of rapid and great change that is referred to as the Industrial Revolution. Use maps to discuss the location of industrial areas in Britain during the Industrial Revolution.

Describe developments that made industrialism possible, particularly the new knowledge of the scientific revolution and the invention of particular devices and processes. At this stage, there is no need to develop detailed knowledge or to raise problematic issues related to the Industrial Revolution. The aim is to provide a knowledge base to support ensuing investigations.

Discuss the idea of progress — particularly technological progress from ancient to modern times. Ask students whether they think the views of the class regarding the idea of progress are widespread and what evidence they might be able to find in the local area to indicate how people think and feel about the idea of progress today.

Remind students of the location of industrial areas and consider whether these places represent progress from an environmental viewpoint. Explain that in the next phase, they will be exploring the idea of progress, attitudes towards the natural environment and ideas about work that all began with the Industrial Revolution.

Phase 2 Highlighting issues, framing questions

Core learning outcomes emphasis: TCC 5.1, TCC 5.2, PS 5.3

In this phase, students use stimulus materials to identify issues and frame questions for investigation of the Industrial Revolution.

Activity 4 Ideas about progress, natural environments and work

Provide groups of students with a range of stimulus resources that they can use to begin to investigate the Industrial Revolution. Ask them to use these resources to answer the question 'What main message(s) about the Industrial Revolution is/are conveyed by this resource/these resources?'. Students should identify key issues from the resources in a table like the following:

Resource 1

Support materials and references

Sample stimulus resources	Key issue
An extract from an old primary school reader used in Queensland schools during the early 1900s (Resource 1).	• the idea of progress associated with the Industrial Revolution
An illustration of a landscape devastated by industrial activity. A section of the ABC television program *Out of the Fiery Furnace* showing industrial landscapes in Britain in the early stages of the Industrial Revolution.	• attitudes to the natural environment associated with the Industrial Revolution
An illustration of factory work (Hoepper, B. et al. 1996). A section of the feature movie *Baraka* showing large-scale, repetitive work in factories in Central America.	• ideas about work during the Industrial Revolution

Ask individuals or groups to report their findings. Discuss whether the sources were primary or secondary sources.

Activity 5 Analysing and interpreting historical sources

Summarise the discussion from Activity 4. For example:

Key issue	Main message
• the idea of progress associated with the Industrial Revolution	The Industrial Revolution was a time of progress because it improved the living standards of people in Britain and other industrialised countries.
• attitudes to the natural environment associated with the Industrial Revolution	During the Industrial Revolution, people treated the natural environment as a resource, sometimes causing severe damage.
• ideas about work during the Industrial Revolution	During the Industrial Revolution, many people performed monotonous, repetitive and unsafe tasks in factories.

Ask students to focus on each of the three 'main messages'. Prompt and encourage them to frame some questions that they can use to guide their deeper investigation of the issue. For example:

Key issue/main message	Possible prompts by the teacher
• the idea of progress associated with the Industrial Revolution • The Industrial Revolution was a time of progress because it improved the living standards of people in Britain and other industrialised countries.	Do we know that this description of improved living standards would have applied to everyone in society at the time?
• attitudes to the natural environment associated with the Industrial Revolution • During the Industrial Revolution, people treated the natural environment as a resource, sometimes causing severe damage.	Do we know how widespread this damage was?
• ideas about work during the Industrial Revolution • During the Industrial Revolution, many people performed monotonous, repetitive and unsafe tasks in factories.	Do we know how many people actually did this type of work?

Use the following questions to assist students to develop a set of questions. Note that, for each issue, there is a question about whether the issue was 'new' — in other words, did it represent a change from previous, ancient and pre-industrial, beliefs and practices? If necessary, prompt students to include such a question and note its relevance to learning outcome TCC 5.1.

Questions concerning ideas of progress

- How was progress described by the leaders of Britain and other industrial nations during the Industrial Revolution?
- Was this a new way of thinking about progress?
- How did British people benefit from the Industrial Revolution?
- Did all British people benefit equally?
- Did some British people suffer? If so, why?
- Did the Industrial Revolution have a direct impact on people in British colonies? If so, how?
- Did anyone try to remedy the problems caused by industrialisation? If so, how? With what success?

