ARTEFACTS
A teacher and student resource for Leaving Certificate Art and Design Appreciation
ARTEFACTS

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The Chester Beatty Library offers visitors the opportunity to explore the history of art through its Collection of fascinating artefacts from diverse cultures. The Library’s mission is to facilitate teachers and students in exploring the connections of its unique Collection with the art and design curriculum, using innovative ways of engaging with the artworks within the classroom.

*Artefacts* has been devised to give students following the Leaving Certificate Art History course a comprehensive understanding of selected objects from the Collection, providing them with the skills needed to further explore and understand the artists and their works in the Collection. The contents of this resource and the artworks have been selected because of their relevance to key movements, styles and techniques included in the Leaving Certificate Art History exam.

Questions and prompts are added throughout the resource to encourage students to engage with the artefacts in a meaningful way and to practice using key art terminology when discussing and writing about artworks.
Aims

- To provide educators and students with a comprehensive and exam-oriented resource about the Chester Beatty Library Collection.

- To create links and suggest primary source material relevant to the Leaving Certificate Art History course as devised by the Department of Education and Skills.

Objectives

- To provide an understanding of the various developments in art history as reflected in the Leaving Certificate Art History course.

- To provide the opportunity for students and educators to discuss and evaluate European, Islamic and East Asian art as found in the Chester Beatty Library Collection.
On your journey through the Collection you will find examples of books and artefacts that represent specific periods in history and, therefore, art history. One of the aims of this resource is to create links between the Chester Beatty Collection and the Leaving Certificate Art curriculum. The rich variety of world art objects, materials, techniques, styles and subject matter represented here will enable you to experience, first-hand, some of the key aspects sought by Art and Art History examiners.

During your visit take notes, make sketches, listen to and look at the information being communicated, but above all think about what you are experiencing. Try to compare and contrast objects from different cultures and time periods. Decide which styles or imagery you like most and least, and question yourself about your opinion.

- Use the questions and prompts throughout this pack to evaluate your experience of the Collection.
- Make note of new vocabulary and unfamiliar terms.
- Learn about materials and techniques used by the various artists and craftspeople represented.
- Watch the visual presentations to see the skills and processes used to create some of the objects.
- Explore the gallery/library itself; consider all the decisions made by curators and designers.
Section 3 of the Leaving Certificate exam deals with the Appreciation of Art and Design. Each year there is a question based on a visit to a cultural site or event; this can be any exhibition in a gallery, museum, cultural or heritage centre.

In order to be able to answer this question with confidence it is important that you visit at least two exhibitions during the year to become familiar with all the important aspects of the exam answer.

Also, by seeing two exhibitions, you can compare and contrast the different approaches taken by the galleries and, therefore, be more knowledgeable of the topic.

The information and questions contained within this resource are designed to provide all the relevant facts and to stimulate you, the visitor, to question what you see and form your own opinions about the Library and its Collection.
Name and Function of Institution

The Chester Beatty Library contains some of the finest treasures of the great cultures and religions of the world. The Collection was bequeathed to the Irish people by the American collector Sir Alfred Chester Beatty. The Library’s extraordinary Collection of manuscripts, prints, icons, miniature paintings, early printed books and objets d’art – from across Asia, the Middle East, North Africa and Europe – exemplify the richness of human creative expression dating from c.2,700 BC to the present day.

The Chester Beatty Library Mission Statement

To maintain and preserve the Collections and make them available in the most appropriate ways for the use and enjoyment of the public and for scholarly study and research, in order to promote a wider appreciation and understanding of the international cultural heritage embodied in the Collections and to foster relations between Ireland and the peoples whose cultures are represented in the Collections.

There is no entrance fee to visit the Chester Beatty Library, making it accessible to a wider audience.

The Chester Beatty Library
Location and Architecture

The Chester Beatty Library is located in the Clock Tower building in the garden of Dublin Castle. Originally built c.1752, the north façade and the brick second storey were added early in the 19th century. According to the Irish Architectural Archive it is almost certain that this 19th-century redesign was by Ireland’s most important architect of the period, Francis Johnston (1760–1829). He designed two other buildings in Dublin Castle: the Chapel Royal and the Quartermaster General’s Office. Johnston’s architecture spanned both the neo-classical (the GPO, 1814, O’Connell Street, Dublin) and the neo-Gothic styles (Charleville Castle, 1800–1812, Tullamore, Co. Offaly).
See: archiseek.com/tag/francis-johnston.

During the early 1990s the building was completely remodelled and a purpose-built exhibition block added. The architects (Office of Public Works) intended the design to ‘express the value of the Collection and, like a jewellery box, to protect it’. The quality of materials and construction reflect the importance of the artworks and artefacts and provide 21st-century conditions. However, apart from the Library’s promotional signage, the exterior architecture gives little clue as to the richly diverse and unique treasures contained within.

The glazed concourse area acts as a lightweight link between the restored 19th-century Clock Tower building and the environmentally controlled exhibition spaces. This three-storey, light-filled space draws visitors into the Library in a welcoming way, as this is the main public area containing the restaurant, shop, lecture space and audio-visual theatre. The complex also houses a conservation laboratory, a reading room and offices, as well as three exhibition galleries and a roof garden. The Library relocated from its original location in Shrewsbury Road to Dublin Castle when it opened in 2000.

In 2002 the Chester Beatty Library won the impressive European Museum of the Year award.

Describe your initial response on entering the Chester Beatty Library.

How do you feel?
What are you thinking?

1 www.cbl.ie
What is the function or role of a gallery, museum or library?

- Education and community outreach programmes
- Conservation and preservation of heritage and culture
  - Display
  - Entertainment
- Support for artists, craftspeople and collectors
  - Promoting cultural understanding

Who and what is a curator?

‘Traditionally, a curator has been defined as the custodian of a museum or other collection – essentially a keeper of things. The Association of Art Museum Curators identifies curators as having a primary responsibility for the acquisitions, care, display and interpretation of objects, such as works of art. They work with their institutions to develop programmes that maintain the integrity of collections and exhibitions, foster community support, and generate revenue’. From the Association of Art Museum Curators: [artcurators.org](http://artcurators.org).
Provision of Information

One of the main functions of a cultural institution is to engage with its audience and to provide facts and interesting information to the visitor. During your journey through the Chester Beatty Library, make note of the various ways information is communicated to you, the visitor (e.g. catalogues, worksheets, maps, text panels and labels).

Look at the floor plan of the Library. Do you think it is easy to follow? Why/why not?

Technology is often utilised by galleries as a means of communicating to the visitor. The Chester Beatty Library uses a number of audio and visual presentations on-site as well as on its website and online digital image bank. Some institutions use interactive touch-screen devices and apps. Others provide virtual tours for those who cannot visit the institution in person.

In your opinion, how would the experience of a virtual tour differ from an actual visit to a gallery or museum?

Consider the needs of different types of visitors to a gallery or museum, for example, the visually impaired or non-English-speaking visitors.

In how many languages is the information leaflet available?

Are there audio guides or Braille panels?

Do you think information is effectively communicated? Is it interesting/relevant?
Timeline

Look at the timeline included in your pack; you will see that it contains the dates of some of the most important human achievements from c.30,000 BC to 2,000 AD.

Student Exercise

As you explore the artefacts and objects that interest you, make a note of the date they were made. On your own, as a class or as a whole school exercise, compile your own timeline; include significant world events, artists, important movements, designers, iconic architecture, great musicians, scientific inventions and important figures throughout history and see where your chosen Chester Beatty treasures fit in.

Did You Know?

Different cultures refer to dates differently.

The Christian Gregorian method uses BC (Before Christ) and AD (Anno Domini) for the years before and after the birth of Christ. Suggestions have been made to change this to BCE (Before Common Era) and CE (Common Era) or simply – and +.

In the Islamic/Muslim calendar the first year was the year in which the Prophet Muhammad left Mecca to reside in Medina, known as the Hijra.

AH is used to signify the Latin Anno Hegirae of the Islamic calendar.

Other calendar systems include the Julian, Hebrew, Ethiopian, Iranian and Lunar calendars.

Why Collect?

Do you or your family or friends collect objects of any kind? Do you think all humans have the urge to collect useful, valuable, beautiful or unusual objects and artefacts?
The love of books for their own sake, as distinct from the love of literature, has attracted book collectors or bibliophiles throughout the centuries. Some collectors have sought to acquire copies of the earliest books, whereas others have collected works from particular printers, authors or periods in history.

Alfred Chester Beatty was particularly attracted to decorated books, especially if they had beautiful illuminations, illustrations or fine bindings. He also collected the rarest of the rare: not necessarily the first edition, but often the finest edition, issued in very limited numbers.

His Library is a collector’s library containing the finest or rarest material available, which Beatty summed up in his own words as: ‘Quality, quality and quality!’

Many scholars regard Chester Beatty as the last of the great private book collectors. It is most unlikely that his lifetime achievement can ever be repeated, given the breadth of the Collection and the resources that he was able to devote to it.
Psalms of Heracleides, Psalmbook, Part II, Coptic text on papyrus, CBL Prma 4.191–192
The Life Story of a Book

Many of the books within the Collection tell or contain a story. But consider the actual life story of a book: who made it, who owned it and who has read it over the course of its life?

