Chapter 1 – The Invention of Writing

**Key Terms** (in order of appearance)

1. **substrate**:a surface, as a writing surface.
2. **pictograph**:an elementary picture or sketch representing the thing depicted.
3. **petroglyph**:a carved or scratched sign or simple figure on rock (Fig. 1–2).
4. **ideograph**: a symbol that represents an idea or concept (Fig. 1–3).
5. **Mesopotamia**:“the land between rivers,” which is known as the cradle of civilization. This flat, once-fertile plain, with its wet winters and hot, dry summers, proved very attractive to early humans. They ceased their restless nomadic wanderings and established a village society between the Tigris and Euphrates Rivers, which flow from the mountains of what is now eastern Turkey across Iraq and into the Persian Gulf.
6. **Sumerians**:those who settled in the lower part of the Fertile Crescent before 3000 bce.
7. **ziggurat**:a multistory brick temple compound constructed as a series of recessed levels becoming smaller toward the top of the shrine.
8. **cuneiform** (from the Latin for “wedge-shaped”): a method of writing in which a triangular-tipped stylus was pushed into the clay and formed a series of wedge-shaped strokes rather than a continuous line drawing (Figs. 1–7, 1–8, 1–9, 1–10, 1–11, and 1–12).
9. **rebus writing**:pictures and/or pictographs representing words and syllables with the same or similar sound as the object depicted. (Fig. 1–25)
10. **phonogram**:a graphic symbol that represents sounds.
11. **scribe**: in early cultures, such as Sumeria and Egypt, the profession of those individuals who could read and write.
12. ***edubba***:a writing school or “tablet house” where those youths in early Mesopotamia selected to become scribes began their schooling.
13. **stele**:an inscribed or carved stone or slab used for commemorative purposes (Figs. 1–16 and 1–17).
14. **cylinder seal**:Prized as ornaments, status symbols, and unique “trademarks” for the owner, cylinder seals were a method of sealing documents and proving their authenticity by rolling the seal across a damp clay tablet to create a raised impression of the depressed design (Fig. 1–18).
15. **hieroglyphics**:The Egyptians retained their picture-writing system, called *hieroglyphics* (Greek for “sacred carving,” after the Egyptian for “the god’s words”), for almost three-and-one-half millennia. The earliest known hieroglyphs (Fig. 1–21) date from about 3100 bce.
16. **Rosetta Stone**:In August 1799, Napoleon’s troops were digging a foundation for an addition to the fortification in the Egyptian town of Rosetta, which they were occupying, when they unearthed a black slab bearing an inscription in two languages and three scripts: Egyptian hieroglyphics, Egyptian demotic script, and Greek (Figs. 1–22 and 1–23).
17. **determinatives**:signs, such as hieroglyphs, that determine how the preceding glyph should be interpreted.
18. **obelisk**:a tall, geometric, totemlike Egyptian monument.
19. **cartouche**:a bracketlike plaque containing the glyphs of important names (Fig. 1–24).
20. **ankh**:a hieroglyph of a cross surmounted by a loop (see Fig. 1–31), which had modest origins as the symbol for a sandal strap. Due to a phonetic similarity, it gained meaning as a symbol for life and immortality and was widely used as a sacred emblem throughout the land.
21. **papyrus**:Developed in Egypt, this paperlike substrate was made from the *Cyperus papyrus* plant, which grew along the Nile in shallow marshes and pools. Used for manuscripts, papyrus was a major step forward in Egyptian visual communications.
22. **verso**:the bottom surface of a papyrus sheet in which the fibers run vertically.
23. **recto**:the upper surface of a papyrus sheet in which the fibers run horizontally.
24. **hieratic script**(from the Greek for “priestly”): a simplified hieroglyphic book hand, developed in Egypt by the priests for religious writings. The earliest hieratic script differed from hieroglyphs only in that the use of a rush pen, instead of a pointed brush, produced more abstract characters with a terse, angular quality. (Fig. 1–30)
25. **demotic script**(from the Greek word for “popular”): an abstract script in ancient Egypt that supplemented hieroglyphs and came into secular use for commercial and legal writing by the year 400 bce (Fig. 1–30).
26. **papyrus manuscripts**:came into use as funerary texts around 1580 bce in Egypt. Citizens of limited means could afford simple papyri to accompany them on the journey into the afterlife.
27. **pyramid text**:beginning with the pyramid of Unas (c. 2345 bce), hieroglyphic writings that covered the walls and passages of the pyramids, including myths, hymns, and prayers relating to the godlike pharaoh’s life in the afterworld.
28. **coffin texts**:funerary texts, often illustrated with pictures of possessions for use in the afterlife that covered all surfaces of a wooden coffin and/or stone sarcophagus.
29. **The Book of the Dead**: a third phase in the evolution of funerary texts; the book was written in a first-person narrative by the deceased and placed in the tomb to help its occupant, the deceased, triumph over the dangers of the underworld. The artists who illustrated the Book of the Dead papyri were called upon to foretell what would occur after each subject died and entered the afterlife (Fig. 1–31).

