

## YEAR 5: The Australian Colonies

### No 1 Pump Station, Mundaring Weir

#### BACKGROUND INFORMATION

No 1 Pump Station is the first in a line of eight steam-powered pumping stations built to deliver freshwater from Mundaring Weir to WA's Eastern Goldfields following discoveries in what was to become Coolgardie in 1892 and Kalgoorlie in 1893. The goldfields pipeline, inevitably linked to Engineer in Chief CY O'Connor and WA Premier John Forrest, operates to this day, although electric pumps have replaced steam and the scheme now sustains agricultural areas as well.

In 2009 the Goldfields Water Supply Scheme was declared an International Historic Civil Engineering Landmark - the third in Australia - joining the Sydney Harbour Bridge and the Snowy Hydro Electric Scheme on a list that includes the Eiffel Tower and San Francisco's Golden Gate Bridge. In 2011 it was placed on Australia's National Heritage List.

In use until the 1950s, No 1 Pump Station stands at the foot of Mundaring Weir as a monument to the Golden Pipeline's significance in the colonisation and settlement of WA and the building of the Australian nation. No 1 Pump Station is an ideal site to visit for students studying the history of the state. It is used now to tell fascinating stories from the past: of what life was like on the goldfields: the role that O'Connor and Forrest played in shaping WA; the impact of the discovery of gold on WA and more.

#### OVERVIEW OF PROGRAM

A visit to No 1 Pump Station, Mundaring Weir can be used to engage students with the **development** of Western Australia, subsequent to the founding of the **Swan River Colony**. The **discovery of gold** in the 1890s transformed the so-called 'Cinderella State' and resulted in rapid development in terms of infrastructure and settlement. The site lends itself to the examination of **significant events, people**, political and economic developments and settlement patterns following the discoveries. This program has been written to complement a visit.

This program is written to meet the requirements of the Australian Curriculum: History, providing opportunities to develop historical understanding through key **concepts** including **sources, continuity and change, cause and effect, perspectives, empathy and**

**significance.** Investigating these concepts within the context of the goldfields and agricultural areas water supply scheme, of which the weir and No 1 Pump Station form a part, facilitates student understanding of the past and gives them a focus for historical inquiries. Suggestions are made for classroom activities aimed at developing historical skills.

## **No 1 PUMP STATION EXCURSION**

Up to 90 students (3 classes) can be accommodated at No 1 Pump Station at any one time. A full day's visit (approx 10 am to 2 pm) is recommended although shorter visits are possible. In general, weather and Water Corporation operations permitting, a visit consists of a workshop on the Gold Rush and the subsequent need for the pipeline, a tour and exploration of No 1 Pump Station's interactive display and a walk across the dam wall. Visits can be tailored to suit particular areas of study e.g. water or CY O'Connor.

### **To make a booking:**

Contact the National Trust by:

Email: [trust@ntwa.com.au](mailto:trust@ntwa.com.au)

Phone: 9321 6088

## **INQUIRY QUESTIONS AND KEY CONCEPTS**

The Year 5 curriculum provides a study of colonial Australia in the 1800s. Students look at the founding of British colonies and the development of a colony. They learn about what life was like for different groups of people in the colonial period. They examine significant events and people, political and economic developments, social structures and settlement patterns.

**A framework for developing students' historical knowledge, understanding and skills is provided by inquiry questions through the use and interpretation of sources. The key inquiry questions at this year level are:**

- **What do we know about the lives of people in Australia's colonial past and how do we know?**

The National Trust has compiled information about lives in the earliest days of WA's Eastern Goldfields. Our education website features more than [80 photographs](#) with accompanying information as well as information sheets (see [Golden Pipeline information sheets](#)) on aspects of the goldfields water supply scheme. Resources for sale include a picture book ([The Pipeline O'Connor Built](#)). The display at No 1 Pump Station uses primary source extracts to emphasise the desperate shortage of water on the goldfields.

- **How did an Australian colony develop over time and why?**

Population growth in WA was very slow until significant discoveries of gold in the 1890s. Thanks to the 1890s Gold Rush the population of Western Australia doubled and redoubled in the space of 10 years. The Goldfields Water Supply Scheme was – and continues to be – an essential infrastructure in maintaining settlements and industries (farming and mining) in the arid interior.

