

**I will send out tests for all classes on Thursday May 14th. Please study and be prepared to do your best**

### **American History, week of May 11 – 15**

We stopped last time with General George Washington taking major risks to achieve important victories at Trenton and Princeton; then spending the winter camped in Northern New Jersey.

**(New Material)** Due to time constraints, I am going to present the most important events leading up to the defeat of General Cornwallis at Yorktown, VA. During the spring of 1777 General Howe (who replaced General Gage) began a campaign to capture Philadelphia, which was the capital city of America. General George Washington tried to stop the British forces at Brandywine Creek, but failed and the Continental Congress had to flee Philadelphia.

The British suffered a significant setback in October of 1777, when General John Burgoyne was defeated at Saratoga, NY by the forces of General Horatio Gates. Things did not go as well for General George Washington and late in 1777 he camped at Valley Forge, PA. It was a brutal winter and American troops suffered greatly from lack of food and basic supplies (such as clothes and shoes). However, a positive thing happened during this time; France began helping the American colonies (remember that France was bitter after losing the French–Indian to England).

The year 1778 began with bad and good events for the American colonies. When General George Washington set up camp at Valley Forge he had ~10,000 men, but more than 2000 died during the winter. A young French aristocrat (Marquis de Lafayette) had spent the winter at Valley Forge and he played a significant role in getting the French government to sign a treaty of cooperation with America in February 1778. One of the terms in the treaty was that France would not make

peace with England, unless the English recognized American Independence. Also in February 1778, Prussian Captain Friedrich von Steuben began training American troops and finally molded them into real soldiers & an effective fighting unit.

The year 1778 brought a major shift in British war strategy. During the summer of 1778, General Howe moved troops to Georgia and took Savannah. His goal was to capture southern colonies and then work north. Progress was slow but the British did control all of Georgia in 1779 and appointed a governor to run the colony. General Howe then left for New York and was replaced by Generals Henry Clinton and Charles Cornwallis. They led a force of 8,500 men into South Carolina and captured Charles Town in May 1780. General Cornwallis had the aid of freed slaves and won a major victory at Camden in August. Yet when he moved into North Carolina, there was strong resistance that forced him to retreat. General Washington sent his ablest commander (General Nathanael Greene) south to harass Cornwallis' troops. General Greene had the aid of General Morgan and the Swamp Fox (Francis Marion). Did you know that Marion's 'irregular methods of warfare' are considered to have laid the foundation for modern-day Special Forces troops such as the Green Berets.

There were two battles in the south that caused General Cornwallis to make a strategic blunder and move British troops to Yorktown, VA. The first battle occurred at Cowpens, SC where General Greene won a decisive victory in January 1781. In response, an angry General Cornwallis attacked General Greene at Guilford Court House, NC during March. Intent on securing victory, General Cornwallis lost a quarter of his troops. This costly victory caused him to move into Virginia to gain reinforcements and attack a force led by the Marquis de Lafayette and Von Steuben. Unable to defeat them, General Cornwallis moved to Yorktown, which is situated on land between the James and York rivers.

This was a tactical mistake because the French had navy fleets in the West Indies and Rhode Island. When combined French and American land forces attacked Cornwallis, the French navy engaged and defeated the British navy. The French navy then instituted a naval blockade of Yorktown and after three weeks of fighting, General Cornwallis was forced to surrender.

Peace talks began in Paris during 1782, after England recognized American independence. The negotiating team of John Adams, Benjamin Franklin, and John Jay (future Chief Justice of the Supreme Court) completed the Treaty of Paris in September, 1783. This treaty set the boundaries of the United States as Canada to Florida and the Atlantic Ocean to the Mississippi River.

**Please begin familiarizing yourselves with these important events of the American Revolution (including the Declaration of Independence) because this will be the material for your last test.**

### **Study guide**

Events that occurred during the French–Indian War played a fundamental role leading to the American Revolution. The French–Indian War was to determine who would gain possession of a large part of resource-rich North America: France or England? Remember that European countries had depleted their natural resources over centuries of civilization and needed a new source in order to grow. The Treaty of Paris ended the French–Indian War and the defeated French were bitter due to losing all of their claimed lands in Canada and west of the Mississippi River. This explains why they supported the colonists during the American Revolution. Although a British defeat would not restore lands the French lost at the conclusion of the French–Indian War, it would definitely weaken their hated enemy.

