



## **PiXL Gateway: Progression – History**

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Year 12-13 History

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## I. History Vocabulary

### HISTORY:

Currently, within the History section of the app, we have the following units:

- Civil Rights in the USA
- Democracy and Dictatorships in Germany
- Italy 1900-1946

Civil Rights in the USA Keywords and Definitions

Word	Definition
freedom	Freedom is the right to act, speak or think as one wants.
civil rights	Civil rights are the rights of citizens to political and social freedom and equality.
slavery	Slavery is the system of owning slaves.
negro	Negro is a dated and offensive term for black people.
citizen	A citizen is a person who is legally recognised by the state.
discrimination	Discrimination is the prejudicial treatment of different types of people.
segregation	Segregation is the enforced separation of different racial groups.
state (Law)	In American history and politics, a state law is applicable to one state in the USA.
federal (Law)	In American history and politics, a federal law is applicable to all states in the USA.
amendment	In American history and politics, an amendment is an article added to the US constitution.
boycott	A boycott is the refusal to engage in a policy or event as a form of protest.
strike	In regard to the rights of workers, a strike is the refusal to work as a form of organised protest.
industrialisation	Industrialisation is the development of industries in a country or region on a wide scale.
capitalism	Capitalism is an economic and political system based on private enterprise.
communism	Communism is an economic and social system in which all property is owned by the community.
socialism	In Marxist theory, socialism is a transitional state between capitalism and communism of an economic and social system in which all property is owned by the community.
trade union	A trade union is an organisation of workers by trades or professions formed to protect their rights.
nomadic	Nomadic means a person or group of people who are not settled in one place.
polygamy	Polygamy is the practice of having more than one wife or husband at the same time.
feminism	Feminism is the belief in establishing equal political, economic and social rights for women.
laissez-faire	Within this topic in history, laissez-faire is a belief that government should not regulate the economy.
suffrage	Suffrage is the right to vote.
judiciary	The judiciary is the judicial authorities of a country.

public sector	The public sector is businesses or industries owned and managed by the state.
private sector	The private sector is businesses or industries owned and managed privately.
real wages	Real wages is a term used to describe what wages can actually buy.
radical	Radical means extreme, far-reaching and, or, thorough.
rhetoric	Rhetoric is language designed to have a persuasive or impressive effect.
bipartisan	Bipartisan is the cooperation of two opposing political parties.
habeas corpus	Habeas corpus is the right not to be detained unlawfully.
American Dream	The American Dream is the ideal of equality of opportunity allowing all Americans the ability to achieve.
Melting Pot	In American history, the Melting Pot is a place where different people are mixed together.
Manifest Destiny	In American history, Manifest Destiny is the belief that Americans had a God-given right to settle the continent of America.
Jim Crow	In American history, Jim Crow is a dated and offensive term for black people and, or, the system of segregation.
dejure segregation	Dejure segregation is the separation of the races by law.
defacto segregation	Defacto segregation is the separation of the races by social and economic opportunities and circumstances.
sharecropping	Sharecropping is a system of farming in which land is rented in return for a share of the crops produced.
Reconstruction	In American history, Reconstruction was the period of time immediately after the civil war.
scab labour	Scab labour are workers who are willing to work during strikes.
closed shop	In this topic and context, a closed shop is a workplace where one union dominates and workers have to belong to that union.
blue collar	Blue collar relates to manual work or workers.
white collar	White collar relates to professional, technical or clerical work or workers.
yellow-dog contract	Yellow-dog contracts are contracts signed by workers agreeing to not join a union.
welfare capitalism	Welfare capitalism was a policy in America in the 1920s where employers offered improved working conditions and benefits in return for the establishment of unions under their direct control.
Social Darwinism	Social Darwinism is a dated theory that humans are subject to the same Darwinian laws of natural selection as plants and animals.
nativism	In American history and politics, nativism is the policy of protecting the interests of native-born or established inhabitants against those of immigrants.
temperance	Temperance was the belief that alcohol was a social evil and should be prohibited.
ethnocentric	Ethnocentric means evaluating other cultures according to preconceptions originating from one's own culture.
pan-Africanism	Pan-Africanism is a belief in the need for unity and solidarity among Africans all over the world.
bifurcation	In American history, bifurcation was the splitting of the black community into two economic, and thus social and political, groups.

