

FED ED! Teacher Notes

These notes are to be used as a guideline to developing your own educational experience to Federation Square

History of Federation Square

The development of Federation Square began in the 1990s as part of the Jolimont Rail Yard rationalization project that reduced the railway lines running parallel to the Yarra River from a total of 53 lines to 12 lines. The main reason behind this rationalization project was that improved technologies allowed the reduction and the relocation of shunting operations to outer Melbourne locations.

The Victorian State Government in association with the Melbourne City Council wanted to develop a square over these railway lines to provide the city with a monument to commemorate the first one hundred years of Australia's nationhood in 2001.

As part of the overall project, the existing (and unpopular) Gas and Fuel office towers needed to be demolished to open up the city and connect it to the Yarra River.

In 1996 an international architectural design competition was announced by the then Premier Jeff Kennett. Melbourne's Federation Square was to be built on the site north of Princes Bridge, bounded on one side by Flinders Street and the other side by the Yarra River. The design needed to show that the site was to become the new centre of cultural activity for Melbourne with a large open space for the public to gather in.

In 1997, architects Peter Davidson and Donald Bates from Lab Architecture Studio in London won the contract to design and build Melbourne's Federation Square. Lab Architecture Studio's winning design showed they could bring together Melbourne's distinct elements and activities while maintaining visual and formal coherence. In addition, their design best reflected the true spirit of Federation – independent buildings combined to form a larger whole.

Some of Lab Architecture Studio's ideas for the site were to build gallery and performance spaces, a centre for multimedia including cinema, function centre and restaurants, outdoor courts for cafés, street theatre and music.

During the next five years, the busy intersection of Flinders and Swanston Streets (opposite Flinders Street Station) was transformed into the new public space called Federation Square. The Square opened in 2002 and can accommodate up to 15,000 people in its large open spaces.

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Discussion:

- What is Federation? Discuss the development and concept of the Commonwealth of Australia.
- List the main reasons why Federation Square was built. What are the advantages of having a large public space? (*Think about public gathering space and location*).
- Ask students if they have already been to Federation Square before and why.
- Name all of the attractions at Federation Square and discuss why it is so popular for the people of Melbourne and visitors from all over the world.

Activities:

- Inside one cobble stone in the main square contains a prehistoric oyster shell. Ask students to locate the shell. How did the shell become embedded in the stone? Discuss prehistoric period. (*Note: the sandstone was mined and quarried from the Kimberley Region in Western Australia*).
- Look at the geographic position of Federation Square. Discuss the various modes of transportation available to allow people to visit the site.
- Federation Square hosts hundreds of community events and festivals every year. Ask students to design their own event to host at Federation Square. Think about arts festivals, sports days, cars, fashion, flower shows, peace parades and so on.

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Aboriginal History of the Site

Although Federation Square's history is short, it is the site upon which the Kulin confederacy of Aboriginal peoples lived.

The Wathaurung, the Bunurong and the Woiworung peoples occupied the land. The Woiworung group comprised a number of clans including the Wurundjeri, who laid claim to the area drained by the Yarra River and its tributaries.

In the first years after European settlement, Aboriginal clans still camped at their traditional locations on both sides of the Yarra River, near the MCG and Government House.

Discussion:

- Discuss the concept of Meeting Place for Aboriginal communities.
- Discuss Birrarung Marr and the various features that exist. (*Note: it was the first parkland in over 100 years to be created in the centre of Melbourne*).
- Discuss "Neararnnew" – the artwork that is laid to form the square's cobblestone design.

Activities:

- Ask students to point out sites where the Kulin clans camped (eg. MCG, Government House, Botanical Gardens, the Yarra Banks).
- Ask Students to identify great contemporary indigenous people.

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Design, Arts and English

Federation Square is made up of many different public art projects and equipment. Artist Paul Carter created the artwork called “**Nearamnew**”, which is carved into the sandstone of the Square. *(Note: The name comes from the pidgin word derived from the Aboriginal word “narr-m” which means “the place where Melbourne now stands”).* The sandstone cobblestones were mined and quarried from the Kimberley Region in Western Australia.

The sandstone artwork also contains “**Federal poems**” which have been carved into several areas around the Square. The array of words and phrases are associated with the Federation of Australia.