England borrowed so much money to win the French–Indian war that King George III believed the American colonists (who definitely benefitted by the French defeat) should repay most of the debt. This led Parliament to pass a series of acts that imposed numerous taxes. These included the Sugar, Stamp, Townshend, Tea, and Intolerable acts. The colonists responded to the Tea Act by staging the Boston Tea Party and the Intolerable acts by assembling the first Continental Congress. Patrick Henry, representing Virginia, declared that colonies in America that did not have representation in Parliament were not subject to English taxes. Hence the rallying cry: ‘no taxation without representation.’ A result of the Continental Congress meeting was that colonies began stockpiling weapons and ammunition.

The official start of the American Revolution is represented by the battles at Lexington and Concord, Massachusetts. These occurred when General Gage sent British troops to seize weapons and capture John Adams and Samuel Adams (members of the Sons of Liberty). General Gage failed on both counts and then sent troops to secure Breed’s Hill, which would give him control of Boston Harbor. The Redcoats marched in tight formation up the hill and suffered more than 1000 casualties, but eventually succeeded in capturing Breed’s Hill (this is remembered as the Battle of Bunker Hill). Due to the high number of casualties, General Gage was replaced by General Richard Howe. The Continental Congress debated whether to reconcile with England or start a revolution to gain independence. Thomas Paine did a superb job presenting the case for revolution in ‘Common Sense,’ which was very popular in the colonies. This led the Continental Congress to assemble a committee to prepare a ‘declaration of independence.’ Thomas Jefferson wrote the Declaration of Independence in a way that documented how King George violated the colonists inalienable rights (such as to life, liberty, and the pursuit of happiness) in specific ways to provide just cause for a revolution and legal justification.

After the defeat at Bunker (Breed's) Hill, General Howe planned to isolate the New England colonies by capturing New York City. General George Washington had 23,000 troops to defend the city, but retreated in defeat across the Delaware River with ~8,000 troops. He needed significant victories quickly for the remaining troops to reenlist and crossed the ice-choked Delaware River during a fierce storm to take Trenton, NJ and then achieved a victory at Princeton. General Howe responded by moving British troops south to capture Savannah, GA and then Charles Town, SC. American General Nathanael Greene defeated British troops under General Cornwallis in a significant battle at Cowpens, SC. General Cornwallis wanted revenge and achieved a costly victory in North Carolina and this caused him to seek reinforcements in Virginia. He was unable to defeat troops led by the Marquis de Lafayette and retreated to Yorktown, VA. This was a tactical mistake, because they were trapped and unable to be resupplied after the British navy was defeated by the French navy. After weeks of fighting, Cornwallis surrendered and a treaty signed in Paris recognized America's independence and set physical boundaries of the country.

**There will certainly be a question about the French-Indian War and how France aided the American colonists' quest to gain independence. You should also know why the American colonists wanted independence and what events (including acts of Parliament) caused them to revolt. Finally, you should be able to state what the Declaration of Independence is and details about it.**

### **English History week of May 11 – 15**

We need to quickly cover important events leading up to the War of the Roses. King Edward III won significant battles in Scotland and France (this started the 100 Years' War with France), but the reign of his son Richard II was one of turmoil that ended in his death at Pontefract Castle. His illegitimate successor, Henry of Bolingbroke, had Parliament declare that his claim to the throne was good and name him King of England. However, the rightful heir was Edmund Mortimer

(Earl of March) and Parliament used this fact to force King Henry IV to do things that lessened his power, and benefited Parliament. Supporters of the late King Richard II included the powerful Earl of Northumberland, Edmund Mortimer (the legitimate heir to the throne), and Owen Glendower (a Welshman). They rebelled against King Henry IV and had the support of France because King Richard's widow, Isabella, was the daughter of the French king. During this time of confusion in England, the French attacked and took coastal towns (remember this all occurred during the 100 Years' War).