Questions concerning attitudes to the natural environment

- What was the dominant attitude towards the natural environment during the Industrial Revolution?
- Was this a new attitude to the natural environment?
- How did people use the natural environment for industrial purposes?
- What environmental damage was caused by industrial activity?
- Did any people suffer because of environmental damage? If so, how?
- Did anyone try to limit or eliminate the environmental damage at the time? If so, how? With what success?

Questions concerning ideas about work during the Industrial Revolution

- What forms of work were common during the Industrial Revolution? Why?
- Had these forms of work existed prior to the Industrial Revolution?
- What benefits resulted from that work?
- How did some workers suffer during the Industrial Revolution?
- What did people at the time think about the poor conditions experienced by some workers?
- Did anyone try to remedy the suffering of industrial workers? If so, how? With what success?

Phase 3 Planning, investigating and making decisions

Core learning outcomes emphasis: TCC 5.1, TCC 5.2, CI 5.3, SRP 5.4

In this phase, students plan how to investigate their questions and decide how the findings will be recorded and reported. Students decide how many issues and how many questions they will deal with and locate sources that might be used in investigating the questions.

Lead the initial 'investigating the issues' sequence, but conclude the phase with a more student-centred 'making decisions' sequence. Although these sequences are described as separate activities, they may develop and occur simultaneously with student research activities.

Activity 6 Attitude scales

Resources 2, 3 and 4

To highlight the ways of thinking and doing that characterised the period of the Industrial Revolution, and to assist students to demonstrate the core learning outcomes emphasised in this phase, organise one or more of the following activities:

- 'Win as much as you can' — a 30-minute whole-class game (See Resource 2)
- 'Paper planes' — a 20-minute simulation (See Resource 3)
- 'Attitude scale' activity (See Resource 4).

Activity 7 Student research activity

Provide opportunities for students to locate resources and use them to answer their research questions.

Activity 8 Sharing and compiling a 'newspaper' page

As students complete their research, encourage them to consider ways of presenting and sharing their findings. Discuss options such as a newspaper spread, poster display or web page.

Resource 5

Introduce and discuss the task on Resource 5. Additional core learning outcomes from this module could be added to those on Resource 5. Allow time for students to complete tasks on Resource 5.

Phase 4 Making links and digging deeper

Core learning outcomes emphasis: TCC 5.2, CI 5.3, SRP 5.4

This phase allows students to explore some lasting impacts of the Industrial Revolution.

Activity 9 The Industrial Revolution influences ideas today

Assist students to investigate the extent to which the three key features of the Industrial Revolution explored in this module (ideas of progress, attitudes to the environment and ideas about work) still exist in our society. Provide a range of modern sources, such as newspapers, magazines and advertisements, and ask students to search for evidence of these features in modern society.

Ask students to produce a display collage from these materials. The display should highlight how one of the three features investigated in Phase 3 is evident in today's Australian society. It should show whether there are similarities and/or differences between the current situation and the situation during the Industrial Revolution. Students could present an oral explanation of their display collage to their peers. This would enable them to demonstrate TCC 5.2. Ask each student group to reveal how the feature they are describing may influence a wider cultural group to which they all have a sense of belonging. This provides opportunities to assess CI 5.3.

As the presentations occur, ask each member of the audience to record any of their own ideas concerning progress, the environment and work that may have been influenced by the Industrial Revolution. On completion of the presentations, ask each student to use these records to describe cultural aspects that have helped construct their identities. These descriptions could be written paragraphs that provide opportunities to assess CI 5.3.

Activity 10 Legal and gender issues

This activity provides students with opportunities to develop an understanding of two other issues: how political and especially legal systems responded to the challenges of the Industrial Revolution (SRP 5.4) and the roles of men and women in the Industrial Revolution.

- How did the industrial revolution influence political and legal systems?

Focus on the ways political and legal systems responded to the challenges and opportunities of the Industrial Revolution through various institutions — political, legal, trade union, educational. Include an exploration of aspects such as Parliamentary Reform Acts, factory and labour laws, the legalisation of trade unions, free public education and the establishment of schools of arts and mechanics' institutes.

Assist students to construct a timeline which traces significant developments in a law, such as compulsory education. Ask students to add annotations to the timeline to explain the links they think may have occurred between industrial development and compulsory education. Discuss timelines to assist students to identify possible links between the Industrial Revolution and a current law. This may provide opportunities to assess SRP 5.4.

- What were the roles of men and women in the Industrial Revolution?

