



HOME OF THE SWAN BELLS, PERTH

Teacher's Guide Middle and Upper Primary

Some Introductory Information about the Bell Tower.

In 1988, the existing bells of St Martin-in-the-Fields, one of London's most famous churches, were presented to Western Australia as part of a program of activities to commemorate the Australian Bicentennial.

This group of 12 bells was cast in 1725-26 and is the only peal of Royal bells known to have left England.

A further five bells were cast in 1988 and in 1997 the WA government commissioned the casting of the "Millennium Bell" to complete a ring of 18 bells, one of the largest in the world.

On October 18th, 1998 the then Premier of Western Australia, the Hon. Richard Court MLA, announced plans for the extensive redevelopment of Barrack Square on the foreshore of the Swan River.

This would include as its central feature, a spectacular tower to house the 'Swan Bells'. Officially opened December 10, 2000, the Bell Tower was Western Australia's Millennium Project and the centrepiece of the Barrack Square Redevelopment.

Designed by local architects Hames Sharley (WA) Pty Ltd, the Bell Tower features a steel and glass spire 82.2 metres in height and copper-clad 'sails' which reflect the maritime history of the area and the importance of mining to the State.

The Bell Tower is the first in the world to be built to allow the public to view the bells during ringing and to watch the bell ringers perform their art. There is also an external observation deck that offers unparalleled views of the river and the city.

It does however remain a building designed to house a musical instrument of considerable cultural significance and is dedicated to becoming a centre of excellence in the art of English change ringing.

Expanding Your Visit

At the time of booking your visit, please indicate if your class would like a demonstration of how these bells are rung. We can then organise one of our volunteer bellringers to show you how full-circle ringing is done and provide an opportunity for students to 'chime' a bell.

(Chiming is very safe for those of us without ringing experience).
Demonstrations generally last approximately 30 minutes and provide a really interactive experience.

We suggest you combine a visit to the Bell Tower with a visit to the Perth Zoo by utilising the ferry service from Barrack Square to South Perth, or other close by sites such as the Perth Mint or Kings Park.

For music students it is possible to organise a demonstration with one particular specialist demonstrator who will include the use of the Swan Bells' set of hand chimes so students can actively participate in making music and experience the unique sound these instruments make.

Public Art

After touring the Bell Tower rediscover our capital city – walk up to the Perth Town Hall and enjoy the public art on the way. Check out the '*State Images*' mosaics in the water feature and the Swan sculptures by Susan Flavell and Gina Moore on the southern side of Barrack Square and have a look at the inscriptions on the swan's feathers.

Behind Jetty 6 is the '*Willem de Vlamingh*' Memorial by Charles Smith and Joan Walsh-Smith which features a sundial indicating Amsterdam time and many historical references in the work. Then walk up Barrack Street past the public art piece called '*Memory Markers*' by Anne Neil in Stirling Gardens opposite The Esplanade near the Supreme Court.

Continue up towards the city and keep an eye out for May Gibbs' '*Gumnut Babies*' by Claire Bailey & Indra Geidans amongst the ferns in Stirling Gardens close to the footpath.

On the corner of Barrack Street and St George's Terrace proudly stands the statue of '*Alexander Forrest*' by Pietro Porcelli. Cross the Terrace and as you come to the Town Hall you will pass the life size statue of '*Captain James Stirling*' by Philip Somers.

(For more information on Perth public art, contact the Community Services Unit at the City of Perth on 9461 3154).

Pre- and Post-Visit Cross-Curricular Activities

Here are some useful cross-curricular ideas which link to the Curriculum Framework.

Learning Area: English

- Vocabulary and Comprehension worksheets (words and information from text supplied on visit).
- Make a list of words associated with the sound of bells.
- Write a poem about the sound of the bells.
- Develop a Tourist brochure for the Bell Tower.
- Write an entry in your diary (or ship's log) as a member of Captain James Cook's crew on your return to England in 1771 to the sound of the bells of St Martins after 3 years at sea. What are your feelings on returning? What are your memories of the journey?
- Describe your trip up the Swan River as part of the crew of Willem de Vlamingh in 1697 seeing plants and animals never seen before by Europeans.

Learning Area: Mathematics

- Graph the weights of each bell and compare.
- Devise a pattern for 8 bells – use a xylophone or glockenspiel with numbers to play it.

