Chapter 17a

The Transformation of the West
(1450 – 1750)
The Renaissance and Reformation

Between the 1300s and 1500s, Europe experienced a period of cultural rebirth known as the Renaissance. During the same period, the Protestant Reformation and the Scientific Revolution reshaped European civilization.
What was the Renaissance?

- Time of “rebirth” after period of disorder and disunity of Medieval Ages.
- The Renaissance was a time of creativity and change in many areas—political, social, economic, and cultural. *Perhaps most important, however, were the changes that took place in the way people viewed themselves and their world.*
- Renaissance thinkers explored the human experience in the here and now. They emphasized *individual achievement.*
- The Renaissance ideal was the person with talent in many fields.
- A spirit of adventure and curiosity led people to explore new worlds.
Why did the Renaissance Begin in Italy?

The Renaissance was marked by a new interest in the culture of ancient Rome. Italy had been the center of the Roman empire.

The cities of Italy had survived the Middle Ages and grown into prosperous centers of trade and manufacturing.

A wealthy merchant class in the Italian city-states stressed education and individual achievement and spent lavishly on the arts.

Florence produced an amazing number of gifted poets, artists, architects, scholars, and scientists.
The Renaissance in Italy

- The Medici family were bankers and merchants and became one of the wealthiest and most powerful families in Florence.
- Cosimo dé Medici gained control of the Florentine government in 1434.
- Cosimo’s grandson, Lorenzo “the Magnificent” was a clever politician and generous patron of the arts.
Humanism

At the heart of the Italian Renaissance was an intellectual movement known as **humanism**.

Humanism was based on the study of classical culture and focused on worldly subjects rather than on religious issues.

Humanists studied the **humanities** (grammar, rhetoric, poetry, and history), the subjects taught in ancient Greece and Rome. They believed that education should stimulate creativity and develop the individual.

**Francesco Petrarch** assembled a library of Greek and Roman manuscripts.
The Impact of the Printing Press

Visual Source Documents 1 & 2
Writers wrote self-help books to help ambitious men and women rise in the Renaissance world.

Painters developed realistic style, learned rules of perspective, used shading to make objects look round and real, studied human anatomy, and used live models.

Portraits of well-known people to reflect individual achievement.

Architects rejected Gothic style and adopted columns, domes, and arches that had been favored by the Greeks and Romans.
Architecture

- Rejected Gothic style as disorderly.
- Returned to Classical style with columns, arches, and domes.
- Filippo Brunelleschi created a majestic dome for the cathedral in Florence, modeled after the Pantheon in Rome.
# Three Geniuses of Renaissance Art

<table>
<thead>
<tr>
<th>LEONARDO</th>
<th>MICHELANGELO</th>
<th>RAPHAEL</th>
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</thead>
<tbody>
<tr>
<td>Made sketches of nature and of models</td>
<td>Talented sculptor, engineer, painter, architect, and poet</td>
<td>Studied the works of Michelangelo and Leonardo</td>
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<tr>
<td>Dissected corpses to learn how the human body worked</td>
<td>Sculpted the <em>Pieta</em> and statue of David</td>
<td>Paintings blended Christian and classical styles</td>
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<tr>
<td>Masterpieces include <em>Mona Lisa</em> and <em>The Last Supper</em></td>
<td>Painted huge mural to decorate the ceiling of the Sistine Chapel in Rome</td>
<td>Best known for paintings of the Madonna, the biblical mother of Jesus</td>
</tr>
<tr>
<td>Studied botany, anatomy, optics, music, architecture, and engineering</td>
<td>Designed the dome for St. Peter’s Cathedral in Rome</td>
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<td>Made sketches for flying machines and undersea boats</td>
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*Leonardo da Vinci* was a prodigious inventor and artist known for his contributions to science and technology. He was curious about the natural world and studied botany, anatomy, optics, music, architecture, and engineering. His masterpieces include *Mona Lisa* and *The Last Supper*. He was also interested in aerodynamics and made sketches for flying machines and undersea boats.