## Democracy and Dictatorships in Germany Keywords and Definitions

Word	Definition
alliance	An alliance is a relationship between two parties based upon a shared interest.
democracy	A democracy is a system of government using elected representatives.
dictatorship	A dictatorship is a state led by a dictator.
dictator	A dictator is a ruler with total power over a country.
constitution	The constitution is the set of principles establishing how a country is governed.
conscription	Conscription is compulsory military service for a set period of time.
autocracy	Autocracy is a system where one person has absolute rule.
autonomy	Autonomy is the right of self-government.
black Market	The Black Market is an underground economy where goods are sold and purchased without regulations.
federal	Federal is a system of government in which several states form a union but remain independent in internal affairs.
Jewish people	Jewish people are united through the religion or ethnicity and culture of Judaism.
anti-Semitism	Anti-Semitism means hostility to, or prejudice against Jewish people.
eugenics	Eugenics is the dated scientific programme advocating controlled breeding for the genetic improvement of the race.
rearmament	Rearmament is the process of developing a new supply of weapons.
hard currency	Hard currency is a currency that is unlikely to fluctuate or depreciate suddenly or greatly.
nationalism	Nationalism is the belief in and support for a national identity and sovereignty.
occupying powers	In this topic, the occupying powers were the USA, the USSR, France and Great Britain who occupied Germany post World War Two.
passive resistance	Passive resistance is a form of opposition without the use of force.
pogrom	A pogrom is an organised massacre of a particular ethnic group. The term is associated strongly with actions taken against Jewish people in Russia, Eastern Europe and Germany.
proletariat	The proletariat are working-class people. The term is often used in regard to Marxism and communism.
reparations	Reparations are war damages. The payment of money and the transfer of resources from the defeated to the victor after a war.
Reichstag	The Reichstag is the German state parliament.
show trial	A show trial is a trial held in public to influence public opinion rather than ensure justice.
proportional representation	Proportional representation is a form of democracy in which the number of votes won in an election determines the number of seats won in parliament.
coalition government	A coalition government is a government formed by two or more political parties.

collectivisation	Collectivisation was a policy initiated by Stalin the USSR in the 1930s to create larger and more efficient agricultural units under state control.
total war	Total war is a state of war which involves the whole population economically and militarily in a war.
welfare state	The welfare state is a system whereby the state commits to the protection and well-being of its citizens by means such as services, benefits and pensions.
cult of personality	A cult of personality is the use of the power and charisma of a political leader to influence and dominate a nation.
supranational	Supranational is a power or influence that transcends national boundaries or governments.
annexation	Annexation is the act of seizing something such as territory.
avant garde	Avant garde is a term suggesting new ideas and styles in art.
asocials	Used during the Nazi era, asocials were people whom the Nazis deemed as socially unfit, such as alcoholics, prostitutes and homosexuals.
autarky	Autarky means the aim for self-sufficiency in the production of food and raw materials.
bilateral	Bilateral means involving two parties.
cartel	A cartel is an arrangement or association between businesses in order to control the market and restrict competition.
balanced budget	A balanced budget is a financial programme where the government will not spend more than it is able to raise in revenue.
dualism	Dualism is a system of government where two forces coexist.
pluralism	Pluralism is a system where two or more states, groups or parties exist.
demagogue	A demagogue is a political leader who seeks support by appealing to the desires and prejudices of the people.
rapprochement	Rapprochement is the establishment or re-establishment of cordial relations between two powers.
Fuhrerprinzip	Used during the Nazi era, Fuhrerprinzip means 'the leadership principle' and promoted the belief in a one-party state built upon one all-powerful leader.
gauleiter	In German history, a gauleiter means a 'leader of a regional area'.
lebensborn	Used during the Nazi era, lebensborn meant the 'spring' or 'fountain of life' and was a policy to promote racial purity through selective breeding.
lebensraum	Used during the Nazi era, lebensraum meant 'living space' and was a policy to create an empire and German supremacy to the east of Germany.
stunde null	Stunde Null means 'zero hour' and is a term used in German society to describe Germany's collapse in the months after 1945.
untermenschen	Used during the Nazi era, untermenschen meant 'subhumans'. This meant any races such as Jews, Slavs and Gypsies whom the Nazis deemed as inferior.
wiedergutmachung	Used post the Nazi era, wiedergutmachung meant 'making good again'. This entailed paying reparations or restitution to the victims of Nazism.
gleichschaltung	Used during Nazi era, gleichschaltung was the German word for 'bringing into line' or 'co-ordination'.
volksgemeinschaft	Used during the Nazi era, volksgemeinschaft was the German word for 'a people's community'. This meant the development of a harmonious, socially unified and racially pure community.