# Key People and Their Major Contributions (in order of appearance)

1. **Hammurabi**:reigned in Sumeria from 1792–1750 bce, and established social order and justice through the Code of Hammurabi, a stele containing 282 laws that spelled out crimes and their punishments (Fig. 1–16).
2. **Dr. Thomas Young** (1773–1829):proved that the direction in which the glyphs of animals and people faced was the direction hieroglyphics should be read and that the cartouche for Ptolemy occurred several times on the Rosetta Stone (Fig. 1–22).
3. **Jean-François Champollion** (1790–1832):did the major deciphering of the Rosetta Stone hieroglyphs. He realized that some of the signs were alphabetic, some were syllabic, and some were determinatives.

**Chapter 2 – Alphabets**

**Key Terms** (in order of appearance)

1. **alphabet**:a set of visual symbols or characters used to represent the elementary sounds of a spoken language (derived from the first two letters of the Greek alphabet, *alpha* and *beta*).
2. **Minoan civilization**:The Minoan civilization ranks behind only Egypt and Mesopotamia in its early level of advancement in the ancient Western world. Minoan and Cretan picture symbols (see Fig. 2–1) were in use as early as 2800 bce.
3. **Crete**:the Mediterranean island where the Minoan civilization developed.
4. **Phaistos Disk**:unearthed on Crete in 1908, a flat terra-cotta disk 16.5 centimeters (6 inches) in diameter that has pictographic and seemingly alphabetic forms imprinted on both sides in spiral bands; one of the most interesting and perplexing relics of the Minoan civilization (Fig. 2–2).
5. **principle of movable type**:Type-like stamps are used to impress each character carefully into a substrate. Each character is created as a separate stamp, allowing it to be moved and arranged to create complete words, sentences, or paragraphs as multiple lines of type.
6. **substrate**:a material on which letterforms and images are inscribed. Includes papyrus, parchment, wax, stone, wood, etc.
7. **North Semitic writing**:early alphabetic writing created by the Northwest Semitic peoples of the western Mediterranean region.
8. **Phoenicia**:a culture on the western shores of the Mediterranean Sea in what is now Lebanon and parts of Syria and Israel.
9. **Phoenicians**:seafaring merchants of the Mediterranean Sea who developed an early alphabetic writing system, the Phoenician alphabet, which was quickly absorbed by other areas in the region.
10. **sui generis**:a writing script developed in Byblos, the oldest Phoenician city-state, around 2000 bce. This script used pictographic signs influenced by cuneiform and hieroglyphics but devoid of any remaining pictorial meaning, a major step toward the development of an alphabet.
11. **Byblos**:the oldest Phoenician city-state, where sui generis was developed.
12. **Sinaitic script**:an achrophonic adaptation of hieroglyphics designed by Egyptian turquoise miners in the Sinai desert.
13. **achrophonic**:a pictorial symbol or hieroglyph used to stand for the initial sound of the depicted object.
14. **Ras Shamra script**:a true Semitic alphabetical script found on clay tablets inscribed around 1500 bce It used thirty cuneiform-like characters to represent elementary consonant sounds (Fig. 2–3).
15. **alphabetical order**:the sequence in which the letters of an alphabetic script are memorized.
16. **Phoenician alphabet**:North Semitic writing, an early alphabetic system of twenty-two characters written from left to right, was in use by 1500 bce.
17. **Aramaic alphabet**:first used by tribes from Aram, a major early derivation from the North Semitic script and the predecessor of the Hebrew and Arabic alphabets, which developed further into Hebrew and Arabic writing, it is written right to left. (Fig. 2–4).
18. **Square Hebrew alphabet**:developed from the Aramaic alphabet and possibly influenced by Old Hebrew. This alphabet evolved into modern Hebrew, which consists of twenty-two consonantal letters, four letters to indicate long vowels, and five letters for use at the end of a word. Dots and dashes also indicate vowels (Fig. 2–5).
19. **Arabic writing:**developed from the Aramaic alphabet with curving calligraphic gestures. Includes twenty-two original sounds of the Semitic alphabet supplemented by six characters added to the end; three characters are also used as long vowels, and diacritical marks are added for short vowels and to distinguish consonant sounds.