Encourage students to reflect on their study so far and to determine how prominent women have been. Ask students to analyse the resources they have used in terms of the presence of women. Introduce the idea that historical records are influenced by who writes them and point out that histories, until recent times, were largely written by the 'winners' — the most prominent and powerful people in a society. Assist students to think of the roles women may have played during the Industrial Revolution and to consider how new histories might be written to acknowledge these roles.

Explain how women may have been devalued and how the male domain was defined as superior. Emphasise the importance of the distinction that developed between domestic work (in the home, largely female, less valuable, unpaid, less prestigious) and public work (away from the home, largely male, more valuable, paid, more prestigious).

Assist students to study newspapers or other sources that deal with current debates about male and female roles within the modern workplace, especially in relation to the computer industry and the 'caring' professions. Ask students to report their findings in small groups and share whether they personally feel their identity as a worker is likely to be influenced by their gender. Observe this sharing and have students assess themselves and each other concerning CI 5.3. Discuss students' peer and self-assessment and compare with your observations to make decisions about demonstrations of CI 5.3.

Phase 5 Using laws to promote better industrialisation

Core learning outcomes emphasis: SRP 5.4, SRP 5.5

In this culminating phase, students come to understand that industrialisation continued to spread throughout an increasingly globalised world. They also learn how some features of Australian legal systems have helped promote social justice and question whether these systems resulted from industrialisation.

Activity 11 Exploitation, industrialisation, democracy and laws

Explain how the impact of the Industrial Revolution spread to other areas of the world and how some societies, like Australia, eventually became based on service industries and were therefore 'post-industrial' in character, while industrial activity became increasingly located in developing countries, particularly in Asia and Central America. Use resources such as maps of global industrial activity, statistics on workforce profiles in Australia and elsewhere and descriptions of industrial work in developing countries to emphasise that the Industrial Revolution is still happening.

Support materials and references

Read passages from the novels of Charles Dickens or extracts from texts such as Hoepper, B. et al. (1996) that describe working conditions for children in Britain around the 1830s. Contrast these with descriptions of child labour in developing countries today, which can be found in many textbooks and on the Internet.

Ask students why they think exploitation of child labour is uncommon in Australia today. List their responses and prompt them to consider the influence of laws and compulsory education. Ask students when they think the first laws against slavery may have been passed and when education was made compulsory. Provide some options — for example, 1700, 1800 or 1900 — and some hints, such as the dates of the Turner paintings used in Activity 2 and the Factory Reform Acts (both 1830s, thus making 1700 or 1800 highly unlikely). Encourage discussion of why this evidence makes the earlier dates unlikely and then reveal that the main law against slavery in Britain was passed in 1833, but that slavery was not legislated against in the USA until a Civil War was fought over it in the 1860s. Education became compulsory in Australia during the 1870s.

Discuss whether one benefit of industrialisation was that it helped to improve access to democracy (SRP 5.5). Discuss whether the laws you have described were socially just. Emphasise that between 1830 and 1880, many poorer Australian and British citizens appear to have been treated more equally and given more access to democracy. This 50-year period coincided with rapid industrialisation in Australia — for example, the railways began to link major cities. Explain that it may have been possible that industrialisation helped improve access to democracy because the Industrial Revolution required workers with increasing levels of skill and produced a new class of people who became rich not through the traditional methods, such as farming, but by owning and operating factories that mass-produced products. This new class of rich and better-educated people and some of the increasingly educated workers became annoyed at being left out of political decisions. They wanted a say in making laws. The pressure for reforms, especially in Britain, saw a gradual expansion of voting rights from the landed gentry to the propertied classes, to nearly all men and finally to nearly all women. Outline significant developments, such as how Australia granted women the right to vote in Federal elections in 1902. Conclude by emphasising that this is only a very brief summary of how access to democracy improved and explain that not all Australians could vote in Federal elections by 1902 — Indigenous Australians were not legally entitled to do so until 1962.

Raise the question of whether Australia's legal system may have been influenced by the Industrial Revolution. Ask students to name one or two features or principles of this system and to speculate about whether the Industrial Revolution had any impact on these features or principles.

Create a list of the main features and principles of Australia's legal system. Texts such as Kenman, S. (2000) are a useful source of information. Use the list to explain how some features and principles of the Australian legal system may have originated in the Industrial Revolution. For example:

- pressures for universal suffrage and laws made by parliaments increased when the new middle-class factory owners had made enough money that they wanted to protect it by having a say in law making
- compulsory education laws were passed towards the end of the nineteenth century when the demand for more skilled labour began to increase
- the 1907 Australian Harvester Judgment, which established the principle of the basic wage based on needs, only occurred once large numbers of workers began to be concentrated in factories and once employers sought tariff protection.