Some of the books in the Chester Beatty Library are thousands of years old and have travelled thousands of miles! They have witnessed and survived great events, wars, plagues and the passage of time.

Imagine what they have seen and what stories they could really tell.

Within the Collection the Manichaean Papyri have a fascinating life story. Their journey from creation in 4th–5th-century Egypt to the collection of a 20th-century European bibliophile was no doubt full of drama and peril. Today, 48 leaves and some fragments remain from this codex.

In the 1920s Chester Beatty entrusted Hugo Ibscher of Berlin to conserve his papyrus collection. Ibscher, the leading conservator of his day, continued working on the collection throughout the 1930s, but with the outbreak of World War II a substantial part still awaited treatment. Unbeknownst to Beatty, Ibscher removed the papyri to a concrete bunker at Berlin Zoo and continued to work on them in secret throughout the war. After his death in 1943, his son Rolf continued the work until the advance of Soviet forces in 1945.

Rolf Ibscher successfully transferred some papyri to a relative in Bavaria for safe-keeping. But, after the fall of Berlin, the collection was confiscated by the Soviet army and removed to Leningrad. The Soviets eventually returned it to the East German authorities in the 1960s. However, it was not until after the reunification of Germany in 1990 that the papyri finally made it back to their current home in the Chester Beatty Library in Dublin.
The Role of the Conservators

The expert knowledge and skills of conservation specialists trained all over the world, are needed to ensure the preservation of Sir Alfred Chester Beatty’s Collection. Conservators protect, preserve and restore the artefacts and objects, ensuring they will be available for the enjoyment and research of future generations of visitors and scholars. All conservation treatments are governed by a policy of minimum intervention to ensure the historical integrity of the object is maintained.

As you move through the various spaces and galleries, use all your senses to consider changes in: architecture, colour, lighting, display, sound, smell and even temperature.

Does the atmosphere change between the different galleries/spaces? Why?

Notes
Early Religious Iconography

Throughout the history of humankind, marks and images have been used to communicate ideas, as illustrated in Ogham writing carved into stone pillars or hunting scenes painted onto the walls of caves. Organised religion relies on text and imagery to spread beliefs and to convert people to a particular faith. The stories and prayers of a religion are sacred and recorded by priests or scribes who have been held in the highest esteem due to their skills and abilities.

We see religious images and stories from different faiths carved onto stone crosses and cast into precious metal objects or embroidered onto fabrics. The central role of writing and the book in the world’s main faiths can be seen in the Chester Beatty Collection. While beliefs, objects of worship and imagery differ greatly from one religion to the next, all of them have the book – in one form or another - in common.

The Book of Kells dates from c.800 AD and is currently on display in Trinity College Dublin. It is believed to have been created both in Scotland and Ireland by Christian monks and it reflects the style and skills of the High Christian Period. See: tcd.ie/Library/bookofkells/book-of-kells.

Within the Chester Beatty Collection there are numerous religious manuscripts dating from around the same period, the 8th and 9th centuries.

On the Art History course you study a number of Christian books. Can you name any?

Do you know what the books of the different faiths are called?

Christian

Islamic

Jewish

Hindu
The Canons of Saint Basil

The Canons of Saint Basil, dating from c.10th-century Egypt, are a collection of rules on church discipline. The pages or leaves are made from parchment, which is animal skin (usually calf, sheep or goat) that has been scraped, stretched on a frame and treated with lime to create a flat surface able to absorb ink or paint. The pages are written in Coptic text. The term Copt refers to those who remained within the Christian faith in Egypt after the Arab conquest in 641 AD.
The Qur'an is the holy book of the Islamic faith. Muslims consider it to be a record of the exact words of God/Allah as communicated to the Prophet Muhammad by the Archangel Gabriel.

This manuscript dates from the 9th century AD and is thought to have been created in what is now Iraq. It is written in the Arabic language, which the Qur'an states is the language through which God's messages were communicated. Therefore, only in Arabic can the word of God be accurately recorded and understood.

Translation into different languages would mean slight changes and interpretations to the original meaning.

The words are written in what is called Kufic script, a style distinctive for its elongated horizontal and vertical marks. Arabic is read from the right to left of each page and (from a Western viewpoint) from back to front of a book, the opposite of how Latin text is read.

Vellum is used for the pages of this Qur'an. Vellum is a more precious and fine version of parchment, usually made from very young calf skin, scraped and polished to a very smooth finish.
Techniques, Materials and Processes

The techniques and processes used to create illuminated manuscripts have changed little over the centuries. Once the parchment or vellum was prepared, cut and folded to size, the scribe would mark out lines for text, often with a pointed implement or else with charcoal, which would be erased later.

After the under-drawing was complete a layer of white size (usually egg white or wheat starch) was applied. The scribe would use quill or reed pens and various pigments mixed with oils to create the text. Because parchment is thick and strong, if a mistake was made it could be scraped off without making a hole and written over. Once the text was complete, the surface was often burnished (rubbed) with a smooth stone such as crystal and made ready for illumination.

It was common for a number of skilled artists to work on each page. Once the scribe had completed the text, painters would then work on the illustrations and decoration. These artists used brushes made from squirrel or goat hair. The finest brushes were made from the hair inside a calf’s ear or from a white kitten. It is said that Islamic artists often bred their own cats to ensure a constant supply of the highest quality hair. Minerals, precious metals and organic and chemical compounds were ground down and mixed with oils to create the artist’s palette. Usually large areas of gold were filled in first; the various colours were then applied in thin layers. The faces of figures were often the final areas to be completed. To create a high shine the artists burnished the painting a number of times throughout the process.

The Book of Kells, the Canons of Saint Basil and the 9th-century Qur’an fragment are from very different parts of the world yet have a number of important aspects in common:

**Subject:** Religious texts.

**Function:** Each was intended to spread the teachings and beliefs of a specific religion.

**Tools:** Reed and quill pens, animal hair brushes. (See quill pen instructions in hand-out.)

**Materials:** Parchment and vellum pages, bound in leather.

**Pigments:** Minerals, precious metal and stone ground down and mixed with oils.

(See image on p.21)

webexhibits.org/pigments

**Techniques:** Calligraphy, illumination and bookbinding.

Look up the Getty Museum’s Making Manuscripts video on YouTube.
Pigments
(these are some examples of materials that can be used to make pigments)

Black = lampblack (soot)
Blue = lapis lazuli (mineral) or indigo (plant)
White and Red = treated lead
Green = verdigris (copper)
Yellow Ochre = iron (mineral)

(See video on Islamic illumination and calligraphy in the Arts of the Book Gallery First Floor)
Not many people in the medieval period could read; therefore, the Christian faith relied on imagery to help spread Christian teachings to the illiterate masses.

This Qur'an is considered to be one of the great treasures of the Chester Beatty Collection. The calligrapher, Ibn al-Bawwab (d.1022), was one of the three great masters of Islamic calligraphy during, what is referred to in the West as, the medieval period.

1. The Islamic Golden Age is traditionally dated from the mid-7th century to the mid-13th century during which time Muslim rulers established one of the largest empires in history. For further resources see the Metropolitan Museum of Art, website metmuseum.org/learn/for-educators/publications-for-educators/art-of-the-islamic-world.
Materials

When viewing these two religious manuscripts from the same period it is interesting to note the ways in which they are different from each other. One of the most immediate differences between these two books is the materials used. The Stavelot Gospel is written on vellum, whereas the pages of this Qur’an by Ibn al-Bawwab are paper.

The invention of paper has been credited to a Chinese man, Ts'ai Lun, in 105 AD; however, it is thought that paper had been in use in China from c.200 BC. It is not until the 8th century AD that we see paper being used for Islamic texts. It is widely accepted that the secret of paper making was revealed by captured Chinese prisoners during the battle between Chinese and Arab armies in 751 AD at Tallas. By the early 11th century, paper was being produced and used throughout the Islamic world; in contrast, paper was not widely used in Europe until the 15th century.

Decoration and Imagery

Another significant difference between these two works is the type of imagery used to illuminate the text. While most Christian and Muslim manuscripts are richly illuminated (decorated), the Qur’an is never illustrated; this means that no representative images are used. Instead, intricate geometric patterns and interlaced vegetal forms are used to bring the texts to life. These abstract motifs have been used through the centuries. This arabesque style of decoration is distinctive of Islamic art, craft, design and architecture to this day and is non-representational, in contrast with the representational style of Christian art and architecture. In the Stavelot Gospel and most Christian manuscripts, we see depictions of the human figure and animals, as well as images of plants and flowers used throughout.

Consider the architecture of the period: Romanesque churches decorated with carved stone sculpture. Elongated figures, animals and plants were carved onto pillars and tympana, just like those used to decorate the pages of the Stavelot Gospel. The inhabited letter, or illuminated capital, is a distinctive feature of medieval Christian manuscripts. Scribes enlarged and richly decorated the first letter introducing a new verse or chapter. These compositions were often a visual depiction or illustration of the subject of the verse, intended to deepen the reader’s understanding and appreciation of the text.

Composition/Page Layout

The margins of the Qur’an are decorated with verse markers and floral medallions of pattern and colour, while the margins of the Stavelot Gospel are wide and without decoration. The block of text in the Bible is dense and more rigid in comparison to the fluid style of the cursive script used by Ibn al-Bawwab.