20. **Kufic**:from the famous Muslim academy at Kufah in Mesopotamia, a bold inscriptional Arabic lettering with extended thick characters widely used on coins, manuscripts, and inscriptions on metal and stone (Fig. 2–6).
21. **Naskhi**:a more cursive Arabic lettering ideal for writing on papyrus that evolved into the modern Arabic scripts (Fig. 2–7).
22. **Qur’an** or**Koran**:the Muslim holy book written in the Arabic alphabet. Muslims believe it contains great truths revealed by Allah (God) to Muhammad.
23. **calligraphy**: an early form art of fine writing using brush strokes.
24. **Greek alphabet**:evolved from the Phoenician, or North Semitic, alphabet. The Greeks changed five consonants to vowels and employed applied geometric structure to the uneven Phoenician characters. Through a standardized system of horizontal, vertical, curved, and diagonal strokes, the Greeks achieved visual order and balance (Fig. 2–9, and see Fig. 2–1).
25. **votive stele**:an upright slab with an inscribed dedication or sculptured surface used as a monument or commemorative tablet on the façade of a building (Fig. 2–11).
26. ***boustrophedon***(from the Greek “to plow a field with an ox”): a writing method developed by the Greeks in which every other line reads in the opposite direction.
27. **uncials**:a more rounded writing style developed by the Greeks that could be written more quickly because its rounded letters were formed with fewer strokes (Fig. 2–12).
28. **Latin alphabet**:modified from the Greek alphabet by the Etruscans and later adopted by the Romans, originally containing only twenty-one letters, after the letter G was designed by Spurius Carvilius (c. 250 bce) to replace the Greek letter Z (see Fig. 2–1).
29. **Etruscans**:a people whose civilization on the Italian peninsula reached its height during the sixth century bce (Fig. 2–16).
30. ***capitalis monumentalis***:“monumental capitals” of the Latin alphabet created for Roman architectural inscriptions celebrating military leaders and their victories, drawn in thick and thin strokes with organically unified straight and curved lines (Fig. 2–17).
31. **serifs**:small lines extending from the ends of the major strokes of a letterform.
32. ***capitalis quadrata***: “square capitals” written carefully and slowly with a flat pen held at an angle, with stately proportions and clear legibility; a style widely used used from the second century ce until the fifth century (Fig. 2–18).
33. ***capitalis rustica***:“rustic capitals,” a condensed letterform style written quickly with a flat-nibbed pen held in an almost vertical position. They enabled the writer to include half again as many letters on the page as was possible with square capitals; a style used during the same period as the square capitals used from the second century ce until the fifth century (Fig. 2–19).
34. **vellum**:the finest parchment, made from the smooth skins of newborn calves.
35. **codex**:The codex book format began to supplant the scroll in Rome and Greece beginning about the time of Christ. Parchment was gathered in signatures of two, four, or eight sheets. These were folded, stitched, and combined into codices with pages like a modern book. The parchment codex had several advantages over the papyrus scroll. The clumsy process of unrolling and rolling scrolls to look up information yielded to the quick process of opening a codex to the desired page. Both sides of the parchment pages in a codex could be used for writing; this saved storage space and material costs. The durability and permanence of the codex appealed to Christians because their writings were considered sacred.
36. **scroll**:a roll of parchment, papyrus, or other substrate used for writing a document, called a rotulus.
37. **signature**:gatherings of two, four, or eight sheets that could then be folded, stitched, and combined into codices with pages like a modern book.
38. **Hangul**:the Korean alphabet, which has fourteen consonants (Fig. 2–21) and ten vowels (Fig. 2–22). Letters are combined within an imaginary rectangle to form syllabic blocks. These syllables are made by combining at least one consonant and one vowel (Fig. 2–23).