## Italy 1900-1946 Keywords and Definitions

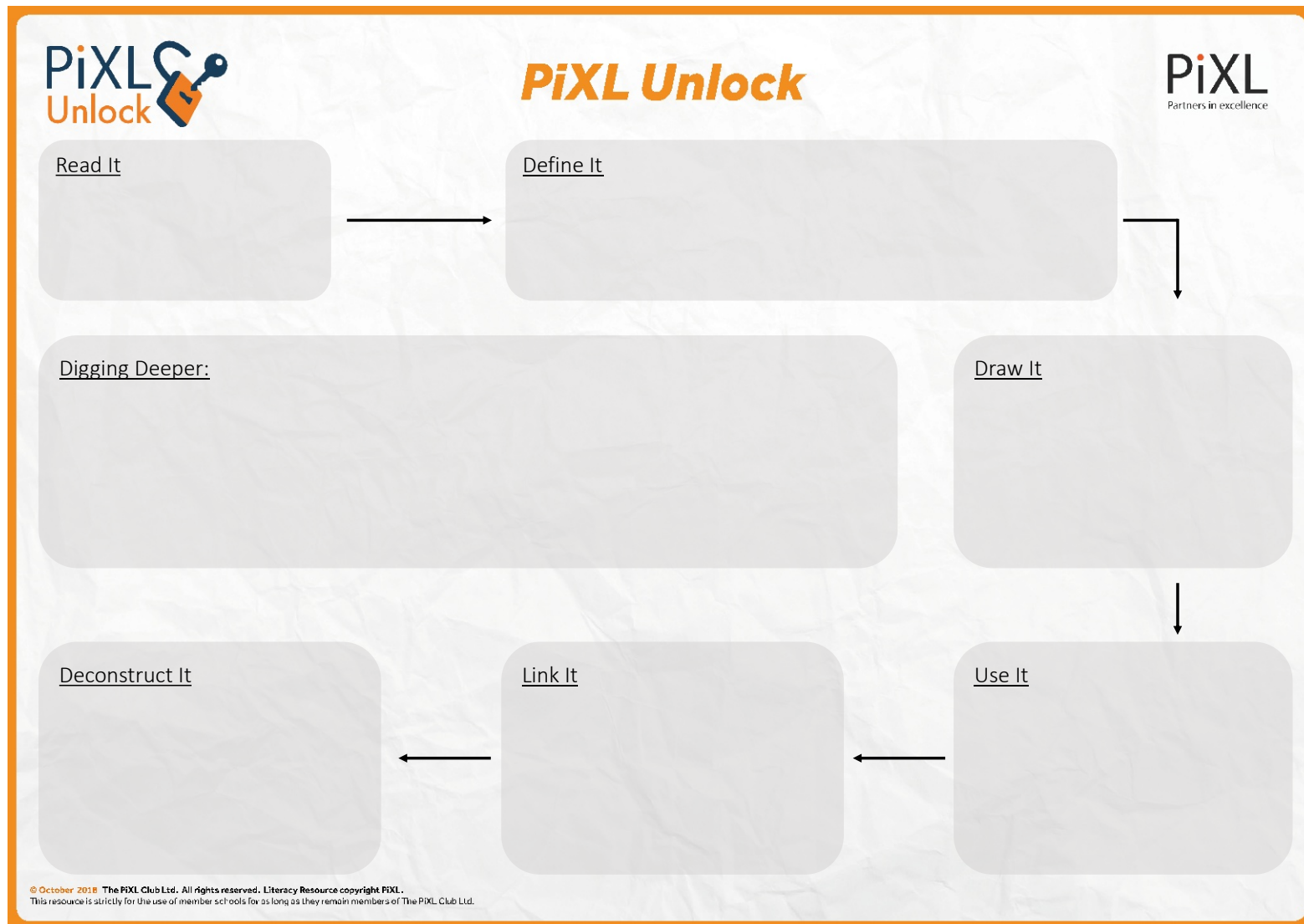
Word	Definition
Risorgimento	The word Risorgimento in Italian means resurgence or rebirth, but in history it refers to the unification of Italy in 1870 which saw the creation of Italy as a new Italian nation with its capital in Rome.
anarchist	The word anarchist is a person who believes in the violent overthrow of state authority, and the establishment of a society without government rule or laws.
questione meridionale	The Italian word meridionale refers to the regions of Abruzzo, Apulia, Basilicata, Calabria, Campania, Puglia, Molise, Sicily and Sardinia. In history, it refers to the southern question, whereby politicians and intellectuals tried to understand the causes of, and solutions to, poverty in the south of Italy.
ANI	The word ANI, in history, means the Associazione Nazionalista Italiana, the right-wing nationalist party created in 1910 by Enrico Corradini.
intervention crisis	The word intervention crisis in history refers to the political crisis caused by Italy's entry into World War One on the side of the Triple Entente in May 1915.
futurist	The word futurist refers to somebody who believes that war would induce a new, more militarist society - they celebrate violence, patriotism and destruction.
League of Nations	The term League of Nations refers to an organisation created after the First World War, made up of nations from around the world, in an attempt to maintain world peace.
proportional representation	The word proportional representation in politics refers to a voting system where the number of elected representatives elected into parliament is proportional to the percentage of votes a party receives.
