The Ultimate AP® European History Unit 4 Cheat Sheet

4.1–4.2 Scientific Revolution: The Cosmos

Old View → New View

Old authorities: Aristotle (physics), **Ptolemy** (geocentric, Earth at center), Galen (medicine); backed by the Church.
New approach: observation, experiment + math replace reliance on ancient texts + church doctrine.

Thinker	Key work	Big idea
Copernicus	On the Revolutions, 1543	heliocentric
Brahe	naked-eye data	precise records
Kepler	laws, 1609–19	elliptical orbits
Galileo	Starry Messenger, 1610	telescope proof
Newton	Principia, 1687	univ. gravitation

How It Built

Copernicus: Sun at center, but kept circular orbits; published at death (1543) → slow impact at first.
Kepler used Brahe's data → planets move in **ellipses**, not perfect circles; math describes the heavens.
Galileo: moons of Jupiter, sunspots, phases of Venus → heavens imperfect + not all orbit Earth.
Galileo's trial (1633): *Dialogue* (1632) → Inquisition forces him to recant; house arrest for the rest of his life.
Newton: the same laws of motion + gravity rule heaven + Earth → the universe as an orderly machine.

Why It Mattered

Natural laws discoverable by reason → thinkers apply the same idea to government + society (4.3).
Religion vs science: Catholic Church bans Copernicus' book (1616); Protestants also reject heliocentrism at first.
Patronage: princes fund science for prestige; Galileo named Jupiter's moons for the Medici family.

⚠ Not instant: Copernicus → Newton took ~150 years; many scientists stayed devout Christians.

✓ Causation: Sci Rev's faith in reason + natural law → Enlightenment's push to reform society.

4.2 Methods, Medicine & Institutions

Two Methods

Thinker	Method	Key claim
Bacon	inductive	Novum Organum, 1620
Descartes	deductive	"I think, therefore I am"

Bacon (empiricism): observe + experiment → build general laws from specific facts; distrust old authority.
Descartes (rationalism): doubt everything, rebuild knowledge w/ math + logic; *Discourse on Method* (1637).
Scientific method blends both: hypothesis + experiment + math, checked by repeated observation.

Medicine & Chemistry

Vesalius: *On the Fabric of the Human Body* (1543), dissection-based anatomy corrects Galen's errors.
Microscope: van Leeuwenhoek sees microorganisms; Hooke's *Micrographia* (1665) names "cells."
Harvey (1628): blood circulates, pumped by the heart. **Boyle**: gas pressure ↔ volume, modern chemistry.

Institutions & Networks

Royal Society (London, 1660) + **French Academy of Sciences** (1666): state-backed, share + test findings.
Print, journals + letters spread results fast across borders → a Europe-wide scientific community forms.
Women: Margaret Cavendish (natural philosophy), Maria Winkelmann (comet, 1702), Émilie du Châtelet (Newton).
Applied science: better navigation, maps + instruments (chronometer, telescope) → aids trade + empire.

Continuity

Old beliefs persist: Newton studied alchemy, Kepler cast horoscopes; witch trials fade only after ~1680.

⚠ Women were largely barred from universities + academies; Winkelmann was denied a post in Berlin.

✓ SAQ: name a thinker, his method + 1 specific way his work broke with Aristotle, Galen or Church teaching.

4.3 The Enlightenment: Thinkers

Political Thought

Thinker	Work	Idea
Hobbes	Leviathan, 1651	absolute sov.
Locke	Two Treatises, 1689	natural rights
Montesquieu	Spirit of Laws, 1748	sep. of powers
Rousseau	Social Contract, 1762	general will

Hobbes: life in nature "nasty, brutish and short" → people give power to a strong sovereign for order.
Locke: life, liberty + property; govt by consent; people may overthrow a govt that violates their rights.
Locke's tabula rasa: mind is a blank slate shaped by experience → education + environment matter.

Society, Law & Economy

Voltaire: religious toleration, free speech, satire of Church + nobles; *Candide* (1759); a deist; "crush the infamous thing."
Beccaria: *On Crimes and Punishments* (1764) → oppose torture + death penalty; punishment should fit.
Adam Smith: *Wealth of Nations* (1776) → laissez-faire, free markets vs. mercantilism. **Physiocrats**: land = wealth.
Diderot: *Encyclopédie* (1751–72) gathers + spreads knowledge; censored for attacking Church + state.
Kant: "What Is Enlightenment?" (1784) → "dare to know" (*sapere aude*); use your own reason, freely.