These two books have some key features in common. Judging by the quality of the materials and the skills of the calligraphers and illuminators, we can assume both were created for very important and influential patrons. Both works contain an abundance of rare and expensive materials such as gold leaf and lapis lazuli (blue).

Note the differences between these two manuscripts:

<table>
<thead>
<tr>
<th>Ibn al-Bawwab Qur’an</th>
<th>Stavelot Gospel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read right to left of page</td>
<td>Read left to right of page</td>
</tr>
<tr>
<td>Arabic Muslim</td>
<td>Latin Christian</td>
</tr>
<tr>
<td>Lapis lazuli and gold</td>
<td>Colour/Symbolism Green, yellow red and blue</td>
</tr>
</tbody>
</table>

3. Verse makers indicate the end of five or ten verses in the Qur’an.
The Book through the Italian Renaissance

Jacopo Avanzi

The artist Jacopo Avanzi (c.1350–1416) painted the miniatures in the book *Thebaid of Statius* (below). He was strongly influenced by the great fresco painter Giotto di Bondone (1267–1337).

The art of the manuscript, along with most art forms, underwent major changes during the 14th century, setting the stage for developments in the Renaissance. For example, it became more common to paint a page or separate panel compositions (miniatures) rather than just illuminate capitals. Therefore, the images were separated from the text more distinctly, allowing the artists to concentrate on the composition without having to incorporate text into the same space.

Patronage

Avanzi, like many other artists of this period, relied on the patronage of wealthy families and the Church for commissions. He painted a number of frescoes as well as manuscripts. By the 13th century in Europe, books had become prized works of art, containing the work of many skilled craftsmen and artists, which could be designed to the exact specifications of the patron. The Church remained one of the most significant supporters of the arts. However, the ruling classes and rich merchant families were also important patrons.

The design and layout of books and documents changed to meet the demands of an increasingly literate population. We see greater numbers of books with secular (non-religious) subjects. Tales of wars, instruction manuals and reproductions of important classical writings became popular subjects. This ‘re-birth’ of interest in the art, culture and philosophy of classical Greece and Rome is one of the major features of the Renaissance period. Wealthy patrons wanted to show off their knowledge and culture through the beautiful objects they commissioned and richly decorated; elaborately bound books were classic examples of their taste and wealth.

Plasticity of Figures/Forms

Look at Avanzi’s use of tone in this miniature. He used a range of shades from light to dark grey to create a three-dimensional (3D) effect. This monochromatic palette is often described as *grisaille;* however, the addition of strong red, blue and gold is used here to create a sense of drama in the composition. The figures are fully rounded forms (plasticity); they overlap and intertwine within the composition in a realistic way. Like Giotto, Avanzi depicts his figures with dramatic gestures and realistic facial expressions. His scenes are full of action, which helps create a strong narrative or story for the viewer.
Bartholomeo Sanvito

The renowned Paduan scribe Bartholomeo Sanvito (1435–1518) completed the manuscript *Dictys Cretensis de Bello Troiano*, on the Trojan War, for Cardinal Gonzaga. Sanvito was a contemporary of Andrea Mantegna (1431–1506), who trained and worked in Padua during the same period, and comparisons have been made between certain aspects of their work. Both artists used strong colour and almost sculptural forms and figures in their classically inspired compositions.

Look up the work of Andrea Mantegna (1431–1506) in your art history book or online. Can you identify any similarities between the style, subject matter or techniques of Sanvito and of Mantegna?

Look at your art history textbook. Find the artworks by Giotto di Bondone (1267–1337) and compare his work to that of the three artists described here:

- Jacopo Avanzi (c.1350–1416)
- Bartholomeo Sanvito (c.1435–1518)
- Benedetto Bordon (c.1455–1530)

Consider how each of the artists has used composition, colour, scale and tone. Compare and contrast their chosen subject matter and media. Pay close attention to how they deal with the human figure (form), architecture and the landscape (perspective).

*Dictys Cretensis de Bello Troiano*, Latin text on vellum (Italian humanist script), c.1480, Italy (Padua), CBL W 122 f. 3r

Look up the work of Andrea Mantegna (1431–1506) in your art history book or online. Can you identify any similarities between the style, subject matter or techniques of Sanvito and of Mantegna?
Perspective

A key characteristic of Renaissance art was the use of perspective to create dramatic visual effects. Linear perspective is where objects appear to get smaller and closer together as they move into the distance or background of the composition. This illusion or visual effect is enhanced with the inclusion of architecture or other man-made structures. A small city on the horizon or pillars, windows and the lines of buildings all converging on a vanishing point create the illusion of depth and distance for the viewer.

Sanvito and Mantegna also made use of atmospheric perspective to create depth. The artist fades the colours and blurs the lines of the background images; mountains become blue/grey, cities become hazy silhouettes tricking the eye into believing that they are far away in the distance.

At this time artists viewed each other’s work and advanced ideas and techniques begun by earlier artists. The aim was to create images that were ideally beautiful and well-proportioned, but in a realistic manner.

Benedetto Bordon

By the time Benedetto Bordon (c.1455–1530) illustrated the sumptuous manuscript Evangeliiary of Santa Giustina (1523–25), the Renaissance was at its height.

Artists were being inspired by the masterpieces created by Leonardo da Vinci (1452–1519) and Raphael (1483–1520), while Michelangelo (1475–1564) was still painting, sculpting and designing for elite patrons. This book, which contains 75 miniatures and numerous decorative ornaments, is considered to be one of Bordon’s finest works and one of the most outstanding artistic creations from 16th-century Padua.

The pages, made of vellum, are covered with Gothic text, detailed miniatures and richly decorated borders. The graphic style used to illustrate the flora and fauna of the borders could be compared to that of Sandro Botticelli (1444–1510), whose compositions teemed with exotic, graphically-depicted flowers. This miniature displays many characteristics of High Renaissance painting: the dramatic depiction of the story, vivid colour and pattern, and the use of linear perspective to create the illusion of depth and distance.

Consider the skill and creativity of Avanzi, Sanvito and Bordon in comparison to other, more famous Renaissance artists. Their creativity is hidden within precious books, often unseen and certainly difficult to display in galleries the way paintings are. Do you think they deserve more recognition for their art? Give reasons for your opinion.
The three miniatures described in this section were produced in Padua, Italy over a 150-year period. This particular era is significant as it encompasses one of the most creative times and places in world art history: the Italian Renaissance. Padua is particularly significant to the development of painting because it is where Giotto painted his famous frescos, in the Scrovegni Chapel.

cappelladegliscrovegni.it

Giotto’s images display a natural and lifelike style, which contrasts the stiff, flat decorative style of his predecessors. Giotto was famous even in his own lifetime as his style and skill were far more advanced than any of his contemporaries.

Look at the Byzantine icons in the Arts of the Book Gallery First Floor, to compare how naturalistic Giotto’s style was to the other artists at that time.

The Martyrdom of Santa Giustina in the Evangeliary of Santa Giustina, Benedetto Bordone, 1523–25, Padua, Italy, W 107, f. 65r
Northern European Realism

The Printing Press

The printing press was invented in Germany by the goldsmith Johannes Gutenberg around 1440–45. This development revolutionised book production, distribution and design. Unlike the speed at which technology can be shared today, it took some time for this new invention and process to spread throughout Europe. Also, the powerful guilds of scribes and illuminators managed to block the introduction of printing in some cities, fearing the loss of their livelihood. However, progress could not be stopped for long because the printing press was so efficient, making it possible to quickly create multiple copies of a text. Over the course of the Renaissance elaborate Gothic text began to be replaced with more fluid, naturalistic scripts, in keeping with the humanist ideas of the time.

Images were created using woodcut and copperplate printing processes. Gradually the art of the scribe and the illuminator became the art of the printer and woodcut artist. At this time paper began to be manufactured and used in Europe, replacing expensive and time-consuming parchment. Book production still required the skills of a number of different craftspeople; it was common practice up until the early 19th century for printed sheets and images to be sold unbound, allowing stationers and buyers to commission bindings of their own design. Some patrons, however, still commissioned hand-copied books, believing in the value and artistic merit of one-of-a-kind illuminated manuscripts.

Print Collection

Although books were central to Alfred Chester Beatty's Collection, it was common for collectors to purchase single leaves and portfolios of unbound prints and pages. The buyer could then decide how they would like to display these images: in sewn and bound albums, in handmade portfolio cases or in frames on their walls. Chester Beatty began collecting prints around 1910. He was particularly interested in the works of northern European artists. Over the course of his life he amassed over 35,000 prints in various techniques, making his one of the largest collections of Old Master prints in Ireland.

Woodcut Printing

The earliest technique for printing images was the woodcut. This process is very similar to that of lino printing. The artist draws out the design on paper and traces it onto the surface of the woodblock in reverse. Using sharp cutting tools of various shapes, the negative space—or background area—is cut away, leaving the design standing in relief (raised from the surface). The block is then rolled with ink and pressed onto paper. The raised inked areas make contact with the paper and transfer the design onto the page. This process can be repeated multiple times, making it possible to create many reproductions of the image.