# Key People and Their Major Contributions (in order of appearance)

1. **Cadmus of Miletus**:allegedly designed some of the Greek letters and is thought to have been the first to bring the alphabet to Greece.
2. **Spurius Carvilius**:designed the letter G and added it to the Latin alphabet to replace the Greek letter Z (zeta).
3. **Ptolemy V of Alexandria**(ruled c. 205–181 bce): King Eumenes II (ruled 197–160 bce) of Pergamum and Ptolemy were engaged in a fierce library-building rivalry. Ptolemy placed an embargo on papyrus shipments to prevent Eumenes from continuing his rapid production of scrolls.
4. **King Eumenes II of Pergamum**(ruled 197–160 bce): was engaged in a fierce library-building rivalry with Ptolemy V of Alexandria. Ptolemy placed an embargo on papyrus shipments to prevent Eumenes from continuing his rapid production of scrolls.
5. **Sejong** (1397–1450 ce):Korean monarch who introduced Hangul, the Korean alphabet, by royal decree in 1446.

**Chapter 3 – The Asian Contribution**

**Key Terms** (in order of appearance; the first page number of their appearance is listed)

1. **Chinese calligraphy**:an ancient writing system using gestured brush strokes developed by the ancient Chinese; used today by more people than any other visual language system.
2. **paper**:a writing substrate made with wood pulp.
3. **logograms***,* graphic signs that represent an entire word (the sign *$*, for example, is a logogram representing the word *dollar*).
4. ***chiaku-wen*** (bone-and-shell script):used from 1800 to 1200 bce as a pictographic writing system inscribed on oracle bones, which were believed to convey communications between the living and the dead (Figs. 3–1 and 3–2).
5. **oracle bones***,* animal bones with written messages on them used to communicate with the dead.
6. ***chin-wen*** (bronze script): inscriptions of well-formed characters in orderly alignment on cast bronze objects, including food and water vessels, musical instruments, weapons, mirrors, coins, and seals; also used for important treaties, penal codes, and legal contracts (Fig. 3–3).
7. ***hsiao chuan*** (small-seal style): a much more abstract form with lines drawn in thicker, more even strokes and with more curves and circles used in a graceful, flowing style (Fig. 3–1).
8. ***chen-shu*** or ***kai-shu*** (regular style)has been in continuous use for nearly two thousand years. Every line, dot, and nuance of the brush can be controlled by the sensitivity and skill of the calligrapher. It is considered the highest art form in China, more important even than painting (Fig. 3–5).
9. ***li****,* the prehistoric character for the three-legged pot, which is now the word for tripod (Fig. 3–6).
10. **Tao***,* the cosmic spirit in Chinese culture that operates throughout the universe in animate and inanimate things.
11. **chop***,* a seal made by carving calligraphic characters into a flat surface of jade, silver, gold, or ivory. The raised surface is inked and the image is transferred to paper by stamping (Fig. 3–10).
12. **cinnabar**:a substance used to make a pastelike red ink for stamping.
13. **woodblock printing**:The negative spaces around characters and images are carved away from the wood. Ink is then applied to the wood, and it is pressed onto paper or other substrates to print the image (Fig. 3–16).
14. **relief printing**:The spaces around an image on a flat surface are cut away, the remaining raised surface is inked, and the inked image is transferred to the paper (Fig. 3–14).
15. ***dharani***:Buddhist charms printed and placed in pagodas to help lengthen one’s life and eventually lead to paradise (Fig. 3–14).
16. **Diamond Sutra**:the oldest surviving printed manuscript, consisting of seven sheets of paper pasted together to form a scroll conveying Buddha’s revelations to his elderly follower Subhuti (Fig. 3–15).
17. **accordion-style book**:folded book resembling a scroll that was folded like a railroad timetable instead of rolled.
18. **codex-style book**:stitched book with sequences of two pages of text printed from one block, then folded down the middle with the unprinted side of the sheet facing inward and the two printed pages facing out.
19. ***pen ts’ao***:a medical book on herbs with illustrations and calligraphy used for headings and a graphic design grid system used to separate the text into sections shown in the center of the right-hand page (Fig. 3–17).
20. **movable type**:in Asia, single characters made individually in a mixture of clay and glue and arranged side by side to compose full lines of text (Fig. 3–19).