Federation Square’s newest public artwork called “**Red Centre**” (located between the Square and the Yarra River) was designed by Konstantin Dimopoulos. It is a permanent sculpture that provides a visual link between the top of the River Terrace and the creative spaces of Birrarung Marr and ArtPlay. “Red Centre” represents fire, light and the Australian outback. A flame symbolizes rejuvenation and change while the “Red Centre” moves with the wind. The wind transforms “Red Centre” from tranquil into elegant movement.

Discussion:

- What colours and shapes do you see at Federation Square? Why do you think the architects and artist used these colours and shapes? *(Think about the colours of the Australian outback – gold, red, ochre, sandy yellow and purple).*
- There are **467,000 individually laid sandstone cobblestones** used to pave the Square. Numerous skilled stonemasons worked together to lay the stones by hand in the mosaic pattern. Discuss the type of job that a stonemason does.
- You would have seen the massive whorl-like pattern of the purplish-pink cobblestones in the Square. Discuss what a mosaic is. What other materials can you make a mosaic with? Design your own mosaic by using coloured cardboard and glue, pebbles, shells, cork, found objects and create your own or class mosaic design for Federation Square.
- The **Big Screen** at Federation Square features a 38.5 metre high TV screen. Write a story on the types of activities or events that could be featured on the Big Screen and why. *(Think about major sporting events like the Commonwealth Games).*

Activities:

- Take the students through the Square to locate and discuss the “**Nearamnew**” artwork. Print and copy the map and images to locate each site. Can you find all nine locations? Use the images and map to navigate your way around the Square.
- The architectural design of Federation Square was determined by an international competition. Ask students to design their own version of Federation Square.
- What words can you see carved in the stone? Using some of these words and phrases, get students to write their own poem about Federation.

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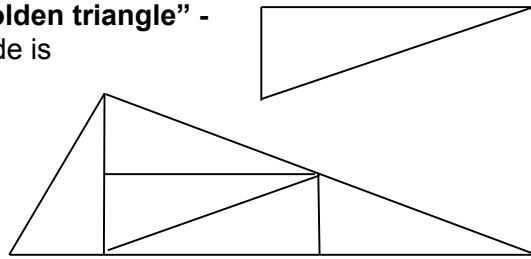
Mathematics and Geography

Federation Square is the size of a whole city block, which is equal to the area of the MCG's playing surface.

Mathematics played a major role in creating the “**pinwheel grid**” which formed the **Fractal Façades** that feature on the buildings of Federation Square. The Fractal Façades are made up of five triangles all at the same angle and size repeated in one geometric shape.

The architects started with what they called “**the golden triangle**” - a right angled triangle in which the middle length side is twice the length of the shortest side.

Draw four more triangles to make a larger “**super-triangle**” like this:



Next, in exactly the same way, draw four copies of the “super triangle” to building a “**super-super-triangle**”. Keep going until you have covered the whole wall.



When you look more closely, the different-sized triangles are pointing in different directions. If you think of successive stages of this process as frames of a movie, then what you see when you watch this movie is a triangle that grows from frame to frame and turns in the clockwise direction, looking like the blades of a pinwheel toy rotating in the wind (*hence the name “pinwheel tiling”, discovered by Princeton mathematician John Conway*). Although the rules are very simple, the pattern never repeats like your bathroom tiles!

Discussion:

- On a map of Melbourne, mark in the Federation Square site and discuss its importance within the cityscape.
- The sandstone cobblestones came from the Kimberley Region in Western Australia. On a map of Australia, locate the Kimberley Region and discuss how the sandstone may have been transported to Federation Square in Melbourne.

Activities:

- There are 22,073 triangles on the external façade of Federation Square which are all the same shape and angle. Of these, there are 7,865 sandstone tiles, 12,325 zinc tiles and 1,883 glass tiles. Can you find the different tiles? What other shapes can you see in the Square? How many triangles make up one panel? (*Note: Five triangles form one panel, then five of these panels are combined to form a mega-famil*).
- With a sketch book, look at the angular design of the buildings. Choose and draw a section of one of the buildings.
- Using the shapes of the buildings, ask students to design and draw their own building to feature at Federation Square.