*Michelangelo di Lodovico Buonarroti Simoni* was a talented sculptor, engineer, painter, architect, and poet. He is known for his sculptures such as the *Pieta* and the statue of *David*. He also painted a huge mural to decorate the ceiling of the Sistine Chapel in Rome and designed the dome for St. Peter’s Cathedral in Rome.

*Raffaello Sanzio da Urbino,* better known as Raphael, was a master painter and architect. He studied the works of Michelangelo and Leonardo and his paintings blended Christian and classical styles. He is best known for paintings of the Madonna, the biblical mother of Jesus.
Three Geniuses of Renaissance Art

- Leonardo da Vinci was an accomplished painter and inventor.
Three Geniuses of Renaissance Art

- **Leonardo da Vinci** was an accomplished painter and inventor.

- **Michelangelo** was a many-sided genius – sculptor, engineer, painter, architect, and poet.
Leonardo da Vinci was an accomplished painter and inventor.

Michelangelo was a many-sided genius – sculptor, engineer, painter, architect, and poet.

Raphael painted works that blended Christian and classical styles.

- Raphael painted works that blended Christian and classical styles. 
  - The School of Athens
  - Raphael’s Madonna and Child
The Impact of the Printing Press

Visual Source Documents 3 & 4

Section 3

Bell Work

A briefe and true report of the new found land of Virginia: of the commodities there found and to be rysed, as well martchantable, as others for victual, building and other necessaries for those that are and shall be the planters there; and of the nature and manners of the natural inhabitants: Discoverd by the English Colony there setled by Sir Richard Greinule Knight in the yeere 1585. which remained vnder the government of Rafe Lane Esquire, one of her Maisters Esquires, during the space of twelve monethes; as the speciall charge and direction of the Honourable Sir WALTER RALEIGH Knight, Lord Warden of the flanerries, who therein hath beene favour and authorized by her Maister and her letters patents.

Directed to the Adventurers, Fauourers, and Wellwillers of the action for the inhabiting and planting there:

By Thomas Harrot, servants to the abouenamed Sir Walter, a member of the Colony, and there employed in discovering.

Imprinted at London 1588.
Baldassare Castiglione wrote *The Book of the Courtier* describing the manners, skills, learning, & virtues a courtier should have.

The ideal courtier was a well-educated, well-mannered aristocrat, who mastered many fields from poetry to music to sports, while avoiding extremes.

Men should be athletics, good at games, play a musical instrument, know literature and history.

Women are a balance to men and should be graceful and kind, lively, but reserved, and beautiful, “for outer beauty is the true sign of inner goodness.”
Political Theory during the Renaissance

- Niccolò Machiavelli wrote a political treatise called *The Prince*, which was published in 1513.

- In it he used realism to discuss how rulers should seize and maintain power using Greek and Roman examples.

- In an age of ruthless politics, he stressed that the ends justified the means, urging rulers to use whatever methods were necessary to achieve their goals.

- Getting results were more important than keeping promises.
The Renaissance began in northern Europe 100 years later than in Italy. It began in Flanders and later spread to Spain, France, Germany, and England.

Albrecht Dürer, traveled to Italy to study. Through his art and essays, he helped spread the Renaissance to Germany the “German Leonardo,” applied Italian painting methods to engravings.

*The Cannon*, Dürer's largest etching, 1518

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*Self-Portrait (1500)* by Albrecht Dürer
Artists of the Northern Renaissance

- Flemish painters **Jan & Huber van Eyck** painted townspeople in rich, realistic detail and developed oil paint.

- **Pieter Bruegel** used it in vibrant colors to portray peasant life, rather than religious themes. His work influenced later Flemish artists.

↑ **Bruegel's The Painter and The Connoisseur** drawn c. 1565 is thought to be a self-portrait

← **The Peasant Wedding**, 1567
**Artists of the Northern Renaissance (cont.)**

- **Peter Paul Reubens** blended the realistic traditions of Flemish painters with the classical themes and artistic freedom of the Italian Renaissance.


Northern Humanists

Like their Italian counterparts, northern humanists stressed education and classical learning. At the same time, they believed that the revival of ancient learning should be used to bring about religious and moral reforms.