trincerocrazia	The Italian word trincerocrazia refers to a new class of men that Mussolini hoped to unite, linked and bound together by their war consciousness and, in the process, leaving their former geographical or class differences behind them.
anti-clericalism	The word anti-clericalism, in history, refers to an ideology that seeks to oppose the clergy, and its supposed privileges and elitism.
squadismo	The Italian word squadismo, in history, refers to the organisation of small, military units of fascists, who sought to address the growth of socialism through extreme violence.
Quadrumvirs	The Italian word Quadrumvirs, in history, refers to the four main leaders of fascism whom Mussolini tasked with organising the March on Rome.
Aventine Secession	The word Aventine Secession, in history, refers to when 100 antifascist deputies left parliament on 13th June 1924, in the wake of the Matteotti crisis, claiming that the government was unconstitutional, and where a new parliament on the Aventine hill outside Rome was created.
Balilla	The word Balilla, in Italy folk history, refers to a boy from Genoa who supposedly started a revolt against Austrian rule in 1746 when he threw a stone at an Austrian official. In history, the name was chosen for the fascist youth organisation to represent the idea of a militarised youth who were ready to stand up to foreign invaders.
Opera Nazionale Dopolavoro	The word Opera Nazionale Dopolavoro refers to the National Afterwork Organisation which provided workers with a variety of social and sporting opportunities.
Il Duce	The Italian word Il Duce refers to the propaganda that sought to portray Mussolini as a leader of immense, God-like ability, who was leading Italy to greatness.
syndicalism	The word syndicalism, in history, refers to an economic system between capitalism and communism.

