

Designing Pattern Study Room Resource Box

Teachers' Notes

Introducing students to original drawings in the Prints & Drawings Study Room is an inspiring and vivid way to interest them in architecture and architectural design processes.

When booking your visit to the Prints & Drawings Study Room, also pre-book the Designing Pattern resource box. The objects from the box will be put on display for you to look at when you arrive. The notes below will help you to explain the drawings to your students. You might choose to examine some as a group, before allowing students to look independently. The drawings show a diverse range of design processes which you could encourage students to try out at school/college.

The objects are unique and often fragile items, so please ensure that your students follow these instructions:

- Coats and bags must be left in the Sackler Centre Lockers or Museum cloakrooms before you visit the Prints & Drawings Study Room.
- Pencils only can be used in the Prints & Drawings Study Room.
- Move carefully around the room, ensuring students don't jog tables, chairs or lean on items
- Take care not to sneeze or cough over the works

Designing Pattern

The Designing Pattern resource box contains a selection of drawings which range in date from the 1830s to the 1940s. They show the interior and exterior decoration of Classical and Egyptian Revival buildings, Indian monuments and plans for modern buildings. The box also includes pattern designs made by Owen Jones for his publication *The Grammar of Ornament* (1856). Jones sourced these patterns from diverse non-western and western cultures and developed his designs during a period of travel in the 1850s.

Key Questions

Encourage the students to consider some of the following questions before reading the notes on each drawing:

The artist or architects' intentions:

- What do you think were the artist or architect's aims and intentions?
- Can you find out who the image is for?

Analysing the image:

- Where can you see pattern in the drawing? On which part of the building does it feature? e.g. interior or exterior, doorway, chimney.
- Is it structural (helps support the building) or decorative (surface decoration)?
- What different types of pattern can you identify? e.g. rotating, reflecting, tessellating
- What shapes or motifs have been used? Are they abstract or figurative?
- Does the pattern convey any symbolism, messages or meanings?

Personal responses:

- Do you think this pattern would improve the design of a building or not?
- Have you seen any other buildings or designs that use patterns like these?

Teacher Notes

Drawings in the Designing Pattern Resource Box

All drawings are from the RIBA Library Drawings Collection

1 & 2 The Mausoleum of *Itimâd-ud-Daulâ*

Topographical drawings of the mausoleum of
Itimâd-ud-Daulâ, Agra, India

c. 1830

Watercolour on paper

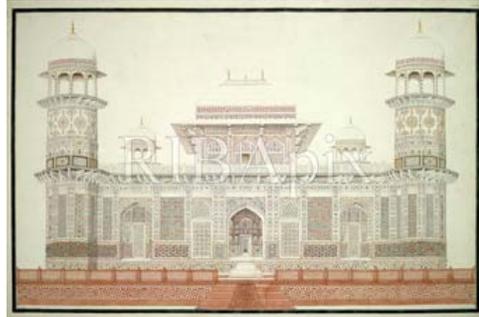
Unidentified draughtsman

RIBA No. SB78/7(1) [top]

www.ribapix.com RIBA21226

RIBA No. SB78/7(3) [below]

www.ribapix.com RIBA12193



This mausoleum, or tomb, was built between 1622 and 1628 in honour of the father of Nur Jahan, wife of the Mughal Emperor Jahagir. He had been given the title of *Itimâd-ud-Daulâ* (pillar of the state). The building has been described as a 'jewel box' or as the 'Baby Taj', because it was a precursor for the larger Taj Mahal.

The mausoleum is almost symmetrical. It was made from white marble inlaid with precious stones including cornelian, jasper, lapis lazuli, onyx and topaz. There are patterns of flowering plants within the arches; a popular decorative device found in many objects from this period. Sunlight enters the building through perforated stone 'jali' screens, carved in ornamental patterns. Drawings such as these were made by Indian draughtsmen for British officials working in India, as an artistic record of the great monuments of the Mughal Empire.

3. Studies of columns

George Smith (b. 1811 or 1812)

Studies of columns and entablatures, demonstrating the five orders of architecture

1800s

Pencil on paper

RIBA No. PB688 (28)

www.ribapix.com RIBA21452



Ancient Greek and Roman buildings often contain columns which support facades or beams. The design and size of the column, in relation to the building above it, often conforms to a style known as an 'order'. The Greeks used three orders: Doric, Ionic and Corinthian. The Romans added two more: Tuscan and Composite.