A number of battles were fought to settle the rebellion against King Henry IV. The Earl of Northumberland gained support in Wales and Northern England, but was killed during a battle in 1408 at Bramham Moor. Owen Glendower had French aid but was defeated by Henry of Monmouth (King Henry IV's heir). The French then withdrew aid to English rebels because a civil war began in France. However, King Henry IV's reign was cut short because he contracted a fatal disease (leprosy) and died in 1413.

King Henry V is a heroic figure in English history due to his many victories against the French, which essentially made him the King of France. A major victory occurred at Castle Agincourt in 1415. Although the French had an army of 50,000 men compared with King Henry V's army of 15,000 men, the battle ended with a resounding victory for England. Then King Henry V conquered Normandy in 1420 and married Catherine, daughter of French King Charles VI. He was promised the French throne when King Charles VI died. King Henry V died at the Castle of Vincennes (near Paris) in 1422 and was considered the 'master of France.' However, his son King Henry VI lost France.

This is where we reach the point of introducing the Houses of York and Lancaster, which fought the War of the Roses in England. King Henry VI was the son of King Henry V and Queen Catherine. Recall that King Henry V was descended from John

Gaunt (Duke of **Lancaster** and son of King Edward III). Therefore, King Henry IV was of the House of Lancaster. Upon King Henry V's death, Queen Catherine was forced out of the royal court and could not care for her young son, King Henry VI. She married a Welshman, Owen **Tudor** (remember the Tudor monarchs from last year). However, the head of the House of York at this time was Richard, Duke of York (he was also a descendant of King Edward III). Therefore, men of the Houses of York and Lancaster were descendants of King Edward III and had legitimate claims to the throne.

What King Henry VI is most remembered for is losing France. Although King Henry V died as master of France, a young French woman rose to unite the entire country and lead them in battle against England. If you hadn't guessed, this was Joan of Arc. After she helped win back the town of Orleans, French armies won many victories and a French King again ruled the country. Yet, Joan of Arc was captured and burned alive at Rouen, Normandy in 1431.

The War of the Roses began in 1455 at the battle of St Albans, when Richard Duke of York took King Henry VI prisoner. King Henry VI's wife, Margaret of Anjou (France), rallied supporters and defeated the House of York at Ludford in 1459 to free the king. However, he was soon taken prisoner after losing a battle at Northampton in 1460. Margaret again managed to free King Henry VI and in a subsequent battle at Wakefield, Richard Duke of York was killed.

King Henry VI was intent on returning to London, which was under control of the House of York. Before King Henry VI could get to London, the youngest son of the late Richard (Duke of York) arrived leading an army and claimed the English throne. A battle ensued outside of London at Townton and King Henry VI's army was defeated; whereupon he fled to Scotland. However, both the House of York and Lancaster suffered great losses in this battle, where 60,000 men died. Edward seized the crown with support of the powerful Duke of Warwick.

However, the reign of Edward IV was short due to losing the support of the Duke of Warwick. King Edward IV was briefly imprisoned but escaped and raised an army to battle King Henry VI, Queen Margaret, and the Duke of Warwick. The armies met at Barnet, outside of London, and Edward was victorious (while the Duke of Warwick perished). King Henry and Queen Margaret fought a final battle at Tewkesbury in 1471, but were defeated and soon executed.

King Edward IV died in 1483 leaving two young heirs (Edward and Richard), but neither took the throne. King Edward's brother, Richard, was determined to seize the throne and had the brothers imprisoned in London Tower; then killed. Henry of Richmond, a descendant of Queen Catherine (widow of King Henry V) and Owen Tudor, then rose against King Richard III. Surprisingly, Henry had supporters in the Houses of York and Lancaster, because King Richard III was a cruel man hated by many. Henry of Richmond led a smaller army against the 30,000 men King Richard III commanded. At the Battle of Bosworth Field, troops of King Richard III turned against him and helped Henry of Richmond achieve victory. Henry was crowned king on the battlefield, after someone found the crown lying under a hawthorn bush.