See Print Technique Glossary and information in the Arts of the Book Gallery First Floor.
Albrecht Dürer

Albrecht Dürer (1471–1528) was one of the most influential northern European artists of his time. Unlike many of his contemporaries, he travelled extensively outside Germany and absorbed as much as he could from other artists and styles. The northern European style of the period had developed from miniature painting. It focused on realistic depictions of the human figure and included rich details, textures and naturalistic light. Southern European artists, especially the Italians, preferred a more idealised beauty, painted with strong outlines and classical proportions. Sharp perspective was often a feature of their compositions. Dürer’s work has been described as ‘mediating’ between the two styles: his compositions often combine realism with beautiful, rich detail. His prints demonstrate his immense skill for creating tone using various types of line and cross-hatching techniques.

The *Apocalypse* series of woodcut prints was completed in 1498 and reprinted many times over. We know Dürer originally intended these prints to be bound into a book or portfolio, because on the reverse of each image is Latin text describing the next image in the series. The image of The Four Horsemen of the Apocalypse is fantastical. Moreover, to the largely illiterate population of the time the realistic details would have made this image very powerful and frightening.

The 16th century in Europe was a time of great change and conflict. The Protestant Reformation (c.1517) challenged the power of the Catholic Church and newly rich merchant families were threatening to overthrow the ruling elite. Dürer’s work often contains graphic warnings to sinners; he warns the viewer not to forget the supreme power of God. The images in Dürer’s Apocalypse woodcuts could be said to depict the horrors that each side of the religious war would inflict on the other in the name of their beliefs. No one is above judgement. In the image we see kings and peasants being trampled underfoot.
Oil Painting

While artists in southern Europe were still using tempera and fresco techniques, northern European artists were developing a new technique. Jan van Eyck is often credited with inventing oil painting; however, in 2008 new discoveries and research proved that Asian artists were using this medium as early as the 5th century AD.

Nonetheless, Jan van Eyck greatly advanced the technique of oil painting. He applied layers of glazes (coloured pigments mixed with oil) on the surface of the canvas or board to create depth and realistic texture and detail.

Simon Bening

The prayer book containing this image (see image on p.31) is a collection of prayers to the Virgin Mary, thought to have been commissioned by Emperor Charles V. The artist, Simon Bening (1483–1561), was one of the greatest Flemish manuscript illuminators of the period. His eldest daughter, Livinia, became court painter to Edward VI of England. His style is characteristic of the northern European Renaissance, with naturalistic light and tone, and realistic depictions of surface texture. The composition is simple: the Virgin and Child are placed centrally within the picture plane and both have golden halos. The background is in blue and Bening has painted architectural details like those of an altarpiece to create the illusion of a frame around the composition. We can clearly see the hand of the artist in this image; all his brush strokes are visible, giving the image a fine linear quality.

The influence of the great Flemish artist Jan van Eyck (c.1390–1441) can easily be observed in this work. See: nationalgallery.org.uk/paint¬ings/jan-van-eyck-the-arnolfini-portrait.

Compare this image of the Madonna to one by an Italian artist of the same period, e.g. Raphael (1483–1520). Note the contrast in light and tone between the two works: Raphael used sfumato to create a soft focus, while Bening kept the light crisp and the lines sharp.

Raphael's figures are rounded and languid in the idealised classical Renaissance style. Bening, in contrast, depicted a realistic northern European woman, with pale skin and hair falling naturally over her shoulders.

Make note of the differences in colour, texture and composition between the two styles.
Virgin and Child, Rosarium of Phillip II of Spain, Simon Bening, c.1530, Bruges, Belgium, W 99, f. 44v
The camera was not invented until the early 1800s, so paintings and prints were used to represent the world in two-dimensions (2D).

We take photographs of important occasions but, before the camera, artists were called on to record these events.

In today’s terms, we could call Jan van Eyck’s style photorealism.

To get a glimpse of the life and techniques of a northern European artist, watch the film The Girl with the Pearl Earring (2003). The story is loosely based on the artist Johannes Vermeer (1632–1675).

20th-Century Influence

Japan was been closed to the outside world for approximately 250 years until its ports reopened for trade with the West in 1854. The introduction of Japanese decorative arts and prints into Europe at a number of international exhibitions in London and Paris from the 1860s to the 1880s sparked a fashion known as Japonisme. Impressionist artists collected Japanese objects and art, and were particularly interested in how Japanese artists used colour and pattern. The flat perspective and unusual points-of-view used in Japanese woodblock prints were totally different to the Western (i.e. European) style of linear perspective. For more examples of Japanese art see the online Image Gallery at cbl.ie.

In Édouard Manet’s (1832–1883) portrait of the writer Emile Zola (1868), the artist paints pictures within his picture: he includes a Japanese screen and a Japanese print of a figure on the wall. See: musee-orsay.fr/en/tools/search/advanced-search.html

Katsushika Hokusai

The woodblock print designer Katsushika Hokusai (1760–1849) is one of Japan’s most celebrated artists. During a hugely productive artistic career that spanned 70 years, he created an astonishing range of works, including prints of beautiful women, landscapes, flowers and animals, as well as illustrated books and artists’ manuals.

The Chester Beatty Collection contains 75 single sheet prints and 9 illustrated books of Hokusai’s work. Especially important is his beautifully varied Thirty-Six Views of Mount Fuji (see image pp.34–35).

These images are a lesson in compositional experiments, showing the same subject (Mount Fuji) from 36 different points-of-view or perspectives.

From the 17th century a growing number of woodblock prints (both illustrated books and single-sheet prints) were produced to meet the demands of the newly prosperous and increasingly literate merchant class in Japan. Woodblock prints could be produced quickly, cheaply and in large numbers.

Prints were produced by a team of highly skilled craftsmen, employed and directed by a publisher. The publisher commissioned an artist to produce an image, which was then carved onto wooden blocks by an engraver and finally inked and printed up by the printer. Initially, prints were restricted to black outlines, which were often hand-painted with red and green pigments. However, by the mid-18th century, a method had been discovered that allowed many different colours to be printed on a single sheet of paper in perfect alignment.

Woodblock printing, like lino printing, is characterised by strong lines, contrasting texture and pattern, and areas of positive and negative space.
Impressionists and Japonisme

At his home in Giverny, France, Claude Monet (1840–1926) created a Japanese-style garden in which to paint his *plein air* landscapes such as *Japanese Bridge at Giverny* (1900). He constructed ponds filled with water lilies, a Japanese-style wooden bridge and planted trees and flowers similar to those seen in Hokusai’s landscape prints in the Collection.

See: nga.gov/collection/gallery/gg85/gg85-74796.html

In 1876 Monet painted a portrait of his wife entitled *La Japonaise*. In the painting she wears a richly patterned silk kimono and is surrounded by Japanese fans. She stands in a pose similar to those found in the book of prints by Suzuki Harunobu (1724–1770) within the collection.

See the Boston Museum of Fine Art: mfa.org/collections/object/la-japonaise-camille-monet-in-japanese-costume-33556

Festival of Lanterns on Temma Bridge, from the series *Views of the Bridges of Various Provinces*, ukiyo-e woodblock print, Katsushika Hokusai (1760–1849), 1827–1830, Japan, CBL J 2755
Compare the striking simplicity of Hokusai’s woodblock print to Albrecht Dürer’s richly detailed woodblock print *The Four Horsemen of the Apocalypse* (1498) (see p.23).
Find some examples of Japanese woodblock prints in the collection; now compare and contrast them to some Western/European paintings you know. See cblie for examples of Japanese woodblock prints.

Think about the different uses of colour and pattern. Note the types of subject matter being depicted. Japanese artists often created compositions with flat or parallel perspective, not the linear perspective used by many European artists, where objects get smaller as they recede into the distance. Also pay attention to the unusual points-of-view shown in the Japanese prints: close-ups, bird’s-eye-views or multiple points-of-view as opposed to the singular and often central point-of-view favoured by many European artists.

The Courtesan Chozan from Choji House, from the series Fashionable Beauties as the Seven Komachi, ukiyo-e woodblock print, Kikugawa Eizan (1787–1867), 1806, Japan, CBL J 2504
**Student task:**
Look at a map of the world. In groups, choose a number of objects from the Collection that interest you. Plot the location of these objects on the map. How many countries and cultures are represented? Would you consider the Collection to be a written history of the world? Are there any countries not represented? Why do you think this is?

**Student reflection:**
How does the Chester Beatty Library seem to you in comparison to other galleries/museums you have visited? List the similarities and differences and evaluate which aspects of each are more successful in your opinion.