# Key People and Their Major Contributions (in order of appearance)

1. **Cangjie**:inspired in about 1800 bce to invent writing by contemplating the claw marks of birds and footprints of animals, then developing elementary pictographs of things in nature.
2. **Prime Minister Li Si** (c. 280–208 bce): charged with designing the new standardized writing style, *hsiao chuan*.
3. **Li Fangying** (1695–1754 ce): wrote and illustrated the *Album of Eight Leaves,* showing how the vividly descriptive strokes of a bamboo brush join calligraphy, painting, poem, and illustration, into a unified communication (Fig. 3–7).
4. **Cai Lun**:the high governmental official credited with inventing paper.
5. **Pi Sheng** (1023–63 ce): Chinese alchemist who developed the concept of movable type.

**Chapter 4 – Illuminated Manuscripts**

**Key Terms** (in order of appearance)

1. **illuminated manuscript**:This name is used for all decorated and illustrated handwritten books produced from the time of the late Roman Empire until printed books replaced manuscripts after typography was developed in Europe around 1450 bce. The vibrant luminosity of gold leaf, which reflected light from the pages of handwritten books, gave the sensation of the page literally being illuminated.
2. **gold leaf**:a method of embellishing illuminated manuscripts by hammering the gold into a fine sheet of gold leaf and applying it over an adhesive ground. Burnishing for texture, punching, and tooling with metalworking tools were often used on gold leaf for design effects.
3. **scriptorium**:During the early Christian era, nearly all books were created in the monastic *scriptorium*, or writing room.
4. ***scrittori***:The head of the scriptorium was the *scrittori*, a well-educated scholar who understood Greek and Latin and functioned as both editor and art director, with overall responsibility for the design and production of the manuscripts. He laid out the pages to indicate where illustrations were to be added after the text was written. Sometimes this was done with a light sketch, but often a note jotted in the margin told the illustrator what to draw in the space.
5. ***copisti***: *a* production letterer, who spent his days bent over a writing table penning page after page in a trained lettering style.
6. **illuminator**:The illuminator*,* or illustrator, was an artist responsible for the execution of ornament and image in visual support of the text.
7. **colophon**:The colophon of a manuscript or book is an inscription, usually at the end, containing facts about its production. Often the scribe or designer (or, later on, the printer) is identified.
8. **musical notation**:invented by scribes working in medieval monasteries. As early as the ninth century, punctuation marks were gradually used to denote pauses and pitch changes for chants; this eventually evolved into the five-line staff.
9. **frontispiece**:Literary sources refer to manuscripts on vellum with a portrait of the author as a frontispiece*.*
10. **classical style**:typical of the manuscripts dating from the Roman and Greek eras. Lettered in rustic capitals in one wide column on each page, with illustrations the same width as the text column framed in bright bands of color (frequently red). Illustrated using a simple technique with a cinematic graphic sequence, somewhat like the contemporary comic book; illusionistic space, like the wall frescoes preserved at Pompeii. These are placed at the top, in the middle, or at the bottom of the page, adjacent to the passage illustrated. An example is the Vatican Vergil (Fig. 4–1).
11. **medieval**:The thousand-year medieval (meaning “middle”) era lasted from the fifth-century fall of Rome until the fifteenth-century Renaissance. After the Western Roman Empire collapsed in 476 bce, an era of dislocation and uncertainty ensued. Cities degenerated and became small villages; officials left their duties and moved to their country estates; government and law ceased to exist. Trade and commerce slumped and became almost nonexistent, for travel became extremely dangerous. Europe’s regional languages, customs, and geographic divisions started to form in isolated areas during this period. The general population languished in illiteracy, poverty, and superstition. The centuries following the decline of Rome saw Barbarian and Roman influences combine to produce a rich and colorful design vocabulary in the arts and crafts. The knowledge and learning of the classical world were almost entirely lost, but the Christian belief in sacred religious writings became the primary impetus for the preservation and making of books. Christian monasteries were the cultural, educational, and intellectual centers.
12. **uncials**:Written between two guidelines that were one *uncia* (the Roman inch) apart, these letters were actually invented by the Greeks as early as the third century bce. Uncials are rounded, freely drawn majuscule letters more suited to rapid writing than either square capitals or rustic capitals. The curves reduced the number of strokes required to make many letterforms, and the number of angular joints—which have a tendency to clog or close up with ink—was significantly reduced (Fig. 4–2).
13. ***uncia***:the Roman inch.
