Design and Applied Technology Teaching Kit for Senior Secondary Curriculum

Value and Impact

**Video: Modernism in Architecture**

[Teacher notes]
Contents

Preamble

Teaching plan ................................................................. i

Lesson 1: Modernism in Architecture

1.1 What is Modernism? .................................................. 02
1.2 Architecture and Modernism ....................................... 02
1.3 Modern Architecture in Hong Kong .............................. 04
Case study: Bridges Street Market .................................... 05
Exercise: Revitalizing Bridges Street Market ....................... 08

Summary, Key words and Further reading .......................... 09

Appendix: Architectural drawings of Bridges Street Market ......... 10

Disclaimer

Create Hong Kong of the Government of the Hong Kong Special Administrative Region provides funding support to the project only, and does not otherwise take part in the project. Any opinions, findings, conclusions or recommendations expressed in these materials/events (or by members of the project team) do not reflect the views of the Government of the Hong Kong Special Administrative Region.

© 2012 Hong Kong Institute of Architects
Major teaching areas

**Design and Applied Technology**

*Strand 3 Value and Impact*
- Values in Technology and Design
- Historical and Cultural Influences

**Related teaching areas**

*Design and Applied Technology*

*Strand 1 Design and Innovation*
- Design in Practice

*Strand 2 Technology Principles*
- Nature of Technology

**Interdisciplinary teaching areas**

*Visual Arts*
- Visual Arts Appreciation and Criticism in context

**Learning objectives**

- To learn about Modernist impacts on architecture in the 20th century
- To identify applications of Modern architecture in Hong Kong

**Teaching plan**

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 1</td>
<td>The Modernist movement</td>
</tr>
<tr>
<td>Modernism in Architecture</td>
<td>Modernist impacts on architecture</td>
</tr>
<tr>
<td></td>
<td>Features and reasons for modern architecture in Hong Kong</td>
</tr>
<tr>
<td></td>
<td>Case study Bridges Street Market</td>
</tr>
<tr>
<td></td>
<td>Exercise Appreciation and Interpretation of Modern Architecture</td>
</tr>
</tbody>
</table>

These are supplementary teaching notes for the video ‘Modernism in Architecture’.
Lesson 1
Modernism in Architecture
Lesson 1
Modernism in Architecture

1.1 What is Modernism?

Modernism, in its broad sense, is modern thought, character, or practice. The term specifically describes the Modernist movement in the arts and culture which arose in the early 20th century.

Modern design: a new way of living achieved by interest in exploring new materials, rejection of classical precedents, simplification of design through a reduction of ornament and emphasis on architectural space rather than physical form.

1.2 Architecture and Modernism

Architectural Modernism was widely adopted after the Second World War, and continued as a dominant architectural style throughout the 20th century.

Early Modernist architecture began at the turn of the 20th century to reconcile the principles underlying architectural design with rapid technological advancement and the modernization of society.

Modernist architects:
- Le Corbusier
- Ludwig Mies van der Rohe
- Louis Kahn
- Frank Lloyd Wright
- Walter Gropius

Teaching Tips
Examples of De Stijl architecture can be found in the supplementary session of Arts Topic 01: ‘Art and Architecture’.

 признаётся в интернет виртуал彼得бургской оптики
‘Less is more.’
— Ludwig Mies van der Rohe

△ Barcelona Pavilion by Ludwig Mies van der Rohe
▼ Villa Savoye by Le Corbusier
1.3 Modern Architecture in Hong Kong

Architectural features of Modernist architecture:
- Emphasis on building space based on function
- No decoration
- Simple architectural components
- Geometric forms
- Suitable for modern living
- Based on industrial products

Modernism was widely adopted in Hong Kong in the 1950s and 1960s. The design approach was to stress aesthetic fundamentals and strive for geometrically pure forms. It was highly functional and expressed aesthetics of simplicity.

Reasons for the spread of modern architecture in Hong Kong:
1. In the 1950s, there were urgent needs for infrastructure and new building construction. Modernism became the most suitable building solution because of its simplicity and efficiency.
2. Modern architecture contributed to Hong Kong’s reputation as an international city. Prominent public buildings were no longer built in colonial style or traditional Chinese style.

Examples of modern architecture in Hong Kong:
- Queen’s College
- Public housing projects of the 1960s
- City Hall
- Jardine House
- Bridges Street Market

‘Form follows function.’
— Louis Sullivan

Teaching Tips
More information can be obtained from Science Topic 07 ‘VIDEO: Energy-saving Approaches in Architecture’.

Wan Chai Market, one of the best known examples of modern architecture in Hong Kong, is now being redeveloped as a residential block. The original facade of the market will be kept.
Bridges Street Market is located at No. 2 Bridges Street, Central. It was built under the auspices of the then Urban Council after World War II to replace the old markets which had been destroyed during Japanese occupation, with a view to meeting the demand of the rising population. It was constructed and commenced operation in 1953, housing 26 stalls for selling fish and poultry on the G/F and 33 stalls on the 1/F mostly selling beef, pork, fruits and vegetables. It was the first of its kind built in Hong Kong’s urban areas after World War II. Part of the 1/F was converted into an indoor children’s playground in 1969 connected by two link bridges to Wing Lee Street. Though it is no longer operating as a market, Bridges Street Market served the community for almost 60 years and is considered a local landmark.