corporatism	The word corporatism in economics refers to an ideology where national economic planning would be determined by a mixed union of workers and employers.
cartelisation	The word cartelisation in economics refers to forced mergers whereby large businesses were assisted by the fascist government to take over smaller companies.
ruralism	The word ruralism, in history, refers to economic and political policies which seek to protect and maintain a country's agricultural industry and peasant population.
Freemasonry	The word Freemasonry refers to a worldwide organisation of secret clubs which initiate new members through a series of secret rituals and which provide advantageous employment or social connections to its members.
plebiscite	The word plebiscite in politics refers to a direct vote in which the entire population is asked to vote on a proposal that may lead to an amendment in the constitution.
Abyssinia	The word Abyssinia, in geography, refers to the large area of land in modern-day Ethiopia.
Anschluss	The German word Anschluss refers to the concept of a political union between Austria and Germany.
referendum	The word referendum, in politics, refers to a direct vote in which the entire electorate is asked to make a decision on a certain proposal.
Kingdom of the South	The term Kingdom of the South refers to the royal government created during the Italian Civil War in 1943, in direct opposition to the Salò Republic in the North.
deposed	The word deposed refers to the process whereby a political leader is removed from office suddenly and forcibly.
Rome-Berlin Axis	The word Rome-Berlin Axis refers to the political, diplomatic, military and economic alliance between Germany and Italy.
Pact of Steel	The term Pact of Steel, in history, refers to the military and economic cooperation between Italy and Germany that was signed in May 1939, establishing the permanent political consultation between the fascists and the Nazis.
Vatican	The word Vatican refers to the headquarters of the Roman Catholic Church.
trasformismo	The Italian word trasformismo refers to the process whereby governments would aim to form political alliances by knowing how to buy the support of MPs, often through corruption.
Roman Question	Roman Question, in history, refers to the split between the Italian state and the Catholic Church, which refused to recognise the legitimacy of the unified nation.
irredentism	The word irredentism, in history, refers to a political movement that grew in the late 19th century which demanded that all Italian-speaking areas should be incorporated into Italy.
Liberal Italy	The term Liberal Italy, in history, refers to the period of political governance by broadly liberal governments between 1870 and 1922.
Treaty of London	The Treaty of London refers to the secret pact Italy made to support Britain, France and Russia in World War One in return for much of the irredente lands.
Carporetto	The word Carpioretto, in geography, refers to a small town today known as Kobarid in Slovenia. In history it refers to the location of a battle in World War One where Italian forces suffered an embarrassing defeat to Austria.
mutilated victory	The word mutilated victory, in history, refers to the national shame Italy suffered at the Treaty of Versailles where they gained very little territory for their sacrifices in World War One.
Biennio Rosso	Biennio Rosso refers to the period of considerable labour militancy and strikes that took place in Italy between 1919 and 1920.



Fasci di Combattimento	The Italian word fascio comes from the Latin word that refers to the ancient Roman emblem of a bundle of wooden rods bound together with an axe, symbolising strength through unity. In history, it refers to the title given to Mussolini's creation of a league of ex-soldiers committed to the ideology of fascism.
New Programme	New Programme, in history, refers to the policies that Mussolini adopted in the second fascist national congress which formalised his ideological conversion from a left-wing to a right-wing agenda.
totalitarian	The word totalitarian refers to a system of centralised government which has complete power over all aspects of life inside a country.
martial law	Martial law refers to when the military takes complete control over the normal civilian functions of government.
consolidation	The word consolidate, in science, refers to making something physically stronger and solid. In politics, it refers to the process through which political leaders and organisations increase their power and control.
indoctrination	The word indoctrination, in politics, refers to the process of teaching a person or group to accept a set of beliefs uncritically.
coercion	The word coercion refers to the action of persuading someone to do something by force or threats.
autarky	The word autarky in economics refers to the policy of achieving economic self-sufficiency and independence.
concordat	The word concordat is an agreement between the Catholic Church and a sovereign state.
Grand Council	The word Grand Council, in history, refers to the cabinet in the fascist party.
Republic of Salò	Republic of Salò, in history, refers to the Fascist state Mussolini created in the north of Italy during the civil war, between 1943 and 1945.
partisan	The word partisan, in history, refers to a member of an armed group formed to fight secretly against an occupying force.