Two humanists:

- **Desiderius Erasmus** called for reform of the church and for the Bible to be translated from Latin into the *vernacular*, or language of ordinary people.
- **Thomas More** pressed for social reform and wrote of a **utopian** society.

Woodcut by Ambrosius Holbein for a 1518 edition of Thomas More's *Utopia*.
# Writers of the Northern Renaissance

<table>
<thead>
<tr>
<th>RABELAIS</th>
<th>SHAKESPEARE</th>
<th>CERVANTES</th>
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<tbody>
<tr>
<td>French humanist who was a monk, physician, Greek scholar, and author</td>
<td>English poet who was the towering figure of Renaissance literature</td>
<td>Spanish author who wrote <em>Don Quixote</em>, which mocks romantic notions about medieval chivalry</td>
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<tr>
<td>Offered opinions on religion, education, and other subjects in <em>Gargantua and Pantagruel.</em></td>
<td>Wrote 37 plays that are still performed around the world</td>
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<td></td>
<td>His love of words vastly enriched the English language.</td>
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A printing revolution took place when:

- In 1450, **Johannes Gutenberg** invented the printing press, which made the mass publication and circulation of literature possible in Europe.
- Derived from the presses farmers used to make olive oil, the first printing press used a heavy screw to force a printing block against the paper below. An operator worked a lever to increase and decrease the pressure of the block against the paper.
- In 1456, he printed the first complete edition of the Bible.
- Movable type was developed twenty years later.

**IMPACT:**

- Printed books were cheaper & easier to make.
- With books more readily available, more people learned to read.
- Readers gained access to expanded knowledge and ideas.
Matteo Ricci on Chinese Printing

“From such a block a skilled printer can make copies with incredible speed, turning out as many as fifteen hundred copies in a single day. Chinese printers are so skilled in engraving these blocks, that no more time is consumed in making one of them than would be required by one of our printers in setting up a form of type and making the necessary corrections. This scheme of engraving wooden blocks is well adapted for the large and complex nature of the Chinese characters, but I do not think it would lend itself very aptly to our European type which could hardly be engraved upon wood because of its small dimensions.”

- Is Ricci saying that Chinese block printing was in general a more efficient way of printing than Europe’s use of movable type, or just that it was better for the Chinese?

- If block printing was as good as Ricci says here, why do you suppose that printing with metal movable type became the method used all over the world, not just in Europe?
The Protestant Reformation

In the 1500s, calls for reform unleashed forces that would shatter Christian unity. The movement is known as the Protestant Reformation.

People who joined the movement for reform called themselves Protestants, for those who “protested” papal authority.

St. Peter’s Basilica from the River Tiber. The iconic dome dominates the skyline of Rome.
Abuses in the Church

Beginning in the late Middle Ages, the Church had become increasingly caught up in worldly affairs.

- Popes competed with Italian princes for political power.
- Popes fought long wars to protect the Papal States against invaders.
- Some clergy promoted the sale of indulgences.
- Popes led lavish lifestyles and spent a great deal of money on the arts.
- The Church increased fees for services such as weddings and baptisms to finance worldly projects.
Luther’s Protest

- In 1517, priest Johann Tetzel offered indulgences in exchange for donations made for the rebuilding of the Cathedral of St. Peter in Rome.
- Martin Luther drew up his 95 Theses in protest.
- The church called on Luther to recant his views and excommunicated him when he refused.
Luther’s Teachings

- Salvation was achieved by faith alone. Luther rejected Church doctrine that good deeds were necessary for salvation.
- The Bible is the sole source of religious truth. Luther denied other authorities, such as Church councils or the pope.
- Advocated a “priesthood of the saints” and allowed clergy to marry. Luther rejected the idea that priests and Church officials had special powers.
- Translated the Bible into the vernacular so everyone had access to it and advocated schools for girls.
- Banned indulgences, confession, pilgrimages, and prayers to saints.
- Became the start of the Lutheran Church.
Luther’s ideas spread quickly in northern Germany and Scandinavia.