Consider how the Collection can influence your own artwork. See the Leaving Certificate Higher Level 2008 exam paper: examinations.ie.

| Interior/exterior architecture | | |
| Design and use of gallery spaces | | |
| Type of collection | | |
| Display/hanging style | | |
| Lighting | | |
| Provision of information | | |
| Use of technology | | |
| Most successful and/or interesting aspects | | |
| Least successful and/or interesting aspects | | |
| Further observations and ideas | | |
Timeline

- Carved limestone miniature figure, *Woman of Willendorf*, Austria
- Paleolithic cave paintings, Lascaux, France
- Emergence of cuneiform writing on Clay Tablets, Sumerian civilisation (now Iraq)
- Construction of Newgrange passage tomb in Ireland
- Hieroglyphic writing invented
- The *Chester Beatty* collection's oldest object, Clay Tablet (cuneiform text) See p.46
- Phoenician alphabet developed
- Chinese script
- Reign of Tutankhamen in Egypt
- Trojan War
- The Greek alphabet adapted
- First Olympic Games held in Greece
- Birth of Buddha
- Socrates, philosopher
- The opening of trade routes along the Silk Road
- Founding of the Roman Empire
- Birth of Jesus
- The *Book of Breathings*. See p.47
- Ts'ai Lun invented paper in China
- Ogham alphabet/writing used
- Decline and fall of the Roman Empire
- Birth of the Prophet Muhammad
- Qur'an, book of Muhammad's revelations compiled
- Secret of papermaking revealed to Muslim craftsmen by Chinese prisoners in Samarquand
- Vikings established settlement in Dublin
- *Qur'an* fragment. See p.19
- The *Canons of Saint Basil*. See p.18
- Irish High Crosses (The Ahenny Crosses, Co. Tipperary)
- The *Stavelot Gospel* book, Flemish. See p.22
- *Qur'an* by Ibn al-Bawwab, Iraq. See p.22
- The *Great Perfection of Wisdom Summary Sutra*, China. See p.52
- First paper mill in Europe at Jativa in Moorish Spain
- *The Book of Kells*, illuminated manuscript. Trinity College Dublin
- *De Civitate Dei*. See p.49
- Gislebertus carved tympanum and sculptures at Autun Cathedral, France
- *The Bayeux Tapestry*
- *Great Perfection of Wisdom Summary Sutra*, China. See p.52
- *First Crusade* (until c.1290 Christians and Muslims fought over the Holy Land)
- *The Canons of Saint Basil*. See p.18
- *First Crusade* (until c.1290 Christians and Muslims fought over the Holy Land)
- *The Book of Kells*, illuminated manuscript. Trinity College Dublin
- *De Civitate Dei*. See p.49
- *First Crusade* (until c.1290 Christians and Muslims fought over the Holy Land)
- *The Bayeux Tapestry*
- *The Book of Kells*, illuminated manuscript. Trinity College Dublin
- *De Civitate Dei*. See p.49
- *First Crusade* (until c.1290 Christians and Muslims fought over the Holy Land)
- *The Bayeux Tapestry*
YOU ARE HERE

2000  Chester Beatty Library re-opened
1970s  Post-Modernist period emerged, Neo-Conceptualism, Cindy Sherman (1954-) Minimalism, Frank Stella (1936-)
1943  First Irish Exhibition of Living Artists (IELA) Mainie Jellett (1897-1944) Evie Hone (1894-1955) Louis le Brocquy (1916-2012)
1939-1945  World War II
1916  Irish Easter Rising, leads to 1922 Civil War
1914-1918  World War I
1906-1989  Irish avant-garde novelist, poet and playwright Samuel Beckett (Modernist)
1900-1909  Irish avant-garde novelist, poet and playwright Samuel Beckett (Modernist)
1898-1908  Fauvism. Henri Matisse (1869-1954) Les Fauves
1897  The Vienna Secession founded. Gustav Klimt (1862-1918) Egon Schiele (1890-1918)
1880s-1890  Post-Impressionism emerged. Paul Cézanne (1839-1906) Paul Gauguin (1848-1903) Vincent van Gogh (1853-1890)
1875-1889  Sir Alfred Chester Beatty
1875-1897  First Impressionist Exhibition held in Paris. First commercially available typewriter
1871-1957  Irish illustrator and painter Jack Butler Yeats (Expressionist style)
1867-1871  Universal Exposition, Paris. Introducing Japanese prints, textiles and objets d'art to European artists and collectors
1856-1869  Spanish architect Antoni Gaudi, (1852-1926) Spanish architect Antoni Gaudi, Sagra Familia Cathedral, Barcelona (Art Nouveau style)
1852-1926  Austrian neurologist Sigmund Freud, founder of psychoanalysis The Interpretation of Dreams 1900
1853-1890  Pre-Raphaelite Brotherhood founded. Millais (1829-1896) and Rossetti (1828-1882)
1845-1852  The Irish Famine ‘The Great Hunger’ an estimated 1 million people died and a further 2 million emigrated
1840s-1860s  Barbizon School. Jean-Francois Millet (1814-1875) Jean Baptiste Camille Corot (1796-1875) Nathaniel Hone (1831-1917)
1837-1901  Queen Victoria reign Great Britain
1832-1883  French painter Edouard Manet Olympia and Dejeuner sur l'herbe musee-orsay.fr (Impressionist/Realist)
1829  First Braille printing for the blind
1826  Invention of photography in France
1798-1863  French painter Eugene Delacroix Liberty Leading the People louvre.fr (Romanticism)
1798  Invention of lithographic printing
1780-1867  French academic painter Jean Auguste Dominique Ingres The Turkish Bath louvre.fr (Neo-Classical style)
1780  American Declaration of Independence (War of Independence c. 1775-1873)
1786  French painter Jacques Louis David The Oath of the Horatii louvre.fr (Neo-Classical style)
1748-1825  Spanish Painter Francisco Goya Executions of the 3rd of May museodelprado.es
1746-1828  Japanese artist Kikugawa Eizan (Ukiyo-e genre) See p.36
1744-1770  Dutch painter Jan Vermeer Lady Writing a Letter National Gallery Ireland
1652-1675  Dutch painter Rembrandt van Rijn The Night Watch rijksmuseum.nl
1606-1669  Spanish painter Diego Valazquez Las Meninas Prado Museum Madrid
1598-1680  Bernini, Counter-Reformation Architect: Piazza of St. Peter's Rome, Sculpture The Ecstasy of St Teresa Rome (Baroque)
1573-1610  Painter Caravaggio The Taking of Christ National Gallery Ireland (Baroque)
1564-1616  Writer William Shakespeare
1541-1614  Painter El Greco (Manierist style) St Francis in Ecstasy National Gallery Ireland
1517  Martin Luther's challenge to the church, thus beginning Protestant Reformation of Western Christianity
1508-1580  Architect Andrea Palladio, The Villa Barbaro, Italy (Palladianism)
1497-1543  Hans Holbein the Younger (court painter for Henry VIII) The Ambassadors National Gallery London
APPENDIX A

PRINTING TECHNIQUES

Woodcuts

The woodcut was one of the earliest techniques used to print images and decorative details. The artist would normally draw his composition on paper, glue it to the wood and then cut away those areas of the drawing that were not to be printed, thereby leaving the remaining composition standing in relief from the rest of the block. This raised area would then be inked and printed, either as a single print or combined with lines of text for an illustrated page.

Characteristics of woodcut illustration are the large bold lines and blank spaces, usually enclosed by a printed ink border. The raised lines of the woodcut tend to break after repeated use, the effect of which can be seen in broken areas of ink in late issues of a woodcut print. This can be disguised by later colouring, which can overpower the image, an effect the original artists never intended.

Engraving

Engraving is an intaglio technique of making printed images. This technique requires the use of a sharp tool to cut an image onto a metal plate (usually copper). When the composition is complete, ink is dabbed over the plate and into the incised lines; any excess ink is removed, leaving the surface of the plate clean and ready for printing.

A printing press is needed in order to pick up the ink from the incised lines and the pressure exerted on the dampened paper by the engraved plate results in the characteristic plate mark around the edges of an engraving.

Copper engraving became the most common method of transmitting printed illustrations as technical refinements greatly increased its range of tone, textures and detail. As printing developed and fashions changed, other techniques for making prints became more popular.

Etching

Etching is another intaglio printmaking technique. Here, the artist first coats a metal plate with a thin layer of etching ground made from a combination of wax, gum and resin. After this is applied, the surface is usually blackened by smoking the plate over a candle.

The artist uses an etching needle to draw the composition and, as the etching needle cuts through the etching ground, it exposes the copper plate underneath. The etching ground offers very little resistance to the etching needle, which allows the artist more freedom of movement than in other engraving techniques; consequently, etchings can show more spontaneity and movement than other prints.

Once the composition is finished, the coated plate is immersed in a bath of acid, which bites into the exposed copper plate. The artist can remove the plate from the acid at regular intervals to achieve varying strengths of line or to correct mistakes. When the artist is satisfied that the lines are sufficiently bitten, the plate is cleaned and inked and is then ready for printing. A variety of techniques can be added to this process to achieve more subtle effects, aquatint and drypoint being the most common.
**Lithography**

Lithography was invented in 1798 in Munich by Alois Senefelder (1771–1834). It was the first new printing process since the invention of intaglio printing in the 15th century. Senefelder explained his process in his book *The Complete Course of Lithography* (1818). Senefelder’s first application of lithography was in the production of music scores; he claimed that he could produce up to 6,000 prints a day. The commercial success of lithography came about in the late 1820s when printers used the technique for posters, magazines and illustrated bill headings.

The basis of lithography is that water and grease repel each other. Usually, the artist draws a design on a polished limestone slab that has been covered in a greasy substance made from soapy fats and mixed with carbon black. After preparing the design for printing, the stone is dampened with water and an oil-based ink applied with a roller. This results in a black-and-white print. If the artist required colours, different stones were used for each colour. Early examples used only three stones and three primary colours (yellow, red and blue). The superimposition of each stone on the design resulted in a colour lithograph.