## II. The PiXL Unlock Template



### III. Summer Reading list

- The Time Traveller's Guide to Medieval England (Mortimer)
- The Winter King – Henry VII (Penn)
- Silk Roads (Peter Frankopan)
- The Celts (Alice Roberts)
- The Romanovs (Montefiore)
- The 'Very Short Introduction to... series' is very good (Machiavelli, Marx, Mill)

## IV. Links to TED Talks/Articles/Documentaries/Books/Journals

### Podcast

- a) <https://www.bbc.co.uk/programmes/articles/2Dw1c7rxs6DmyK0pMRwpMq1/archive> - In Our Time podcast Archive – you can search by era, or topic, and all podcasts feature a discussion with three people eminent in their field.

Suggested podcasts to get you started:

- a. <https://www.bbc.co.uk/programmes/b00gryrx> - **History of History** - Melvyn Bragg and guests discuss how the writing of history has changed over time, from ancient epics to medieval hagiographies and modern deconstructions
- b. <https://www.bbc.co.uk/programmes/p005458g> - **History's relevance in the C20th**
- c. <https://www.bbc.co.uk/programmes/p00545kv> - **Capitalism**
- d. <https://www.bbc.co.uk/programmes/b00jjgg8> - **Suffragism**
- e. <https://www.bbc.co.uk/programmes/p003k9gt> - **Archaeology and Imperialism**
- f. <https://www.bbc.co.uk/programmes/p004y2b0> - **Witchcraft**
- g. <https://www.bbc.co.uk/programmes/p00548zm> - **The Art of War**
- h. <https://www.bbc.co.uk/programmes/p00548j4> - **Heritage**
- i. <https://www.bbc.co.uk/programmes/p00547jm> - **Democracy**
- j. <https://www.bbc.co.uk/programmes/b00b7r71> - **The library at Nineveh**

### TED Talks

- b) TED Talk: A History of the world in 18 minutes  
[https://www.ted.com/talks/david\\_christian\\_big\\_history?language=en](https://www.ted.com/talks/david_christian_big_history?language=en)
- c) TED Talk: Cave writing?  
[https://www.ted.com/talks/genevieve\\_von\\_petzinger\\_why\\_are\\_these\\_32\\_symbols\\_found\\_in\\_ancient\\_caves\\_all\\_over\\_europe#t-712984](https://www.ted.com/talks/genevieve_von_petzinger_why_are_these_32_symbols_found_in_ancient_caves_all_over_europe#t-712984)

### Documentary

- d) Documentaries looking back on the 20th Century: The Peoples' Century documentaries were commissioned as a retrospective of the C20th by the BBC in the UK and PBS in America  
[https://www.youtube.com/watch?v=jnT\\_3m01vQQ&list=PLuL26fXZ8eTNLLnugg2BTyOZQ7HT-QZk4](https://www.youtube.com/watch?v=jnT_3m01vQQ&list=PLuL26fXZ8eTNLLnugg2BTyOZQ7HT-QZk4)

Suggested episodes:

- a. 1957: Skin Deep  
<https://www.youtube.com/watch?v=3ZtAECC3BOc&list=PLuL26fXZ8eTNLLnugg2BTyOZQ7HT-QZk4&index=18>
- b. 1970: Half the People  
<https://www.youtube.com/watch?v=Nxpyonf5j4&list=PLuL26fXZ8eTNLLnugg2BTyOZQ7HT-QZk4&index=22>
- c. 1963: Picture power  
[https://www.youtube.com/watch?v=LfAZ2g\\_RzLA&list=PLuL26fXZ8eTNLLnugg2BTyOZQ7HT-QZk4&index=20](https://www.youtube.com/watch?v=LfAZ2g_RzLA&list=PLuL26fXZ8eTNLLnugg2BTyOZQ7HT-QZk4&index=20)