Assist students in small groups to identify which of the listed features and principles may have originated in the Industrial Revolution and to explain their reasoning to other groups. Students discuss and compare findings. Comment on the strength of the causal arguments presented and ask students to consider how laws may change as a result of the present post-industrial, service-based economy. For example, will laws be increasingly concerned with who owns ideas rather than physical property?

Although these discussions are primarily intended to prepare students for the completion of reports and posters in the next activity, they may offer opportunities for students to demonstrate SRP 5.4 and SRP 5.5.

Activity 12 Improving democracy

Students have explored the impact the Industrial Revolution had on world history in terms of human progress, human rights and environmental effects. They have also focused on whether this revolution impacted on ways of accessing democracy and on Australia's legal system. In this culminating activity, students plan a way of publicising what they have learnt.

This could be done in a number of ways. For example, students could design posters modelled on a newspaper layout and perhaps titled 'The Good, the Bad and the Ugly' which could be displayed within the school or local community. Alternatively, students could create a special 'advocacy' web page and use it to present their thoughts on the social, environmental and especially democratic impacts of industrialisation. Whatever format is chosen, students should refer to some principles of legal systems in Australia (SRP 5.4) and how access to democracy in Australia could be improved (SRP 5.5).

An extract from a school history textbook widely used in Queensland in the early 1900s

Resource 1

Progress of Britain from 1714 till 1820

During the eighteenth century Britain made a great advance in trade and manufactures, in wealth, and in the number of her people. The population more than doubled, increasing from under seven to about fourteen millions.

Under George III the manufacture of goods by the skilful work of men's hands developed to such an extent that Britain became a kind of workshop for a large part of the world. Already some towns in Norfolk and in the south-west of Yorkshire, such as Norwich and Leeds, were weaving much woollen cloth. Manchester and Bolton had become famous for cotton goods; Dundee for linen; and Spitalfields, in East London, for silks.

Then, all at once, the brains and hands of clever and resolute men found out the means of making goods with far more ease, speed, and cheapness than had ever before been possible. Machines, instead of hands, began to spin and weave. James Hargreaves, a Lancashire man, greatly improved the way of dressing and spinning cotton, by his combing-frame and spinning-jenny. Richard Arkwright, a barber of Preston, made still better work in cotton with his spinning-frame.

Samuel Crompton, a third Lancashire man, invented a machine of great value called the spinning-mule, which of itself did the work of the other two spinning-machines together. Thus was improved the way of making thread from raw cotton.

The next thing was to find a quicker means than the hand-loom gave, for weaving the yarn or thread into cotton cloths. The labours of several men, spread over many years, ended in the invention of the power-loom.

How all these machines could be driven by steam was shown in 1769, when the great Scotsman, James Watt, invented the steam-engine.

Not only in cotton and wool, but in silk and iron, and many other articles, steam soon gave our workmen the first place in the markets of the world. The trade of the country grew so fast that the Thames, the Tyne, and the Mersey were filled with forests of masts, borne by ships that sailed to and from every part of the world.

Source: *The Complete History Readers: Book IV*, Blackie and Son Ltd, London.

Win as much as you can — Resource 2

Directions for teachers
'Win as much as you can' is a whole-class activity designed to highlight various concepts including achievement, success, reward, competition, cooperation, individualism, community, trust and altruism.

Resources required
- a poster showing the scoring system
- a tally sheet for each pair of players
- one red token and one blue token for each pair of players
- pencils or pens

Procedure
Divide the class into groups of eight students. Each group of eight students divides into four pairs. The groups of pairs sit facing inwards, forming a square. Each pair is given two tokens — one red, one blue.

Announce that the name of the game is 'Win as much as you can'. Encourage the players to keep that in mind throughout the game. Explain that the game consists of ten rounds. In each round, at an announced moment, each pair of players will display either a red or a blue token. For each round, the choice of token displayed will determine the score achieved by the pair of players (see the score chart for details).

Usually, players are only allowed to discuss their decisions with their partner. However, in rounds 5, 8 and 10, discussion among all eight players in each group should be encouraged. These three rounds are also bonus rounds, in which scores are multiplied by three, five and ten respectively.