- **How did colonial settlement change the environment?**

The discovery of gold led to a time of great expansion in WA both in terms of population and economic activity. The pipeline, built as a consequence of the Gold Rush, brought and continues to bring security to what is now known as the Wheatbelt, supporting farming in WA, as well as mining. No 1 Pump Station and Mundaring Weir are essential elements of this ongoing story.

- **What were the significant events and who were the significant people that shaped Australian colonies?**

The name CY O'Connor is synonymous with the pipeline but it would not have been possible without the political acumen of WA's first Premier, John Forrest. Together, thanks to money from the Gold Rush, they built much of WA's infrastructure. A visit to No 1 addresses the significance of WA's fabulous gold discoveries in the 1890s and the role of the dynamic duo, O'Connor and Forrest, whose legacy lives on.

## **KEY CONCEPTS**

### **Sources**

The Gold Rush period is rich in primary sources, in particular photographs, diaries and letters, to investigate the past. Primary and secondary sources available electronically include newspapers such as the Kalgoorlie Western Argus. Our presenters at No 1 Pump Station are also valuable sources for student questions which we encourage!

### **Continuity and Change**

The Goldfields Water Supply Scheme can be investigated in terms of aspects that have remained the same over its period of operation and some that have changed. A visit to No 1 Pump Station includes aspects of the past, present and future.

### **Cause and Effect**

Students investigate reasons for the building of the Goldfields Water Supply Scheme during a visit to No 1 with its visually rich display.

### **Perspectives**

Why did some people call it a Scheme of Madness? Would we design a dam like Mundaring Weir today? Students consider the points of view of people in the past to gain historical knowledge.

### **Empathy**

The circumstances facing desperate miners on the waterless goldfields lend themselves to an appreciation of their point of view. Students investigating opposition to the scheme are moved to empathise with CY O'Connor.

### **Significance**

The impact of the Goldfields Water Supply Scheme on the development of Western Australia, the scheme's longevity and its association with CY O'Connor and Sir John Forrest are aspects relating to No 1 Pump Station's significance for students to explore.

## **TEACHING RESOURCES**

Photographs and accompanying educational information relating to life on the 1890s goldfields, the water supply scheme and CY O'Connor can be found at the Golden Pipeline: Facts & Photos [Website](#)

Golden Pipeline Resources and Activities File to complement a visit to No 1 Pump Station or for stand-alone activities.

### **Pre-visit Activities:**

Teachers are strongly advised to **develop historical skills in students** by having them identify key questions to which they want to find the answers during their visit to No 1. **Informing an historical inquiry** [ACHHS100](#).

### **Rules and Regulations**

Students think about and compile a list of rules to follow on the excursion. Are there some they might need to observe when they walk across a dam wall? Some they need to follow if they are near a source of drinking water?