- e) The Normans, a three part BBC Documentary  
Part 1: <https://www.youtube.com/watch?v=LD6zJON2xTc>  
Part 2: <https://www.youtube.com/watch?v=-Kn320EvjS0&t=512s>  
Part 3: <https://www.youtube.com/watch?v=LqO4Ksx58Lw>
- f) Henry VII, The Winter King  
<https://www.youtube.com/watch?v=aBpSRQ6wVPU>

### **Online Courses**

- g) The Open University has a number of free online courses.  
<https://www.open.edu/openlearn/free-courses/full-catalogue>  
You can filter by selecting History and the Arts.  
Here are a few to get you started:
  - a. Open University: Extending your thinking skills  
<https://www.open.edu/openlearn/education/extending-and-developing-your-thinking-skills/content-section-0?intro=1>
  - b. Open University : What is good writing?  
<https://www.open.edu/openlearn/history-the-arts/culture/literature-and-creative-writing/what-good-writing/content-section-0?intro=1>
  - c. Open University: The Holocaust  
<https://www.open.edu/openlearn/history-the-arts/history/world-history/the-holocaust/content-section-0?active-tab=description-tab>
  - d. Open University: History of Reading: an introduction to reading in the past  
<https://www.open.edu/openlearn/history-the-arts/culture/literature-and-creative-writing/history-reading-introduction-reading-the-past/content-section-0?active-tab=description-tab>
  - e. Open University: Hadrian's Rome  
<https://www.open.edu/openlearn/history-the-arts/hadrians-rome/content-section-0?active-tab=description-tab>

### **Investigating documents**

- h) The National Archives:
  - a. Investigate original documents from the reign of Elizabeth I  
<http://www.nationalarchives.gov.uk/education/resources/elizabeth-monarchy/>
  - b. Focus on film as an information source  
<http://www.nationalarchives.gov.uk/education/focuson/film/>
  - c. Palaeography: Take a tutorial in learning to read handwriting from documents 1500-1800  
<http://www.nationalarchives.gov.uk/education/resources/palaeography/>

## V. Knowledge Organiser Template



## VI. Thinking Hard Revisit Template

Name of Topic: \_\_\_\_\_

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Read the text and come up with 20 questions to ask someone about the text.

	Question	Answer
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

## VII. A Model of the Thinking Hard Revisit document

**Name of Topic:** Henry VI – Quizzing on Winter King Documentary

**Name:** J Bloggs

**Class:** 12h

Read the text and come up with 20 questions to ask someone about the text.

	Question	Answer
1	Where did Henry VII spend his early life?	Brittany and in exile
2	Why was Henry VII's stepfather significant at Bosworth?	He supported Henry VII which enabled him to defeat Richard III
3	Which early actions of H7 helped him consolidate his control of the crown?	Crowned Oct 1485 in Westminster Abbey BEFORE parliament sits / Nov 1485 – HVII first parliament – discredits R3 – sets his reign dating from 21st Aug 1485 therefore, everyone who fought for R3 as traitor and treasonous / Married Elizabeth of York / Tudor Rose propaganda – and his family arms placed on all key buildings
4	Who was a threat to H7 in terms of usurping his throne?	1 – De la Poles 2 – Lambert Simnel 3 – Perkin Warbeck
5	Which Pretender was the biggest threat to H7?	Perkin Warbeck as he had numerous foreign backers across most countries in Europe
6	Why was 1502 such a bad year for H7?	Arthur dies of the sweating sickness
7	How did things get worse in 1503?	Elizabeth of York, his wife, dies in childbirth, H7 distraught, shuts himself up in Richmond Palace
8	When does the 'accountant / miser king' myth begin?	After 1503 H7 reissues bonds and recognisances and enforces tax laws more harshly
9	Who were the two hated legal advisors of H7?	Empson and Dudley (beheaded by H8 on his accession)
10	Why was marriage to Catherine of Aragon such a coup for H7?	Spain had recently conquered territories under Isabella and Ferdinand and were increasing in power and influence in the 1500s
11	Why did Margaret of Burgundy hate H7 so vehemently?	She was a Yorkist and supported Perkin Warbeck and De la Pole
12	When was the Duke of Burgundy's ship wrecked off the coast of England?	1506
13	How did H7 check his accounts?	He checked off every entry and initialled them to show he had seen them