Learning Area: Science

- Research and write a report on what is an alloy and what alloys are used for bells.
- Determine what the qualities of different metals are and why they are used for bells.
- Galileo, one of the most famous scientists of the 14th / 15th century, used the Belltower of Pisa Cathedral to test at least one of his theories, as well as designing a forerunner to mechanical clock mechanisms (you can see a model of this at Bell Tower). Research the life and science of this great scientist and inventor.

- When you hear the bells at the Bell Tower you will notice that the larger the bell the deeper the note. Investigate this effect by making a water jar musical instrument and experiment with the volume of water in each jar.
- Investigate what kind of physical forces a tower would experience.

Learning Area: Society and Environment

- Map the Bell Tower and Barrack Square, jetties etc on grid paper looking down from level 6 of the Bell Tower.
- Make a plan of the bells on level 4 – produce and label a diagram and indicate which bell you chimed.
- Research ‘towers’ around the World eg Leaning Tower of Pisa, Eiffel Tower, Sydney Tower (Centrepont), Space Needle (Seattle, USA). Find out what the reasons for construction were and how they were made? Graph the heights of these famous towers for comparison and/or produce a timeline of their age.
- Research famous bells of the world eg Big Ben, Liberty Bell, Tsar Kolokol. Find out what the famous bells of the world are and why they are famous. You could also discover where they were made and how they were cast?
- Research the history of clocks and early timekeeping devices and make a sundial and/or an hour glass.
- Research the history of Barrack Square and write a report. (See ‘The History and Development of Barrack Square’ information sheet)
- Investigate the changes to the river foreshore since European settlement.
- Investigate the controversy associated with the opening of the Bell Tower and discuss the pros and cons of the project.

Learning Area: Arts

Visual Arts

- Draw the Tower from different perspectives. How different does it look from each compass point?
- Draw what you can see from the top level of the Bell Tower. There are views to the city, Kings Park and across the river.
- Sketch the mosaics in the water feature in front of the Bell Tower from level 6.
- Draw other objects or views in Barrack Square (at ground level) eg a ferry, the Swan sculptures.
- Make Rubbings of the forecourt mosaics and other plaques on St George's Terrace (the plaques of notable Western Australians in the footpath on both sides of St George's Terrace).
- Consider and discuss the public art works in Barrack Square and along Barrack Street. Draw the pieces and record your impressions of them.
- Discuss what you think is the significance of the shape of the building? What does it suggest to you?

Music

- Research handbells and hand chimes and experience ringing them at the Bell Tower.
- Compare the musical notation of Methods with standard and other musical notation.

Learning Area: T & E

- Produce a new design and map for a belltower the same height as the Swan Bells for a river side precinct using the research, plan, construct and appraise process.

- Produce a model of the new tower (older or more able students can produce a scale model - a scale model is a representation or copy of an object that is usually much smaller than the actual size of the object being represented. Consider how strong it should be and test if the model is sufficiently strong. Determine how you will test it and for what will you test it, as well as how could it be made stronger? It would be possible to apply information from any bridge building activities already undertaken as well as the use of the triangle as the strongest shape.

Learning Area: Health

- Cook's journey was almost free of the disease called Scurvy amongst his crew – an amazing accomplishment at the time. Research what is Scurvy, what causes it and what prevented it during the voyage? Discover what is a vitamin and what do they do in the body?
- The Bell Tower is the only bell tower in the world that allows people to watch the bells ring close up at a safe volume. On the other side of the glass panels, when these large bells ring their volume is damaging to the unprotected ear. Research how loud sound can damage ears and how they can be protected from this kind of damage.

Learning Area: LOTE

- Research bells in other cultures such as temple bells in Asia, gamelan in Indonesia, carillons in Europe.
- Why and on what occasions are these bells rung? (See the Asian Bells exhibit on level 2 as a starting point)
- Draw a diagram of the Bell Tower and label in LOTE.
- Write a poem or song in a LOTE describing the sounds and feelings of a wedding with the bells ringing.

USEFUL SITES

The Bell Tower - www.thebelltower.com.au

City of Perth - www.perth.wa.gov.au

Australian and New Zealand Association of Bellringers - www.anzab.org.au

The Central Council of Church Bell Ringers – www.cccbr.org.uk

The Church of St Martin in the Fields – www.stmartin-in-the-fields.org