Each order had a particular symbolism. The Doric order, for example, was considered masculine and can be found in temples dedicated to male gods. The Ionic order was used for temples dedicated to female gods.

George Smith records details of the five orders in this drawing. Interest in Classical architecture increased during the 18th and 19th centuries, due to new archaeological discoveries in Greece and Italy which fuelled the imagination of artists, designers and architects.

4. Study of Corinthian Capital

George Smith (b. 1811 or 1812)

Measured study of a Corinthian capital, base and entablature

c. 1800s

Pen on paper

RIBA No. PB688/7 (7)

www.ribapix.com RIBA21227



The Corinthian order was very popular with the Romans who liked a more ornate style. The capitals were decorated with rounded acanthus leaves.

5. Design for the Halls of Justice

John Haviland (1792-1852)

Design for the Halls of Justice ('The Tombs'), New York: front elevation

1835

Pen and pencil on paper

RIBA No. SC28/2 (7)

www.ribapix.com RIBApix21228



This drawing shows the front of a prison, known as the Halls of Justice, in New York City. The architect John Haviland was born in Taunton, Somerset but moved to America in 1816. He wrote a book entitled "Builder's Assistant", which was one of the earliest architectural pattern books written and published in North America.

Haviland's design for this building was inspired by an engraving of an Egyptian mausoleum. Egyptian temples were massive structures characterized by thick walls, flat roofs and closely spaced columns. These columns are built in a style known as palmiform, which represents palm fronds tied to a pole. Other Egyptian columns look like lotus buds or papyrus. The pattern above the windows and over the front entrance represents a vulture, with widespread wings. This symbolized protection and maternal care, and was often used to decorate temple ceilings in Ancient Egypt.

6&7 100 houses Scheme

Lubetkin & Tecton (drawn by Peter Yates)

Two unexecuted designs for a prefabricated house front for the 100 Houses Scheme, Thorntree Gill Housing, Peterlee, County Durham

1949

Watercolour on paper

RIBA No. PA115/8(1-19)

www.ribapix.com RIBA21232 and RIBA21231



Berthold Lubetkin, a Russian émigré, founded Tecton with six British architects in 1932. The firm quickly became known for pioneering modernist design. Influenced by the abstract art of the period, they showed a preference for using simple lines, squares, rectangles and other geometric shapes in their work.

8. Topographical studies of windows

John Richard Stammers

Topographical studies of windows from different historical periods

c. 1936

Pencil and wash on paper

RIBA No. PA182/4

www.ribapix.com RIBA21453

RIBA Library Drawings Collection



In these drawings, architectural student Stammers records different styles of window from Ancient Egyptian, Greek and Roman examples through to Renaissance and Baroque windows. In the the 11th and 12th centuries, small windows were safer and less expensive. Later, as glass became cheaper to produce and times more peaceful, windows could become larger and more ornate. The opening was often divided by carved stonework called tracery. Windows usually had pointed arches but circular rose windows were also popular.

9. Topographical drawings of chimneys

John Richard Stammers

Topographical and measured drawings of 16th century brick chimneys

c. 1936

Pen with brown washes on paper

RIBA No. PA182/5

www.ribapix.com RIBA21230



In these drawings, architectural student Stammers analyses the design of 16th century brick chimneys in England; including one from Hampton Court Palace. Until the fourteenth century, chimneys were rare as houses were heated by a central hearth with smoke escaping through an opening in the roof. As it became more common for fireplaces to be built in other rooms, chimney stacks were built on the exterior of buildings and by the sixteenth century, these became a decorative feature that either appeared in single shafts or grouped together. Designs were varied with the shafts ranging in shape from cylinders to octagons, ornamented with zigzags, honeycomb patterns or twists.

10. Designs for ornamental roof tiles

Harry Stuart Goodhart-Rendel (1887-1959)

Design for ornamental roof ridge tiles

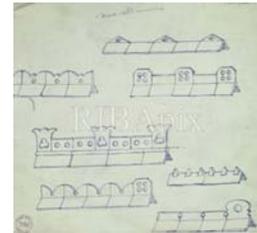
c. 1930

Pen on tracing paper

RIBA No. PB371/66 (1)

www.ribapix.com RIBA21229

RIBA Library Drawings Collection



The ridge of a roof needs to be waterproofed, using lead or ridge tiles. The decorative terracotta ridge tiles shown here have different vertical crests, including the 4 hole hexagonal crest, the cockscomb crest and the Trefoil crest. These crests first became popular in the Victorian era.