14. **semi-uncial** or **half-uncial**:Four guidelines were used instead of two, and strokes were allowed to soar above and sink below the two principal lines, creating true ascenders and descenders. The pen was held flatly horizontal to the baseline, which gave the forms a strong vertical axis. Half-uncials were easy to write and had increased legibility because the visual differentiation between letters was improved. Although some half-uncials appeared in the third century ce, they did not flourish until the late sixth century (Fig. 4–3).
15. **majuscule**:a capital letter.
16. **minuscule**: a small or lowercase letterform.
17. **ascenders**:strokes rising above the top guideline.
18. **descenders**:strokes dropping below the baseline.
19. **Celtic style**:Celtic design is abstract and extremely complex; geometric linear patterns weave, twist, and fill a space with thick visual textures, and bright, pure colors are used in close juxtaposition. This Celtic craft tradition of intricate, highly abstract decorative patterns was applied to book design in the monastic scriptoria, and a new concept and image of the book emerged. A series of manuscripts containing the four narratives of the life of Christ are the summit of Celtic book design (Figs. 4–4 through 4–9).
20. **carpet pages**:in Celtic design, full pages of decorative design bound into a manuscript, so called because the densely packed design has the intricate patterning associated with oriental carpets (Fig. 4–6).
21. **interlace**:in Celtic design, a two-dimensional decoration formed by a number of ribbons or straps woven into a complex, usually symmetrical design (Fig. 4–5).
22. **lacertines**:in Celtic manuscripts,interlaces created by animal forms (Fig. 4–7).
23. **diminuendo**:a decreasing scale of graphic information (Fig. 4–5).
24. ***scriptura scottia*** (insular script):an Irish variation of the half-uncial, written with a slightly angled pen. The full, rounded characters have a strong bow with ascenders bending to the right. A heavy triangle perches at the top of the ascenders, and the horizontal stroke of the last letter of a word, particularly e’s and t’s, zips out into the space between the words (Figs. 4–5 and 4–9**).**
25. **Caroline** or **Carolingian minuscules**:Developed as part of efforts to reform the alphabet, these were modeled after the ordinary writing script of the late antique period, combined with Celtic innovations (including the use of four guidelines, ascenders, and descenders), and molded into an ordered uniform script (Fig. 4–10). The Caroline minuscule is the forerunner of our contemporary lowercase alphabet. This clear set of letterforms was practical and easy to write. Characters were set apart instead of joined, and the number of ligatures was reduced. Much writing had become a slurred scrawl; the new alphabet restored legibility. The Caroline minuscule became the standard throughout Europe for a time, but as the decades passed, writing in many areas developed regional characteristics.
26. ***turba scriptorium***:Ordered by Charlemagne, a *turba scriptorium* (“crowd of scribes,” as Alcuin called them) was assembled to prepare master copies of important religious texts. Then the books and scribes were dispatched throughout Europe to disseminate reforms.
27. **labyrinth page**:a design of intricate geometry and intense, pure color made as a commemorative message, dating from ancient Greece and Rome and quite popular in medieval manuscripts (Fig. 4–14).
28. **apocalypse**:the terrible judgment and destruction of the earth foretold by the biblical book of Revelation and often depicted in medieval art and books (Fig. 4–15 and 4–16).
29. **textura**:a very functional lettering style in which all the vertical strokes in a word were drawn first, and then the serifs and the other strokes needed to transform the group of verticals into a word were added. Rounded strokes were almost eliminated. Letters and the spaces between them were condensed in an effort to save space on the precious parchment. The overall effect is one of a dense, black texture. Sometimes referred to as *letter de forme*, blackletter, or Old English (Fig. 4–18).
30. ***Haggadot***:Judaic illuminated manuscripts containing Jewish religious literature, including historical stories and proverbs—especially the saga of the Jewish exodus from Egypt (Figs. 4–20 and 4–21**).**
31. **Qur’an** or **Koran**:the Muslim holy book written in the Arabic alphabet and believed to contain great truths revealed by Allah (God) to Muhammad.
32. **aniconism**:religious opposition to representations of living creatures.
33. **Book of Hours**:Europe’s most popular illustrated manuscript, a private devotional volume containing religious texts for each hour of the day, prayers, and calendars listing the days of important saints (Fig. 4–24).

# Key People and Their Major Contributions (in order of appearance)

1. **Charlemagne**(742–814 ce): led a united Holy Roman Empire starting in 800 ce. He fostered a revival of learning and the arts. Charlemagne mandated the reform of illustration and writing by royal edict in 789 bce. Standardization of page layout, writing style, and decoration was attempted, resulting in the development of the Caroline minuscule (Fig. 4–10).