<b>Historical Knowledge and Understanding</b>	<b>Local Context</b> <i>This site lends itself to historical inquiry re:</i>	<b>Student Activities</b> <i>including pre and post visit</i>	<b>General Capabilities (GC)</b> <b>Cross Curricula Priorities (CCP)</b> <b>Other Learning Areas (OLA)</b>	<b>Research and Resources</b> <i>For pre and post visit activities</i>
<p>Reasons (economic, political and social) for the establishment of British colonies in Australia after 1800. <a href="#">ACHHK093</a>; <a href="#">ACHHS098</a></p>	<p>Development of Western Australia post European settlement.</p> <p>WA's change to a resource-driven economy rather than purely a state based on pastoralism.</p>	<p><b><u>Pre visit research and activity</u></b></p> <ul style="list-style-type: none"> <li>Reasons for WA's establishment (free settler society) and development 1827 -1890.</li> <li>Timeline of WA's path from Swan River Colony to self-government.</li> </ul>	<p>GC: Literacy; Numeracy; ICT competence; Critical and Creative thinking.</p> <p>OLA: English; Maths; Geography;</p>	<p><b>PDFs</b></p> <p><b>Teacher Resources</b></p> <p>1. Pipeline Timeline: Sequencing historical people and events.</p> <p><b>Visit the following websites:</b>  <a href="#">Swan River Colony</a></p> <p><a href="#">Celebrate WA</a></p>
<p>The nature of a colonial settlement in Australia, including factors (discovery of gold) that influenced patterns of settlement, aspects of the daily life of its different inhabitants, and how they changed the environment. <a href="#">ACHHK094</a>; <a href="#">ACHHS099</a>; <a href="#">ACHHS100</a></p>	<p>Limited expansion of Swan River Settlement.</p> <p>Impact of lack of water on settlement patterns in WA.</p> <p>Impact of lack of water on lives of Europeans.</p> <p>Impact of European settlement on Aboriginal way of life and the environment.</p>	<p><b><u>Pre visit research and activity</u></b></p> <ul style="list-style-type: none"> <li>Map extent of European settlement in WA until 1890 and note geographical features, climate, and water resources. Look for patterns and compare.</li> <li>Map rainfall patterns in WA</li> <li>Investigate Aboriginal sources of water; how these sources were impacted on by settlement and the subsequent impact on the Aboriginals.</li> <li>Investigate Hunt's Wells.</li> <li>Develop narratives using real characters and events.</li> </ul>	<p>GC: Literacy; Numeracy; ICT competence; Critical and creative thinking; Intercultural understanding; Personal and social competence.</p> <p>CCP: Aboriginal and Torres Strait Islander histories and culture; Sustainability</p> <p>OLA: English; Maths; Science; Geography; Arts</p>	<p><b>PDFs</b></p> <p><b>Teacher Resources</b></p> <p>2. Settlement Patterns: Using historical terms and concepts; Identifying questions to inform an historical inquiry.</p> <p>3. Recounts of early settlers' daily lives: The Story of Mangowine</p> <p>4. Poetry, songs <i>Poems of the Pipeline</i></p> <p>5. Rushing to the Goldfields</p>

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		<p><b><u>Excursion activity</u></b></p> <ul style="list-style-type: none"> <li>View display of early goldfields photographs / read primary sources.</li> </ul> <p><b><u>Post visit activity</u></b></p> <ul style="list-style-type: none"> <li>Prepare an illuminated address to present to William Bayley or CC Hunt. (See <a href="#">website</a> for example.)</li> </ul>		<p><i>And Some Found Graves</i> – the goldfields diary of prospector John Aspinall, published by Hesperian Press (to order see their <a href="#">website</a>)</p> <p><b>Visit the following websites:</b> Photographs of early goldfields on <a href="#">National Trust education website</a></p> <p>Water Corporation <a href="#">resource sheet</a> on Waterborne diseases in the Goldfields</p>
<p>The impact of a significant development on a colony; for example, the gold rushes, the expansion of farming, drought. <a href="#">ACHHK095</a></p>	<p>The impact of the discovery of gold in the eastern goldfields.</p> <p>Early WA industrial heritage.</p> <p>The impact of the water supply scheme on settlement patterns.</p> <p>The impact of the water supply scheme on the lives of people living in the goldfields.</p> <p>The impact of water supply scheme on the environment.</p>	<p><b><u>Pre-excursion activity</u></b></p> <ul style="list-style-type: none"> <li>Map expansion of European settlement in WA 1890 -1900</li> </ul> <p><b><u>Excursion activities</u></b></p> <ul style="list-style-type: none"> <li>Workshop on the Gold Rush.</li> <li>Tour of No 1 Pump Station.</li> <li>Walk across the dam wall.</li> </ul> <p><b><u>Post visit activities</u></b></p> <ul style="list-style-type: none"> <li>Investigate impact of the discovery of gold.</li> <li>Investigate impact of expansion of farming in WA's wheatbelt and agricultural areas.</li> <li>Create 'What if' scenarios: What if they hadn't found gold?' or What if they hadn't built the pipeline?</li> </ul>	<p>GC: Literacy; Creative and Critical Thinking; ethical behaviour; Personal and social competence; ICT competence; Intercultural understanding.</p> <p>CCP: Aboriginal and Torres Strait Islander histories and culture; Sustainability</p> <p>OLA: English; Maths; Science; Geography; Arts</p>	<p><b>Teacher Resources</b></p> <p><b>DVD</b></p> <p><i>Constructing Australia – Pipe Dreams ABC / Screenwest</i></p>