Women & Rights

Wollstonecraft: *Vindication of the Rights of Woman* (1792) → women need equal education to reason.
Olympe de Gouges: *Declaration of the Rights of Woman* (1791). Rousseau wanted women in the home.

⚠ Hobbes ≠ Locke: both use a social contract, but Hobbes → absolutism; Locke → limited govt + revolt.

✓ DBQ: group documents by thinker type (political, legal, economic) + show how each applied reason.

4.3 Spread, Religion & Reaction

How Ideas Spread

Salons: hosted by elite women (Mme Geoffrin) → philosophes, nobles + writers debate new ideas.
Coffeehouses, reading societies, Masonic lodges, lending libraries → a new **public sphere** for open debate.
Print: newspapers, pamphlets, journals boom; literacy ↑, esp. in Protestant NW Europe + in cities.
Republic of Letters: cross-border network of writers; French = the shared language of the educated elite.
Censored ideas still travel: books smuggled from the Dutch Republic + Switzerland, where print is freer.

Religion & Reason

View	Belief	Example
Deism	God = clockmaker	Voltaire
Skepticism	doubt dogma	Bayle, Hume
Atheism	no God	d'Holbach
Pantheism	God = nature	Spinoza

Religious toleration spreads as an ideal: Joseph II's **Edict of Toleration** (1781) for Protestants; Jews get edicts in 1782.
Jewish Enlightenment (Haskalah): Moses Mendelssohn urges Jews to join European culture + keep faith.

Faith Pushes Back

Revivals stress emotion + personal faith: Pietism (German lands), **Methodism** (John Wesley, England).
Censorship: Church + states ban books (Encyclopédie); many philosophes publish abroad or anonymously.
Jansenism (France): Catholic movement stressing grace + strict morals; Jesuits + crown oppose it.

⚠ The Enlightenment was mostly elite + urban; most peasants stayed devout + barely touched by it.

✓ Continuity + change: religion did not vanish; it split into deist elites vs. revival-minded masses.

4.4 18th-Century Society & Demographics

Agricultural Revolution

Where: began in the Dutch Republic + England (1600s–1700s), then spread unevenly across W. Europe.

Change	Who/what	Effect
Crop rotation	Townshend, turnips	no fallow field
Seed drill	Jethro Tull, 1701	higher yields
Enclosure	English gentry	landless poor ↑
New crops	potato, maize	more calories

Enclosure: common lands fenced into private farms → efficient but pushes small farmers into wage labor.

Population Boom

Causes: better food supply, fewer famines, last big W. European plague (Marseille, 1720), new crops.
Result: pop. grows fast after ~1750 → more workers + consumers, but rural poverty + land hunger ↑.
Medicine: smallpox inoculation spreads (Lady Mary Wortley Montagu); still, infant deaths remain high.

Economy & Family

Cottage industry (putting-out): merchants supply raw wool; rural families spin + weave it at home for pay.
Industrious revolution: families work more hours to buy consumer goods (tea, sugar, cotton, coffee).
Family: European marriage pattern → late marriage, nuclear households; childhood seen as its own stage.
Cities grow (London ~1 million by 1800): a new middle class, but crowding, disease + crime rise too.
Moral economy: when bread prices spike, crowds riot + force "just prices"; women often lead these riots.

⚠ Gains uneven: E. Europe kept serfdom + old farming; W. Europe commercialized much faster.

✓ LEQ causation: Ag Rev → pop. growth + labor surplus → cottage industry → sets up the Industrial Revolution.

4.5 18th-Century Culture & Arts

Art Styles

Style	Traits	Artists
Baroque	drama, grandeur	Bernini, Rubens
Rococo	light, playful	Watteau, Fragonard
Neoclassical	order, virtue	David

Baroque (17th c.): emotional, grand; served Counter-Reformation Church + absolute kings (Versailles).
Rococo (early–mid 18th c.): pastel, ornate, aristocratic leisure + romance (Fragonard's *The Swing*, 1767).
Neoclassicism (late 18th c.): Greek + Roman models, civic duty; David's *Oath of the Horatii* (1784).
Shift: Rococo's private pleasure → Neoclassicism's public virtue mirrors Enlightenment + revolution.
Dutch art (17th c.): Rembrandt, Vermeer paint merchants + daily life for a market of middle-class buyers.