The Market was built partially on the old site of American Congregational Mission Preaching Hall (now the China Congregational Church), where Dr. Sun Yat-sen lived. The Mission was founded by an American missionary, C.R. Hager in 1883. Dr. Sun Yat-sen was baptized in the church in the same year and given the name “Yat-sun”, which was later changed to “Yat-sen”. He lived on the third floor of the building in 1884-1886, when he was studying at the Central School. In 1901, the church was relocated to No. 68 Bridges Street.

(Source: Hong Kong Commissioner for Heritage’s Office)
What Modernist architectural features can you find in the design of Bridges Street Market?

1. Interior space of Bridges Street Market
2. Windows of Bridges Street Market
3. Overall form of Bridges Street Market
Suggested Answers

- Minimal and non-decorative building style
  - Plaster surface finishes and tiles
  - Painted in light colours
  - A panel of Shanghai plaster grooved to resemble masonry at the main entrance
- Simple and repetitive structural components
  - Post-and-slab structure
- Geometrical form
  - Asymmetric rectangular massing
- ‘Forms follow functions’
  - Free plan for flexible use
  - Large windows for natural lighting and ventilation
- Serving society
  - Humble building for residents in the district
- Scientific, convenient, economical and efficient design
  - Minimal wall finishes
  - No decoration
  - Public access
- Rational approaches
  - Openings for natural lighting and ventilation
  - Design for flexible use
  - Form to follow functions
- Innovation in the structure
  - Reinforced concrete frame
  - Post-and-slab structure
- Industrialized standardized production
  - Pre-cast floor slab
  - Repeating columns and beams

Teaching Tips
The architect of the City Hall, Ron Philips, talks about the Modernist style of the City Hall in the video.
Bridges Street Market is a Grade 3 historic building. Transform the ground floor of Bridges Street Market into an exhibition space. Keep the Modernist style of the building, but add any elements necessary for the new function of the space. You may also redesign the facade of the building. See Appendix for architectural drawings of Bridges Street Market.

Details on conservation and revitalisation

Note: Check the conservation requirements of Bridges Street Market. You may refer to the ‘Revitalising Historic Buildings Through Partnership Scheme’ (活化歷史建築伙伴計劃 -必列啫士街街市資料冊).

Submission requirements

1. **Design statement**
   Describe concepts and design intentions using text, sketches and diagrams as appropriate.

2. **Illustrations**
   Please illustrate the space relationships, massing, form, circulation pattern and other major design issues using sketches, perspective drawings and 3D renderings as appropriate.

3. **Site plan (1:250)**
   To show site development and indicate vehicular and pedestrian access, and relationship to adjacent sites.

4. **Plans of ground floor and major levels (1:100)**
   To show major spaces and spatial planning. Please label the spaces according to the accommodation schedule. Critical dimensions should be marked on the drawings.

5. **Section(s) (1:250)**
   To show the relationship between various spatial components and building levels with clear annotations and marking of major dimensions.

Optional: **Model (1:250)**
To show the rough form of building masses, relationship between various spatial components and building levels, possible combination of materials, quality of space and sense of scale.

Presentation

All items should be laid out clearly on presentation boards (A3 or A2 sizes). Remember to communicate wisely with graphics - anyone should also be able understand your design immediately and easily!

(Source: Commissioner for Heritage’s Office (CHO), Development Bureau)
Summary

Modernism was widely adopted in architecture after the Second World War, and became a dominant architectural style in Hong Kong in the 20th century because of the following concepts:

- ‘form follows function’
- simplicity
- efficient construction approaches

Modernism did not abandon aesthetic values; on the contrary, historic precedents were abandoned and designers delighted in this new form of architecture.

Key words

Modernism
Form
Function
Geometry
Minimalism

Further reading

1. 香港電台，「漫遊城市建築」
   http://rthk.hk/elearning/architecturetour/index.htm
2. Le Corbusier Foundation
   http://www.youtube.com/watch?v=rUQdQWF4otU
4. Frank Lloyd Wright Foundation
   http://www.franklloydwright.org/
5. Conservation and Revitalization of Bridges Street Market, Hong Kong Commissioner for Heritage’s Office
Checklist for architectural drawings of Bridges Street Market
(Source: Architectural Services Department)
1. 1:1000 Site map (A3)
2. 1:100 Ground floor plan (A3)
3. 1:100 First floor plan (A3)
4. 1:100 Second floor plan (A3)
5. 1:100 Roof plan (A3)
6. 1:100 North elevation (A3)
7. 1:100 South elevation (A3)
8. 1:100 Section 1-1 (A3)
9. 1:100 Section 2-2 (A3)
10. 1:100 Section 3-3 (A3)