To coordinate the displaying of tokens in each round, announce:
- 'You have one minute to decide with your partner which colour token to display.'

After a minute, announce:
- 'Hold out your fist, with the selected token hidden in your hand.'

When one person from each pair has a closed hand held out, say:
- 'Ready? Open your hand now.'

Once the tokens are displayed, ask the players to work out their score and write it on their tally sheet. Follow this procedure for all ten rounds.

In rounds 5, 8 and 10, announce that the round is a bonus round and that all scores will be multiplied by three, five and ten respectively. Explain that the players should discuss these rounds with the three other pairs in their group before deciding as a pair which token to display.

During the game, ask for cumulative scores and highlight those pairs with high and low scores. Remind players that the name of the game is 'Win as much as you can'. At the end of the game, you could write the final score for each pair on a board. Discuss:
- Did the 'you' in the title of the game refer to you as an individual, to your pair, to the whole group of eight or to the whole class? How would those different meanings affect the way you approached the game?
- What evidence did you see of the following in the game: competition; cooperation; ambition; trust; cheating?
- What did you think of the attitudes and behaviours of the other people in your group? What do you think they thought about you?
- If everyone had played cooperatively, by displaying a blue token in every round, what final score would each pair have received? How does that compare with the actual scores achieved?
- How did the chance to 'win' by being better than other players affect your interest in and enthusiasm for the game?
- Which of the terms 'win–win', 'win–lose' and 'lose–lose' would apply to the way your group played the game?
- In what ways might the attitudes and behaviours of 'Win as much as you can' have been common during the early Industrial Revolution? With what effects?

Win as much as you can (continued) **Resource 2**

Scoring system for 'Win as much as you can'

If the group displays these tokens …	Then the scores are …
1. Four red tokens	Each pair loses one point.
2. Three red tokens and one blue	Each red token wins one point. The blue token loses three points.
3. Two red tokens and two blue	Each red token wins two points. Each blue token loses two points.
4. One red token and three blue	The red token wins three points. Each blue token loses one point.
5. Four blue tokens	Each blue token wins one point.

Tally sheet for each pair in 'Win as much as you can'

Round	Conditions	Your pair's selection	The group selection	Your pair's score	Cumulative score
1	normal				
2	normal				
3	normal				
4	normal				
5	bonus x 3				
6	normal				
7	normal				
8	bonus x 5				
9	normal				
10	bonus x 10				
				TOTAL:	

Paper planes

Resource 3

Directions for teachers
Paper planes is a simple activity designed to highlight some differences between individual craft production and mass-production in a factory.

Resources required
- one sheet of A4 paper for each student
- about 40 other sheets of A4 paper

Procedure
Give each student one sheet of A4 paper and ask them to make a paper plane from it. When all students have made their planes, test each design by having the students 'fly' them one at a time in a suitable space. Select the plane that flew best and ask the student who made it to show the class how it was made.

Set up a production line to make multiple copies of the best design. Break the production down into separate steps and have one student responsible for each step. Appoint one student to feed a sheet of paper into the production line at set intervals. (Use a student timekeeper if you like.) Appoint a supervisor to monitor the process and encourage faster work and criticise slow or poor work. Appoint some students as quality controllers to check each plane for obvious defects. Continue the production line process for several minutes, maintaining constant pressure on the workers. Ask the remaining students in the class to watch the process carefully.

Afterwards, have a class discussion about the differences between individual production and mass-production. Focus on issues such as efficiency, quality of product, worker satisfaction and morale.

Attitude scale

Resource 4

Directions for teachers
An attitude scale activity lets students make a decision about an important issue and then discuss it with another student who has a different attitude. Here are the steps involved:

- Two contrasting or conflicting ideas are written on two large pieces of paper or cardboard. The two notices are pinned up on opposite sides of the classroom and students are asked to decide which of the two ideas they support and how strongly.
- Students take up an appropriate position between the two notices — if they agree very strongly with one of the ideas, they should stand close to that notice. Students who are totally undecided should stand in the middle position between the notices.
- Students team up with a student who has decided to stand somewhere quite different on the scale and discuss why each has the attitude they do. They consider whether they might want to change their decision as a result of the discussion. In the event that students cluster in one position, hold a class discussion where you explain why other students may have taken different positions.
- Students participate in a whole-class discussion in which some students explain their positions and respond to questions and comments from other students.