The architect Harry Stuart Goodhart-Rendel, president of the Royal Institute of British Architects from 1937-1939, was described as having 'the most complete and detailed knowledge of English 19th Century architecture of anyone of his time' .

11 & 12. Design for the interior decoration

George Aitchison (1825-1910)

Design for the interior decoration of 1 Grosvenor Crescent, London, featuring green patterned wallpaper and a door with stained glass panels
c. 1886

Watercolour on paper

RIBA No. SB95 2 and 3

www.ribapix.com RIBA21237 and RIBA21238



George Aitchison's interior decoration schemes contain exotic patterns and strong colours. These are common features of the Aesthetic style, popularised in late 19th century. Many British artists and designers at this time were inspired by Japanese art and uses stylised motifs based on natural forms. The front door has stained glass in two of the door's panels; a distinctive Victorian design innovation. You can see the only surviving example of Aitchison's decorative schemes in the Arab Hall of Leighton House, South Kensington.

13. Design for tiled pavement

William Butterfield (1814-1900)

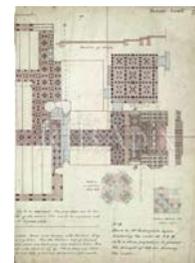
All Saints' Church, Harrow Weald, London

c. 1840s

Pen, pencil and coloured wash on paper

RIBA No. PA126/3 (2)

www.ribapix.com RIBA21473



William Butterfield was a Gothic Revival architect who reinterpreted features of the original Gothic style, such as decorative floor tiles, in Victorian terms. He is best known for designing churches but also designed colleges and schools. He liked to use geometric shapes and patterns in his designs for buildings, brickwork and tiles. This is part of a drawing showing the design for the tiled pavements of the All Saints' Church in Harrow Weald.

14. Designs for a fireplace

Harry Stuart Goodhart-Rendel, (1887-1959)

Fireplace with 3 different designs

c. 1930

Pen and Pencil on graph paper

RIBA No. PB341/40

www.ribapix.com RIBA21451



Three possible designs for a fireplace are drawn here. The architect has noted that it is important to have surface pattern on the fireplace to conceal casting irregularities. Below in pencil, he has made light sketches of some other possible designs. The designs include one with panelling, another with the Greek key pattern and a third more complex geometric pattern.

15&16. Wallpaper designs by CFA Voysey

Design for wallpapers featuring stylized roses, rosehips and leaves (top), and blackbirds among stylized leaves (below)

Charles Francis Annesley Voysey, (1857-1941)

1906-7

Watercolour on paper

RIBA No. SB118/VOY 722 [top]

RIBA No. SB118/VOY 733 [below]

www.ribapix.com RIBA21236 / RIBA21233



Voysey was an architect and a designer of wallpaper, fabrics and furnishings. He developed the 'Arts and Crafts' style, famously pioneered by William Morris, which was developed in the 1860s as a reaction against the industrialisation of Victorian Britain. Nature was an important source of Arts and Crafts motifs and the patterns used were inspired by British plants, birds and animals. Those involved in the Arts and Crafts movement believed in the equality of the decorative arts with the fine arts and felt that the home should be a work of art.

17. Stair carpet design

Hermann, Fritz Heinrich, later known as Frederick Henry (1898-1983)

Stair carpet design for a housing scheme, Berlin-Lankwitz: orange and blue colourways



c. 1930

Watercolour and pencil on paper

RIBA No. PB413(47) 237-9

www.ribapix.com RIBA21454 and RIBA21455

RIBA Library Drawings Collection

These designs for stair carpets for a communal housing scheme in Berlin were made in three colour schemes, the third being green. The abstract art of the period influenced domestic designs, which often used geometric shapes and patterns. The architect Fritz Heinrich Hermann came to Britain in the 1930s as a refugee from Nazism and anglicised his name, becoming known as Frederick Henry Hermann.

18. Wallpaper design

Raymond McGrath (1903-1977)

Design for wallpaper featuring aeroplanes; blue and Red colourways



c. 1932

Watercolour on paper

RIBA No. PB550/6 1 and 2

www.ribapix.com RIBA21234 and RIBA21235

RIBA Library Drawings Collection

Raymond McGrath was a British Australian architect and interior designer. These wallpaper designs date from the mid-1930s and may be connected to his work for Imperial Airways. The prevailing style of the time was Art Deco which celebrated the mechanized, modern world and in particular, the new opportunities made possible to travel by luxury liner, high speed train and aeroplane.