**Chromolithography**

Chromolithography was developed in France by Godefroy Engelmann (1788–1839) in 1837, and within a few years it became the most common technique for printing in colour. Many European artists drew topographical views, which could now be reproduced on a far wider scale than ever before. Very often these artists accompanied the great explorers of the 19th century as they mapped ‘new’ lands in Africa and the Orient. The expanding European merchant class eagerly purchased prints of these images of exotic flora and fauna. Equally popular were prints of royalty and their palaces.

As technology developed in the 19th century, the production of lithographs became more mechanical and the artist became more removed from the production process. Eventually photography took over from lithography as a means of producing mass-illustrations.
WRITING AND THE ART OF THE BOOK

The Development of Writing

Western civilisation has its earliest roots in the ancient cultures that existed more than 5,000 years ago in the regions of present-day Iraq and Egypt. As these societies became more complex, the need for writing evolved. The invention of writing is one of the most important developments in human history. A commonly understood system of writing makes communication between people easy. Records can be kept, commercial transactions recorded and knowledge and beliefs can be written down and passed from generation to generation.

If writing had never been invented, how would we communicate?

Can you think of other forms of communication other than textual?

c.4,000 BC: The Sumerian culture developed a pictographic writing system. Examples exist of recorded information on farming, trade and taxes.

c.3,200 BC: The Egyptians developed hieroglyphics (pictographic), written on papyrus and painted and carved onto the walls of the pyramids.

c.2,000 BC: Phoenician (present-day Lebanon and Israel) traders developed a syllabic (Semitic) writing system. It was quick and easy to read and write.

c.800 BC: The Greeks developed a phonetic alphabet.

Classical period: The Roman Empire adapted and simplified the Greek writing system to create Latin. Many western languages including English are derived from Latin.
Clay Tablets

In Mesopotamia (modern-day Iraq) the Sumerians invented one of the earliest writing systems. Known as cuneiform, a symbol or character was used to represent each word. A sharpened reed called a calamus was pressed into a slab of wet clay to create marks. Once the clay tablet was dried the written inscription was preserved. There are a number of examples of clay tablets in the Chester Beatty Library.

Wax Tablets

The problem of how to reuse writing tablets was solved by the Romans. They used wooden boards covered in a layer of wax. A bone or metal writing tool (stylus) was pointed at one end to write into the wax and rounded at the other end to smooth and erase the text. These wax tablets were used to record information such as lists and trade accounts; examples have also been found containing music and poetry. Ancient Egyptian artists and engineers used these wax tablets as drawing boards to test designs. Several of these tablets could be bound together to make a 'book' known as a codex.
Papyrus

The oldest known fragments of papyri are from Egypt and date from c.2,400 BC. The Chester Beatty Library contains papyrus manuscripts, scrolls and documents ranging in date from 1,800 BC to 800 AD (see p.15). Papyrus is made from the stems of the papyrus plant. A process of pressing, layering, drying and gluing is used to form sheets. Coloured pigments were mixed with oils to make ink and a quill or reed pen was used to write the text.

Parchment

Parchment is made from treated animal skin: sheep, goat, antelope, etc. Vellum (calf skin) is the finest quality parchment, used for important or sacred texts. By about the 3rd century BC, parchment began replacing papyrus. While it is more expensive and time consuming to make, parchment is more durable and versatile (see pp.13-14).

- Scribes could scrape away the surface to erase mistakes and re-write the text.
- It is stronger than papyrus and easier to handle and bind.
- It is easier to conserve, so precious books survive from generation to generation.

Classical Greece and Rome

Greek writers from the c.12th to the 18th century BC, such as Homer and philosophers like Plato (c.428–c.348 BC), influenced how writing and books developed during the Classical period. The Romans, impressed with the Greek reputation for learning and intellect, collected Greek literature, music and art. The Romans also realised the importance of recording new information and tales of their victories and conquests. Latin documents and books spread as the Roman Empire expanded (Spain, Africa, etc.). Roman emperors understood that knowledge was power. Therefore, writing and books became symbols of status and knowledge. Julius Caesar and other powerful individuals created private libraries. By the year 410 AD, when Rome was sacked, there were approximately 28 libraries in Rome and many more in the cities throughout the Empire.

Middle Ages

By the end of antiquity, between the 2nd century and 4th century AD, the codex had replaced the scroll. The book was no longer a continuous roll, but a collection of sheets attached together. It became possible to access a precise point in the text. The codex is equally easy to rest on a table, which permits the reader to take notes while he or she is reading. The codex form improved with the separation of words, capital letters and punctuation, which permitted silent reading. Tables of contents and indices facilitated direct access to information. This form was so effective that it is still the standard book form, over 1,500 years after its appearance.

Books in monasteries

During the turbulent periods of invasions, it was the monasteries that conserved religious texts and certain words of antiquity for the West. There existed scriptoria in many monasteries where monks copied and decorated manuscripts that had been preserved.

The use of paper diffused throughout Europe in the 14th century. This material, less expensive than parchment, came from China via the Arabs in Spain in the 11th and 12th centuries. It was used in particular for ordinary copies, while parchment was used for luxury editions.
The Importance of Monasteries

Following the collapse of the Roman Empire, Europe suffered a long period of war and turbulence. During these Dark Ages valuable knowledge and precious cultural objects were lost or destroyed. Religious orders played an important role in secretly transporting and hiding important religious and classical books as well as artefacts.

The decoration of illuminated manuscripts followed different artistic styles across various cultures and time periods. The spread of religion influenced the style and distribution of books throughout Europe. Most monasteries had a scriptorium where skilled monks translated and copied prayers and gospels. Scribes and illuminators combined text, illuminated capitals, miniatures and decorative borders into complex works of art. These works were bound into protective covers, some of which are beautifully decorated and richly adorned, as can be seen throughout the Chester Beatty Library (see pp.12-14).

The Medieval period

At the beginning of the Middle Ages book production was concentrated in monasteries but, as learning advanced, university towns and larger cities became important centres of production. The design, layout and subject of books changed to meet the demands of an increasingly literate society. As scribes and illuminators experimented with the compositional balance between image and text, elaborate fonts using heavily ornate words and capitals were replaced by simpler ones.

A number of design innovations took place during the medieval period, which still influence how we ‘read’ the page today (see pp.17-21).

- The codex replaced the scroll in European book production.
- The codex easily rests open on a table, allowing the reader to copy or take notes from the text.
- The introduction of tables of contents and indices meant that the reader could access a precise point within the text.
Think of the function of round towers in monasteries; they provided excellent security for precious books and objects.
The invention of paper has been credited to Cai Lun, around the 1st century AD. Woodblock printing made it possible for multiple editions of images and text to be produced from a single block. This increased the speed and reduced the cost of producing documents. In the 11th century, an ordinary man named Bi Sheng invented ‘moveable’ type.

A number of significant inventions were developed in China:

- The logographic writing system in China was developed as early as 1,300 BC. The characters of the Chinese alphabet have evolved over the centuries; however, the basic structure of writing has remained similar.

- The invention of paper has been credited to Cai Lun, around the 1st century AD.

- Woodblock printing made it possible for multiple editions of images and text to be produced from a single block. This increased the speed and reduced the cost of producing documents.

- In the 11th century, an ordinary man named Bi Sheng invented ‘moveable’ type.

Chinese writing and books developed differently than European styles.

Compare the documents and books of the East Asian Collection to the Western Collection in the Chester Beatty Library. Look at the contrast in format, style, composition, materials and techniques.
As book production increased and literacy levels grew, the business of print and publishing began. Early European printed books generally followed the design and layout of illuminated manuscripts. Artists supplied designs for illustrations, decorative initials and ornamental devices. The design principles of the Renaissance soon found expression in the layout and decoration of books. During the early Renaissance (quattrocento) printers moved from heavy Gothic typefaces to roman or italic scripts. See pp.24-27.
The 17th and 18th Centuries

Book design in Europe changed slowly in the 17th century, but it was a period of great commercial expansion. Books were among the most portable of cultural objects and publications quickly spread across Europe and beyond, to the American colonies and Asia. The 18th century witnessed great creativity among typographers as the design of typeface, illustration and page layout reflected the general artistic expressions of the period.

The 19th and 20th Centuries

The 19th century was a period of great technological and social change. As the Industrial Revolution spread throughout Europe, craft industries declined. The introduction of steam-powered printing presses and paper mills influenced book production. Focus on quantity over quality meant that printers and publishers experimented with new materials, such as cardboard, cloth and plastics. These innovations caused book production to increase and therefore book prices to decrease. Mass-produced products replaced one-of-a-kind objects to meet the demand of the growing middle classes. The use of photography and colour reproductions greatly enhanced the quality and variety of books.

Book Collecting

In the late 18th and 19th centuries, large privately owned libraries became increasingly common in Europe and America. This was due to a rise in wealthy industrialists as patrons, a growing interest in antiquarianism and renewed interest in the medieval period. The book again became a symbol of power and intellect. Fine, limited-edition books were produced by specialist printers and bound to the patrons’ specifications. Collectors like J.P. Morgan (1837–1913) and Alfred Chester Beatty began to assemble vast libraries of important and rare books, documents and cultural artefacts.

Bookbinding

Traditionally, the technical process of bookbinding is divided into two parts: forwarding and finishing. Forwarding is mainly concerned with folding and gathering the pages into units or quires and sewing and attaching the protective cover. Finishing, the second stage, is usually carried out by a more skilled binder, who applies the lettering, gilding and other decoration with heated tools and stamps.