Possible pairs of statements:
- The Industrial Revolution was a time of great progress for humankind.
- The Industrial Revolution was a backward step for humankind.

- The natural environment was a major victim of the Industrial Revolution.
- The natural environment was improved by the Industrial Revolution.

- The introduction of factory work was a backward step for society.
- The introduction of factory work was a step forward for society.

Assignment: sharing and compiling a presentation — Resource 5

Tasks
You have investigated some questions concerning either the idea of progress, attitudes to the natural environment or ideas about work during the Industrial Revolution. This assignment requires you to present well-supported interpretations concerning these questions. You will need to work in groups of three.

One option could be to present a double-page feature for a Queensland daily newspaper or a local newspaper. Your presentation could take several other forms, including an interactive web page, containing multimedia elements such as visuals and written text. Whatever format you choose, your presentation should have a clear purpose and audience.

Begin by discussing the answers each member of your group gave to the questions that were framed in Activity 4, then decide on possible audiences for this information. Who may *benefit* from knowing about this? Who *needs* to know this? Who would *like* to know about this for enjoyment? To help you select an audience, think about your discussions during the attitude scale activity and consider any links that can be made between the Industrial Revolution and current and local events. There are many possibilities. Remember that as well as highlighting ideas of progress associated with industrialisation, the environmental impact of industrialisation and ideas about industrial work, your group's presentation must also be relevant to people living today. Discuss and decide what form your completed presentation will take and who its main audience will be.

If the answers to your original questions were recorded electronically you may be able to cut and paste some of the findings of each member of the group. Paper and glue could also be used to compile your presentation; if facilities are available, a short video clip could be created. The components of the presentation must be presented so that they demonstrate the core learning outcomes required below. The exact details are up to you and the following are examples only:
- a newspaper story about the significance of a new local factory
- an interview with a leading industrialist, perhaps then and now, about industrial progress
- a story about a significant industrial invention or technology
- an advertisement for an excursion by steam train or steam ship
- a story about the environmental impact on an industrialised area with reference to local impacts
- a labelled illustration of a damaged environment
- an illustration of working conditions in an industrial factory, then and now
- a comparison of a report of a parliamentary inquiry into child labour in industrial factories in the 1830s with a more recent United Nations report.

Learning outcomes
All groups must include:
- primary and secondary source evidence showing the development of the idea of progress, the impact industrialisation had on the natural environment and ideas about work from ancient to modern times (TCC 5.1)
- indications of how industrialisation has affected human values and identity (preparation for CI 5.3)
- representations of situations before and after an industrial revolution (TCC 5.2). These representations should communicate clearly to your intended audience.

Support materials and references

Hewitt, T., Johnson, H. & Wield, D. (eds) 1992, *Industrialization and Development*, Oxford University Press/The Open University, Oxford.

Hoepper, B. et al. 1996, *Inquiry 2: A Source-Based Approach to Modern History,* Jacaranda, Brisbane.

Hutchinson, F., Talbot, C. & Brown, L. 1992, *Our Planet and Its People*, Macmillan Education, Melbourne.

Kenman, S. 2000, *SOSE Civics for Queensland,* Jacaranda, Brisbane.

McCauley, D., Brown, P. & Mills, M. 2001, *SOSE for Queensland Book Two,* Jacaranda, Brisbane.

Metcalf, B. (ed.) 1995, *From Utopian Dreaming to Communal Reality*: *Cooperative Lifestyles in Australia*, University of New South Wales Press, Sydney.

New Internationalist, New Internationalist Publications, Mitcham, UK (various editions).

Ponting, C. 1991, *A Green History of the World,* Penguin Books, London.

Speed, P. & M. 1985, *The Industrial Revolution,* Oxford University Press, Oxford.

The Complete History Readers: Book IV, Blackie and Son Ltd, London.

World Commission on Environment and Development 1990, *Our Common Future — the Commission for the future* (Australian edition), Oxford University Press, Melbourne.

Video

ABC, *Out of the Fiery Furnace.*

Websites

(All websites listed were accessed in April 2002.)

Greenpeace International. www.greenpeace.org/

International Labour Organization. www.ilo.org/

Mr Neal's Virtual Classroom. www.virtualclassroom.net/
A large collection of lesson notes and PowerPoint slides on many history topics, including the Industrial Revolution. Useful for summary information.

National Gallery of Art, Washington. www.nga.gov/home.htm

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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