Music & Literature

Music: Bach + Handel (Baroque); Haydn + Mozart (Classical) → public concerts, paying middle-class crowds.
Novel rises: Defoe's *Robinson Crusoe* (1719), Richardson's *Pamela* → private life + middle-class readers.

Who Consumes Culture

Patronage shifts: court + Church → market of middle-class buyers, subscribers + public audiences.
Grand Tour: young elites travel to Italy → classical ruins feed the Neoclassical revival (Pompeii dug, 1748).
Popular culture: almanacs, chapbooks, festivals, Carnival; elites start to pull away from these traditions.
Literacy ↑, esp. among urban men + women in NW Europe → more readers for newspapers + novels.

⚠ Don't mix up Rococo + Neoclassical: Rococo = frivolous aristocratic; Neoclassical = serious, moral.

✓ Image MCQ: ornate pastel scene of nobles at leisure → Rococo; stern Roman scene → Neoclassical.

4.6 Enlightened & Other Approaches to Power

Enlightened Absolutism

Idea: rulers use reason to reform + strengthen the state, but keep absolute power. Reform from above.

Ruler	Reforms	Limits
Frederick II, Pr.	toleration, no torture	kept serfdom
Catherine II, Rus.	Nakaz (1767)	serfdom worse
Joseph II, Aus.	ended serfdom 1781	reversed later

Frederick the Great (r. 1740–86): "first servant of the state"; law codes, schools, religious toleration.
Catherine the Great (r. 1762–96): wrote to Voltaire + Diderot; **Pugachev Rebellion** (1773–75) → backs nobles.
Charter of the Nobility (1785): Catherine confirms nobles' freedom from service + tax → serfs lose more.
Maria Theresa (r. 1740–80): centralizes Habsburg taxes + army, limits labor dues serfs owe, starts state schools.
Joseph II (r. 1780–90): Edict of Toleration, closes monasteries, ends serfdom; nobles resist → much undone.

Wars & Balance of Power

War of Austrian Succession (1740–48): Frederick seizes **Silesia** from Maria Theresa; Prussia rises.
Seven Years' War (1756–63): Diplomatic Revolution (France + Austria allies); Britain wins in N. America + India.
Partitions of Poland (1772, 1793, 1795): Russia, Prussia + Austria split it → Poland vanishes until 1918.

Other Paths

Britain: Parliament + cabinet govt; Walpole as 1st PM (1721–42). **France**: war debt → crisis by 1780s.
Russia + Prussia rely on nobles to run army + countryside → reforms stop where noble privilege begins.

⚠ "Enlightened" ≠ democratic. These monarchs reformed to build state power, not to share it w/ subjects.

✓ Comparison LEQ: contrast what each ruler reformed vs. kept, + why (nobles, war, revenue, stability).

4.7 Causation & Exam Strategy

Cause → Effect Chains

Sci Rev → natural laws found by reason → philosophes seek natural laws of govt, economy + society.
Enlightenment → challenges to divine right, Church power + privilege → American + French Revolutions.
Ag Rev → food surplus → population ↑ → cheap labor + consumers → Industrial Revolution (Unit 6).
Seven Years' War debt → French fiscal crisis → Estates-General (1789) → French Revolution (Unit 5).
Ideas → reform: Beccaria's ideas → Frederick II + Joseph II limit torture; Smith → later free-trade policy.

Long-term	Short-term
Sci Rev, Enlightenment	bad harvests, bread prices
Rising middle class	royal debt, taxes
Critique of privilege	Estates-General call

Writing Moves

Thesis: make a claim that answers the prompt + names 2–3 lines of reasoning (e.g., ideas, economics, war).
Contextualize: Westphalia (1648), absolutism, Reformation divisions set the stage for Unit 4 changes.
Sourcing (HIPP): historical situation, intended audience, purpose, point of view → explain why it matters.
Complexity: show both change + continuity (reason rises, yet faith + serfdom persist in the east).

Key Terms

Philosophes, **public sphere**, **deism**, **natural rights**, **laissez-faire**, **enlightened absolutism**, **salon**.
Periodization: Unit 4 spans c. 1648–1815 + overlaps Unit 5, where these ideas meet revolution + war.

⚠ Causation ≠ sequence. Explain HOW one event led to another; "and then" alone isn't analysis.

✓ SAQ formula: answer in 1 sentence, give 1 specific example (name + date), then explain the link.