These two processes formed the division of labour in many binderies, with women mainly connected with forwarding and men with finishing. Like many craft industries, once an apprenticeship was served, membership of a guild was granted. In the 18th and 19th centuries many binderies were located in the streets and alleyways off Dame Street, where the chief patrons of books – the Church, state and university – were situated.
Contemporary Era

The invention of the typewriter – and more recently the computer – has revolutionised book design and production once again. Thanks to desktop publishing, individuals can write, design, print and distribute their own ‘books’. The Internet has had an important impact on book production, significantly reducing the demand for printed books in many ways:

- Lower production costs
- Fast distribution of material
- Reference material is available online
- Positive environmental impact of paper-free communication
- Websites and blogs are new forms of ‘books’

You can write, illustrate and instantly publish your autobiography on Facebook. Electronic books, or e-books, are the most recent incarnation of the book and some people predict the total decline of traditional paper-type books in the near future.

Artists’ Books

The Chester Beatty Library contains a number of important 20th-century ‘artists’ books’ including an example by Henri Matisse from 1950. The book as an art object is having a renaissance. A number of contemporary artists have begun to create innovative one-of-a-kind books or to compile and bind their artwork into unique artists’ books. The use of books as a medium, a material for sculpture or within multi-media art pieces is also popular. The Jaffe Centre for Book Arts, in Florida, has a fascinating collection of artists’ books.

See: library.fau.edu/depts/spc/jaffe.htm.

Treasure Hunt Student Exercise

Find one example of each of the following; make a sketch and take notes on the artefact.

- A concertina ‘book’
- A scroll
- A jade ‘book’
- A book using parchment
- A book using paper
- An illuminated capital
- A decorated border
- An ostracon
- A leather-bound book
- A wooden-bound book
- An illuminated manuscript
- A religious/sacred text
- A secular text
- A text read from right to left
- An ‘artist’s book’

Do you consider Facebook to be a ‘book’?

Why/why not?

Do you think paper books will become obsolete with the development of digital e-books?

Would you miss anything about paper books?
MATERIALS OF MEDIEVAL ILLUMINATION

Media

Glair – egg whites squeezed continually through a sponge or thoroughly beaten until they assume the consistency of water. Camphor or cloves were sometimes added as a preservative. Gum arabic, vinegar or honey might be added to vary the consistency. Water was used to dilute it.

Gum arabic – solid lumps (from the sap of the acacia tree) powdered and then dissolved in water.

Glue – made from a variety of sources, one of the most popular and effective being rabbit skin. Glue materialises from boiling rabbit hides. This is a very flexible glue, which is among the oldest and most reliable binders.

Egg yolk – only used with a few pigments (orpiment, carmine, indigo and azurite). Pigments were ground and mixed with the yolk, which was subsequently washed out and the pigment was then mixed with glair or gum arabic.

Pigments

Black – carbon ink, charcoal or soot (lampblack).

Blue – ultramarine, made from lapis lazuli. Azorium was made from azurite, a copper ore. Indigo mixed with white lead would also yield blue. Juice from blue flowers could also be used. It could be stored in a clothlet: a clean linen rag moistened with water and quicklime, and dipped in the plant juice. When dry, the clothlet could be stored indefinitely. When needed, it was placed in a gum solution to extract the pigment.

Brown – bistre, made from burnt resinous wood boiled in lye. It was used both as a colour and for shading over other pigments.

Green – verdigris, made by subjecting strips or plates of copper to the fumes of vinegar. Verdigris was not ground into powder, but was soaked in wine or vinegar and thickened by heating. Media such as cherry juice, gum water and egg yolk were recommended as binding and fixing agents. Terre verte and chrysocolla (malachite, copper carbonate) were common and easy-to-use green pigments. They were sometimes used as an under-painting in gilding. Green pigment could be extracted from plants and stored in clothlets. Vergaut was a mixture of indigo and orpiment.

Grey – mixture of black and white lead (veneda).

Red – red ochre, sometimes used in manuscripts. Vermilion was obtained from cinnabar, or through a chemical reaction. Mixed with white lead it formed a flesh-colour olchus or membrana. Minium or red lead or sandaraca was prepared by heating white lead. Brazil wood dye was often used in manuscripts. Wood shavings were steeped in a solution of lye, wine or urine, then alum was added. Pigment was mixed with glair for red ink.

Purple – mixture of azurite and brazil wood, or the juice of elderberries. Folium (seeds of turnsole), used in the form of clothlets. Cheese glue was used as a medium.

White – white lead, ceruse, made by exposing plates of lead to vinegar fumes. Wine was used as a medium. Lime white was also used by illuminators.

Yellow – orpiment (arsenic compound), widely used even though highly toxic. Saffron was used with glair, though it was not permanent.
GLOSSARY OF TERMS

The terms listed below refer to the descriptions found throughout Artefacts. These have been selected to assist teachers and students.

Abstract motifs – designs or patterns that do not look like a specific object. Shapes and patterns are used to depict the subject rather than realistic imagery.

Addendum/Addenda – addition/additions to the book after it has been printed.

Antiquarianism – to be interested in, study or collect antiques.

Apocalypse – the last book of the New Testament also called Revelation, written by the Evangelist John, who describes his prophetic visions of the battle between good and evil.

Arabesque – an often complex design of intertwined leaf, flower or vegetal forms.

Artefact – something created by humans, including pottery vessels, flints, jewellery, books and so on.

Artist’s palette – the tray or receptacle used by an artist to hold his/her paints and pigments. The term is also used to describe the choice and range of colours used by an artist in a work of art.

Atmospheric perspective – when objects in a composition lose their colour intensity and become blue/grey and hazy as they recede into the distance, creating a realistic illusion of distance.

Avant-garde – the French term for vanguard, meaning to practice new ideas and move away from the traditional. Art that is ahead of its time, innovative and experimental is referred to as avant-garde.

AD – an abbreviation for Anno Domini, which is Latin for ‘in the year of our Lord’.

BC – an abbreviation for Before Christ.

Bequeath – to leave or give personal property or pass something on to another.

Bibliophile – someone who collects or is interested in books.

Binding – the style or method used to attach the pages of a book together and secure within a cover.

Board – the wood, paste-board, straw-board, or other base material used for the sides of any bound or cased book, i.e. any book in hard covers.

Books of faith – Bible, Qur’an, Torah and Vedas (see p.12).

Calamus – from the ancient Greek word meaning ‘reed’ or ‘reed pen’. The name given to the sharpened reed pen used by the Sumerian culture (c.4,000 BC) to create wedge-shaped marks in clay (cuneiform writing) (see p.40).

Characteristic – a key feature or quality particular to an artwork or movement that helps to identify a particular artist’s work or style of work.

Circa – from the Latin meaning ‘around’ or ‘about’. Circa is usually abbreviated c. or ca. and means ‘approximately’ in English.

Classical Greece and Rome – sometimes referred to as classical antiquity or the Greco-Roman era. The long period of cultural history spanning the Greek civilisation (7th/8th century BC) and ending with the decline of the Roman Empire (5th century AD).

Codex – from the Latin meaning a ‘set of tablets’. A manuscript bound in book form.

Commission – when a patron engages an artist to create an artwork. A commission often comes with very clear specifications from the patron, which can, at times, be difficult or restrictive to the artist.

Composition – any piece of music, writing, or any painting or sculpture. In two-dimensional art, composition refers to the way in which an artist has arranged the art elements within the work and the layout of the picture planes, i.e. background, middle ground and foreground.

Conservation – the profession devoted to the protection and care of an artefact, object or artwork.

Contemporary – belonging to the same period or time as something or someone.

Cross-hatching – an artistic technique used to create tonal effects by drawing closely spaced lines to represent an area of shade and repeating the process in layers.

Cuneiform – the wedge-shaped characters used to depict the words of the ancient Sumerian language in Mesopotamia (see p.40).

Deckle – a removable wooden rim, which can be fitted to a papermaking mould to make it into a tray-like sieve with a raised edge.

Deckle edge – the rough, untrimmed edge of a sheet of hand-made paper.

Decorated initial – a letter at the beginning of a work,
chapter or paragraph. It is usually larger than the rest of the text and ornately decorated.

Decorator – a person who does pen-work decoration with coloured inks around illuminated capitals, paragraph marks and running titles, etc.; also referred to as an illuminator.

Endpapers – leaves added at the front and back of a book by the binder; the outer leaf of each is pasted to the inner surface of the cover (the paste-down).

Environmentally controlled – the light, humidity and temperature where collections are on display are controlled to within internationally accepted standards to support the preservation of the object or artwork.

Exemplar – a book from which another is copied.

Fauna – meaning animals and/or wild creatures, after the Roman god Faunus.

Flora – meaning wild flowers and plants, after the Roman goddess Flora.

Folio – a leaf of paper, parchment, etc. (either loose as one of a series or in a bound volume), which is numbered only on the front. The front and back of the leaf are referred to as recto and verso. Folio also refers to size: a volume made up of sheets folded once or a volume of the largest size.