- Many clergy saw Luther’s reforms as the answer to Church corruption.
- German princes hoped to throw off the rule of both the Church and the Holy Roman emperor.
- Germans supported Luther because of feelings of national loyalty.
- In 1524, the Peasants’ Revolt in Germany was an attempt to end serfdom, but violence caused Luther to denounce the rebellion and it was put down.
- The Peace of Augsburg in 1555, restored peace by allowing princes to choose their religion.
John Calvin

The most important Protestant reformer to follow Martin Luther was John Calvin.

- Calvin followed most of the teachings of Martin Luther, such as the idea that salvation was by faith and the Bible was the only source of truth.

- He also preached predestination, the idea that God had long ago determined who would gain salvation.

- In 1541, Calvin set up a theocracy in Geneva. A theocracy is a government run by Church leaders.

- Calvinist stressed hard work, discipline, thrift, honesty, morality.
Spread of Calvinism

- In several of these countries, Calvinists faced opposition and persecution from other religious groups.

- Reformers from all over Europe visited Geneva and returned home to spread Calvinist ideas.

- By the late 1500s, Calvinism had taken root in Germany, France, the Netherlands, England, and Scotland.

- In several of these countries, Calvinists faced opposition and persecution from other religious groups.

- In Germany, Calvinist battled Catholics & Lutherans.

- In France, Calvinists, called Huguenots, battled Catholics for 30 years for control of the government.

- In the Netherlands Calvinists formed the Dutch Reform Church.

- In Scotland, John Knox led a religious rebellion and overthrew Catholic Queen. Then they formed the Scottish Presbyterian Church.
John Foxe on William Tyndale

“He perceived that it was not possible to establish the lay people in any truth, except the Scriptures were so plainly laid before their eyes in their mother tongue that they might see the meaning of the text; for else, whatsoever truth should be taught them, the enemies of the truth would quench it, either with reasons of sophistry, and traditions of their own making, founded without all ground of Scripture; or else juggling with the text, expounding it in such a sense as it were impossible to gather of the text, if the right meaning thereof were seen.”

- How do you suppose people in Europe gained their sense of “truth,” especially about religious and philosophical matters, before the age of printing and mass literacy?

- What do you suppose a devout Catholic would have said about Foxe’s line here about “reasons of sophistry, and traditions of their own making”? 
As the Reformation continued, hundreds of new Protestant sects sprang up. These sects often had ideas that were even more radical than those of Luther and Calvin.

One radical group, the Anabaptists, rejected infant baptism, arguing they are too young to accept the Christian faith.

- Some Anabaptists wanted to abolish private property.
- Others wanted use violence to speed up judgment day.
- Most called for religious tolerance and separation of Church and state.

Today, Baptists, Quakers, Mennonites, and Amish trace ancestry to the Anabaptists.
The English Reformation

- English King **Henry VIII**, first opposed to Protestants, and was awarded the title “Defender of the Faith.”

- In 1528, he sought to **annul** his marriage of 18 years to Catherine of Aragon, since Catholic law forbid divorce.

- He wanted to marry Anne Boleyn in hopes of having a son.

- The pope refused Henry’s request.

- Henry took the Church from the pope’s control and created the Church of England, making himself its head.
The English Reformation

- Eventually he married four more times, but only had one son, Edward.
- Edward became king at age 10 when Henry VIII died, but died in his teens.
- Protestant King Edward VI brought Protestant reforms to England.
- Mary Tutor, Catherine’s daughter, succeeded him and reinstated the Catholic Church in England.
- Queen Mary had hundreds of English Protestants burned at the stake.
- Queen Elizabeth
- When she died, Elizabeth I, Anne Boleyn’s daughter became Queen and forged a compromise between Protestants and Catholics.
- She then reformed the Church of England.
The Catholic Reformation

In response to the Protestant Reformation, Pope Paul III led a vigorous reform movement within the Catholic Church.

Pope Paul III set out to revive the moral authority of the Church and roll back the Protestant tide. To accomplish these goals, he:

- Called the Council of Trent to establish the direction that reform should take;
- Strengthened the Inquisition;
- Recognized a new religious order, the Jesuits, founded by Ignatius of Loyola, to combat heresy and spread the Catholic faith.

Teresa of Avila set up a new order of nuns, which lived in isolation and dedicated themselves to prayer and meditation.
Widespread Persecution

During this period of heightened religious passion, both Catholics and Protestants fostered intolerance.