14	Why was money so important to H7?	It meant security and control
15	How did H7 reorganise finance?	He moved the treasury chamber into his Privy Chambers
16	How did H7 know what was going on in Europe?	He paid foreigners for information and had a Master of Intelligence – Charles Somerset
17	Who enforced Bonds and Recognisances?	The Council Learned in Law
18	What was the state of England by 1500 according to the Spanish Ambassador?	'How tranquil the country and assured the reign' was
19	How did William Stanley, H7's stepfather, betray him?	He plotted a rebellion against H7, which increased H7's paranoia
20	Why was Elizabeth's death a political as well as personal blow to H7?	She was his main link to Yorkists and once she was dead he was much less secure

## VIII. Cornell Notes Template

Name

Date

Topic

Subject

Main Ideas

Notes

Summary

## IX. A Model of the Cornell Notes document

Name J Bloggs

Date 25.04.19

Topic Big History TED Talk  
[https://www.ted.com/talks/david\\_christian\\_big\\_history/up-next#t-1037205](https://www.ted.com/talks/david_christian_big_history/up-next#t-1037205)

Subject; History

### Main Ideas

How does the universe make complexity?

The Law of Entropy vs the Complexity of the world

The key thresholds of complexity allow the universe to move from simple to complex with the right 'goldilocks' conditions

### Notes

- The universe moves from Order to chaos – Entropy.
- 2<sup>nd</sup> Law of Thermodynamics
- Human Race linked in complex global trade and communication
- How does this complexity happen
  - Goldilocks pockets allow complexity and complexity allows more complexity
  - Complexity increases through threshold moments
  - Goldilocks conditions become more stringent as thresholds progress
- Big History explains this by looking at the history of the universe as a whole
- Threshold 1 – The Big Bang - Start of the world – energy separates
- After 400,000 years simple atoms appear
- Gravity is denser where there is more matter which leads to stars
- Threshold 2 – Stars light up
- Threshold 3 – New Chemical Elements – Gold comes from supernova explosions
- Around young stars new elements form and rocks and asteroids and planets form
- Threshold 4 – The Earth and the Solar System – rocky planets are more complex.
- Threshold 5 – Living organisms created by chemistry – molecules combining – the right amount of energy is needed / chemical elements / liquid

### Summary

In certain circumstances the universe can buck the trend of the second law of thermodynamics and create complexity but not all in one go. Each stage of complexity if the goldilocks zone still exists allows a greater degree of complexity in the case of the universe leading to life on earth.

Name J Bloggs

Date 25.04.19

Topic Big History TED Talk

Subject- History

#### Main Ideas

DNA allows increased complexity resulting in the growth off the human race

Humans threaten the goldilocks conditions

Humans are at a another threshold moment.

#### Notes

- In Threshold 5 oceans, heat from the fissures in the earth's crusts allowed life to be created
- DNA is a clever way to stabilize molecules by creating a stable and copiable template
- DNA is copied and spreads across the ocean; however it can change in one in a billion examples.
- DNA enables more complex organisms – fist single cell and then 1500 billion years ago – multiple cell organisms develop and other step in complexity
- When the goldilocks conditions are changed eg asteroid explosion – complexity can no longer thrive
- Human language enables greater complexity as language ensures information is not lost – this is why we have a history
- Collective learning makes humans different and enables learning through record of history
- Farming increased human population – then shipping and community leads to a global learning.
- Fossil fuels and farming are both energy bonanzas for humans
- Collective learning is a powerful force, we are not necessarily in charge of it.
- Key threat to the goldilocks conditions – nuclear weaponry – burning of fossil fuels
- Big History is a vital intellectual tool in another threshold moment for the universe.

#### Summary

The key complexities after the growth of humans are farming and fossil fuels which allow humans the global complexity it has today, the key threats are nuclear weaponry and the burning of fossil fuels and we could be about the destroy the goldilocks conditions which have allowed complexity in the universe to thrive thus far.



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