Format – the shape and size of a book. The size of a volume in terms of the number of times the original sheet has been folded to form its constituent leaves: folio (2°) = folded once; quarto (4°) = folded twice; octavo (8°) = folded three times; duodecimo (12°) = folded four times, etc.

Font – a complete set of types of letters, numerals and other symbols, cut and cast in the same style and size.

Fresco – from the Italian meaning fresh. It is a technique of mural painting carried out on freshly laid lime plaster. Examples include Michelangelo’s Sistine Chapel and Giotto’s series in Padua. See a demonstration at: youtube.com/watch?v=Uje4Ggg5nQI

Geometric pattern – a motif, design or pattern using geometrical shapes such as lines, circles and triangles.

Gothic text – also known as Gothic script or Gothic minuscule. A script/font used throughout Europe from the 12th century to the 17th century. It is often characterised by angular forms and compressed letter shapes.

Grisaille – a technique used in paintings and drawings using shades of grey to create the illusion of sculpture, especially relief.

Guilds – associations of craftsmen and/or merchants providing professional support and agreed shared standards of practice.

Headline – a line of type at the top of the page above the text. If it consists of the book title (or of a section) on every page or opening it is sometimes called a running title or running head.

Historical initial – one that contains figures or a story within the initial.

Humanism – A Renaissance cultural movement which revived interest in ancient Greek and Roman thought.

Icons – paintings on wooden panels, usually in tempera, depicting holy people. Traditional images originated from the Orthodox Christian churches of Byzantium and are commonly found in Greece and Russia today.

Illuminated capital – see Illumination.

Illumination – the art of decorating handwritten manuscripts with formal, floral or historical style designs and/or elaborate capital letters, often using gold, silver and coloured pigments.

Illustration – a picture used to decorate a book. An illustration is often used to enhance the reader’s understanding of the text.

Impressionism – 19th-century art movement that originated in France. Artists moved away from classical and historical subject matter to the depiction of everyday life. Impressionism is characterised by visible brushstrokes and the changing qualities of light. The first Impressionist group exhibition was held in Paris in 1874.

Industrial Revolution – the introduction of steam power in Britain in the 18th century sparked the rapid change from small-scale craft to large-scale mass production. It was a time of great economic growth, population increase and urbanisation.

Intaglio – a design incised or engraved into a material.

Japonisme – a French term used to describe the craze for Japanese art and design that swept through Europe once trade began between Europe and Japan during the 1850s. The development of modern painting from Impressionism onwards was profoundly affected by the flatness, brilliant colour, high degree of stylisation and realist subject matter of Japanese woodcut prints.

Kimono – a traditional Japanese garment worn by both men and women, t-shaped in structure and often richly decorated with intricate patterns and embroidery.
Leaf – also called a folio. A single folded sheet containing two pages intended to be sewn into a book.

Linear perspective – when the objects within an image recede into the background and disappear at a vanishing point on the horizon, creating a realistic illusion of distance.

Lino printing – a simple form of relief printing. Areas of a linoleum block are cut away to create an image; ink is rolled over the remaining raised areas of the block, which is pressed onto paper, producing a printed image. See: youtube.com/watch?v=bDcZNJB87KM.

Limp binding – a binding composed of parchment, paper, leather or fabric without boards (soft-bound).

Logographic – from the noun logogram; used to describe signs or characters representing a word or phrase.

Madonna – term for the Virgin Mary in Christian art. It is most commonly used when she is depicted with the infant Christ.

Manuscript – a book or document written by hand, often illuminated or illustrated.

Medieval period – often referred to as the Middle Ages or Dark Ages, spanning c.5th –15th century.

Miniatures – small, often extremely detailed and intricate pictures commonly found in medieval and Renaissance manuscripts.

Monochromatic – using only the tints and shades of a specific colour or hue.

Narrative – the story within the work of art.

Non-representational – also referred to as non-figurative. The artwork does not show or depict an actual object or subject, but is more abstract in style.

Objet d’art – French for ‘art object’; used to describe a work of art other than a painting.

Ogham – an early alphabet using inscribed notches and lines common in Ireland, Scotland and parts of Britain during the 4th to the 7th centuries AD.

Old Master – the term used for very distinguished and respected European artists from the period c.1500 to the early 1700s; also used to describe a work of art by such an artist.

Ornamental devices – decorative borders, seals and motifs used to add visual interest to a page or to separate different paragraphs or chapters in a text.

Ostracon – a piece of stone or pottery, usually from a vessel, often with inscribed decoration or writing.

Paleography – the study of ancient handwriting and scripts.

Papyrus – a substance prepared, in the form of thin sheets, from the stem of the papyrus plant by laying thin slices or strips side by side, with another layer of similar strips crossing them. The whole is soaked in water, pressed together and dried; used by the ancient Egyptians, Greeks, Romans, etc. as a material on which to write.

Parchment – the skin of a sheep or goat (and sometimes other animals) dressed and prepared for writing.

Patronage – the support of the arts by wealthy individuals or organisations. The Christian Church and the Medici family in Renaissance Florence were important patrons of artists, architects and musicians.

Pen – in the ancient world and early Middle Ages a reed pen was usually used; in the Middle Ages and later a quill pen was more common.

Photorealism – a style of painting that emerged in Europe and the USA in the 1960s, characterised by painstaking detail and precision. Photorealism strove to create pictures that looked like photographs (Chuck Close, b.1940).

Plasticity – when a figure has the impression of being a fully-rounded solid form.

Plein air – a French term meaning ‘out-of-doors’. It refers to the practice of painting entire finished pictures outside as opposed to simply making preparatory sketches and then completing the work in a studio. British artist John Constable (1776–1837) pioneered the technique. Plein air became a fundamental feature of Impressionism.

Point-of-view (POV) – the position or angle from which the artist views a subject. For example, a bird’s-eye point-of-view depicts a scene from directly above.

Predecessor – the artist or person who came directly before someone.

Proportion – refers to the harmonious relationship between one part of an object or figure and the other parts of the object/figure. During the Renaissance, Leonardo da Vinci and Albrecht Dürer attempted to find a mathematical formula for the proportions of the perfect human body.

Quattrocento – Italian for ‘400’, used to refer to early Renaissance Italian art of the 1400s (15th century). Sandro Botticelli is an important quattrocento artist (c.1445–1510).

Quire – a set of pages of parchment or paper, folded in sequence, one within the other, ready to be stitched into a manuscript or book.
Reformation – religious movement against the elitism and corruption of the Christian Church in 16th-century Europe, led by the German monk Martin Luther (1483–1546).

Relief – a term used when something is raised from the surface. For example, the design on a coin is raised. One can feel it as well as see it and one can say that the image/design is in relief.

Renaissance – from the Italian meaning ‘re-birth’; a period of immense creative development initially centred in Italy and spreading throughout Europe, characterised by a revival of classical art, architecture, literature and learning dating from around the 14th to the 16th century, marking the transition from medieval to modern times.

Representational – a realistic, figurative work of art in which the subject can be clearly seen and identified.

Roll – a piece, or series of pieces, of papyrus, parchment, paper or the like, which is written on (usually one side only) and is rolled up, i.e. a scroll. The most common form of book in the ancient world.

Scribe – a person who writes manuscripts or documents by hand.

Script – a set of letters making up an alphabet of a particular style, e.g. Gothic script. Also referred to as a font or text.

Scriptorium (plural scriptoria) – a writing room where manuscripts were copied by hand.

Sculptural forms – when figures and images in a picture look solid and three-dimensional, as if sculpted out of stone or clay.

Secular – non-religious.

Sfumato – from the Italian word fumare meaning ‘smoke’; used to describe a painting technique where areas of shading are softly blended from light to dark, creating a soft, realistic tonal effect. Artists like Leonardo da Vinci and Raphael perfected the technique.

Stationer – someone who trades in paper goods and writing materials. Historically, a stationer would often buy loose leaves or entire manuscripts and commission specific bindings for clients.

Stylus – an instrument made of metal, bone, etc.; one end is sharp-pointed for incising letters on a wax or clay tablet, or lines onto parchment or paper; the other end is flat and broad for smoothing the wax on the tablet and erasing what was written.

Subject – the theme, object or person depicted in an artwork.

Tempera – a paint made by mixing coloured pigments with sticky water-soluble materials such as size or egg yolk.

Text – a body of writing; also refers to a style of alphabet, font or script.

Three-dimensional – a fully rounded object with height, width and depth, or in a two-dimensional image where the illusion of depth is created.

Tone – in art, tone refers to the degree of lightness or darkness of an area.

Two-dimensional – a flat shape/surface with only height and width; no actual depth.

Tympanum – the semi-circular or triangular panel over an entrance, bounded by a lintel and arch. This area was often decorated with relief sculpture during the Romanesque and Gothic periods.

Typeface – see Font or Script.

Typographer – someone who designs and arranges the text on the page. A typographer also designs new fonts/typefaces.

Ukiyo-e – a term that refers to both paintings and prints of the Edo period (1603-1867) Japan. Ukiyo means ‘floating world’ and depicted popular scenes including brothels, popular theatre and teahouses.

Vegetal – in art, the term refers to designs based on naturalistic forms, such as plants and other flora. The style can be described as free flowing, intertwined and natural.

Vellum – parchment made from the skin of a calf, dressed and prepared for writing on or for binding books.

Volume – originally a roll; a book.
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