Catholics killed Protestants and Protestants killed Catholics.

Between 1450 and 1750, tens of thousands of people, mostly women, died as victims of witch hunts to combat “magic” linked to heresy, believed to come from the devil.

In some places, Jews were forced to live in ghettos, or separate quarters of the city. In other places, they were expelled from Christian lands and their books and synagogues were burned.
<table>
<thead>
<tr>
<th>Immediate Effects</th>
<th>Long-Term Effects</th>
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<tbody>
<tr>
<td>Peasants’ Revolt</td>
<td>Religious wars in Europe</td>
</tr>
<tr>
<td>Founding of Lutheran, Calvinist, Anglican, Presbyterian, and other Protestant churches</td>
<td>Catholic Reformation</td>
</tr>
<tr>
<td>Weakening of Holy Roman Empire</td>
<td>Strengthening of the Inquisition</td>
</tr>
<tr>
<td>Luther calls for Jews to be expelled from Christian lands</td>
<td>Jewish migration to Eastern Europe</td>
</tr>
<tr>
<td></td>
<td>Increased anti-semitism</td>
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</tbody>
</table>
Major European Religions about 1600

Note: Not all minority religious groups are shown. Jews were dispersed throughout Europe.
During the Scientific Revolution, startling discoveries changed the way Europeans viewed the physical world.

- Until the mid-1500s, Europeans accepted Ptolemy’s theory, that the Earth was the center of the universe. This theory matched the teachings of the Church.

- In 1543, Nicolaus Copernicus proposed a heliocentric, or sun-centered, model of the universe.

- In the late 1500s, Tycho Brahe set up an observatory and provided evidence to support Copernicus’ theory.

- Johannes Kepller supported Copernicus’ theory and proposed that each planet moved around the sun in an oval-shaped orbit called an ellipse.

- Galileo Galilei built a telescope and confirmed the heliocentric model. This discovery caused an uproar and Galileo was tried before the Inquisition.
Figure of the heavenly bodies — An illustration of the Ptolemaic geocentric system by Portuguese cosmographer and cartographer Bartolomeu Velho, 1568 (Bibliothèque Nationale, Paris)
Heretical Ideas

- Galileo’s support for Copernicus’s ideas was controversial when a majority of philosophers and astronomers still supported the geocentric view of the universe.
- After 1610, he began publicly supporting the heliocentric view.
- In 1616, the Church condemned him for challenging the idea that the heavens were fixed and perfect and warned him to abandon his support for it.
- In 1632, he defended his views in his most famous work, *Dialogue Concerning the Two Chief World Systems*.
- In 1633, he was tried before the Inquisition and forced to withdraw his “heresies” and spent the rest of his life under house arrest.
A New Scientific Method

- Francis Bacon and René Descartes rejected Aristotle’s scientific assumptions that truth is known at the beginning.
- Bacon stressed experimentation and observation.
- Descartes human reasoning leads to understanding and said, “I think, therefore I am.”
A New Scientific Method (cont.)

This new approach to science depended on observation & experimentation.

- **A hypothesis** is a possible explanation for an observed reaction.
- This is then tested with more observation and experimentation, from which scientific laws are developed.
- After reaching conclusions, it is retested repeatedly.
- This step-by-step process became known at the **scientific method**.
The 1500s and 1600s saw breakthroughs in many branches of science.

- **Isaac Newton** discovered the force that keeps the planets moving around the sun – **gravity**.

- In 1687, he published *Mathematical Principals of Natural Philosophy*, explaining that all motion in the universe can be measured and explained mathematically.

- Linked physics and astronomy and led to the development of calculus.
Other Scientific Advances

- **Robert Boyle** distinguished between individual elements and chemical compounds and explained the effect of temperature and pressure on gases.

- **Andreas Vesalius** published the first accurate and detailed study on human anatomy.

- **Ambroise Paré** developed a more effective ointment for infections and developed a technique for closing wounds with stitches.

- **William Harvey**, described the circulation of the blood through veins and arteries for the first time.

- **Anthony van Leeuwenhoek** perfected the microscope and became the first human to see cells and microorganisms.