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		<ul style="list-style-type: none"> <li>Investigate impact of discovery of gold on the lives of Aboriginal people.</li> <li>Investigate impact of water supply regulation on the <a href="#">lives of Aboriginal people</a>.</li> <li>Create a prospector's journal reflecting daily experiences.</li> <li>Construct a website for a small town along the pipeline including settlement history.</li> </ul>		
<p>The reasons people migrated to Australia from Europe and Asia, and the experiences and contributions of a particular migrant group within a colony <a href="#">ACHHK096</a></p>	<p>People went to WA's goldfields in search of a better life.</p> <p>Prospectors came to WA from the eastern states of Australia and overseas.</p> <p>Not all those attracted to WA's eastern goldfields intended to search for gold.</p> <p>People from Australia's eastern states were dislocated by the economic depression there.</p>	<p><b><u>Pre visit activity</u></b> Class discussion on where students are from and why family is in WA.</p> <p><b><u>Excursion activities</u></b></p> <ul style="list-style-type: none"> <li>Session on 1890s Gold Rush.</li> </ul> <p><b><u>Post visit activities</u></b></p> <ul style="list-style-type: none"> <li>Identify reasons why people went to the goldfields.</li> <li>Investigate the experiences and contributions of the Afghan Cameleers.</li> <li>Investigate the experiences and contributions of the 'T'Othersiders' in WA.</li> </ul>	<p>GC: Literacy; Creative and Critical Thinking; Intercultural understanding; Personal and social competence.</p> <p>CCP: Asia and Australia's engagement with Asia</p> <p>OLA: English; Maths; Geography; Arts</p>	<p><b>Teacher Resources</b></p> <p><b>Books</b></p> <p><i>And Some Found Graves</i> – the goldfields diary of prospector John Aspinall Hesperian Press (to order see their <a href="#">website</a>)</p> <p><i>Tin Mosques and Ghantowns: A History of Afghan Cameldrivers in Australia</i> by Christine Stevens ISBN -13: 9780958176002</p>

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<p>The role that a significant individual or group played in shaping a colony; for example, explorers, farmers, entrepreneurs, artists, writers, humanitarians, religious and political leaders, and Aboriginal and/or Torres Strait Islander peoples. <a href="#">ACHHK097</a> <a href="#">ACHHS101</a></p>	<p>Premier John Forrest's role in shaping Western Australia.</p> <p>CY O'Connor's role in shaping Western Australia.</p> <p>The role of the prospectors in shaping Western Australia.</p>	<p><b><u>Pre visit activity</u></b></p> <ul style="list-style-type: none"> <li>Research lives of significant players in the discovery of gold or water supply scheme e.g. Paddy Hannan, John Forrest.</li> </ul> <p><b><u>Excursion activities</u></b></p> <ul style="list-style-type: none"> <li>Discover tangible links to CY O'Connor.</li> </ul> <p><b><u>Post visit activities</u></b></p> <ul style="list-style-type: none"> <li>Investigate the contribution of CY O'Connor to WA.</li> <li>Investigate the contribution of John Forrest to WA.</li> <li>Investigate the role of gold prospectors in shaping WA.</li> <li>Write a play about CY O'Connor visiting the goldfields today.</li> <li>NTWA Photo &amp; Story competition (<a href="#">see Website</a>).</li> <li>Create an artwork to commemorate John Forrest or CY O'Connor.</li> </ul>	<p>GC: Literacy; Maths; Creative and Critical Thinking; ethical behaviour; Intercultural understanding; Personal and social competence</p> <p>CCP: Sustainability</p> <p>OLA: English; Maths; Science; Geography; Arts</p>	<p><b>PDFs</b></p> <p><b>Teacher Resources</b></p> <p>6. No Engineer Has Done More</p> <p>.</p> <p><b>Websites</b></p> <p>Water Corporation <a href="#">resource sheet</a> on the Life and Achievements of CY O'Connor</p> <p>Search for public artwork on the web relating to CY O'Connor and/or John Forrest.</p>