### **Potential Test Questions**

#### **Why do English people remember the reigns of Edward I, II, and III? Wars.**

Edward I finally conquered Wales and then defeated King Balliol of Scotland. Remember that Balliol was selected by King Edward I after the deaths of Scottish King Alexander II and his heir, Margaret of Norway, which caused 13 people to claim the throne of Scotland. After King Edward I defeated King Balliol, William Wallace and then William the Bruce led the Scottish people in battles against England. Quarrels between King Edward II and English barons allowed Robert the Bruce to reclaim much of Scotland. He became king after a major victory over the English at Bannockburn. Soon after this, the English barons imprisoned and killed

King Edward II. The Hundred Years' War with France began during the reign of King Edward III. He had many victories over the French that included a victory at Crecy, where English troops were greatly outnumbered.

**How were the reigns of King Henry V and VI different?** There are two important points to consider. 1) Henry V defeated French troops in a number of battles and essentially became the king of France. Although his troops were greatly outnumbered at Agincourt, King Henry V won a stunning victory and then conquered Normandy. After marrying Princess Catherine, he was promised the French throne after the death of her father, King Charles VI. During the reign of King Henry VI, the French people rose behind Joan of Arc and before her death, a French king again ruled the country. 2) The English people were united in war against France during the reign of King Henry V but fought amongst themselves during the reign of King Henry VI. In fact, King Henry VI died during the War of the Roses between the Houses of York and Lancaster.

**What caused the War of the Roses and how did it end?** Members of the Houses of York and Lancaster were descendants of King Edward III and had legitimate claims to the throne of England. This caused a serious problem, because men of both houses wanted to rule England. King Edward III was a strong ruler, but Richard II and Henry VI were not. They were killed during the War of the Roses, but stability returned to England in the reign of King Edward IV (House of Lancaster). Upon his death, Richard (the late king's brother) had the young sons of King Edward IV killed. The new King Richard III was a cruel man hated by many and this allowed Henry of Richmond (House of York) to have supporters in the House of Lancaster. Although Henry of Richmond led a smaller army against King Richard III, troops turned against the king and he was killed during the Battle of Bosworth Field. Although this ended the War of the Roses, members of both houses made life difficult for the other.

## Life Science week of May 11 – 15

Since we are having a test at the end of the week, I only want to introduce a little information about leaves. Last week we learned about different characteristics of bark that are useful in identifying trees. Now we want to learn a few characteristics of leaves that are helpful in identifying trees. Remember when we looked at trees around the pond at school, some leaves had smooth edges and others had serrated edges (jagged, like the blade of a serrated knife). We also noted whether leaves were shiny, glossy, hairy, dull, or fragrant. A final feature of leaves we need to consider is the shape. Leaves can be long and thin, oval shaped, triangular, or have distinct parts (lobes, you will see good examples of this with maple and oak leaves).

We are going to do internet searches for six types of leaves. **Please draw good pictures of the leaves and note details so that you will be able to identify pictures on the upcoming test.** Start by typing in 'maple tree leaves' and then click on 'images.' You can see that maple leaves have a distinct shape. They have three, or five, parts and these are the lobes. Also note how only the tips of the leaves are pointed, while the edges are smooth (not serrated). Next type in 'magnolia tree leaves' and then click on 'images.' Notice how these are dark green, glossy, and have smooth edges. How would you describe the shape? I hope you were thinking an oval shape. Next type in 'pecan tree leaves' and then click on 'images.' Notice how these leaves are long-and-thin, with serrated edges. Now look at the ends and see how they taper (narrow down) and appear slightly curved.

The final three leaves we want to study are for birch, sweet gum, and oak trees. Continue your internet search by typing in 'birch tree leaves' and then click on 'images.' Are these leaves lobed or not? I hope you said 'not' and noticed how they have a broad oval shape. Now look at the edges and note how they are serrated. Next type in 'sweet gum tree leaves' and click on 'images.' Are the leaves lobed? Please count the lobes and determine the leaf's shape? I hope you think it looks something like a five-pointed star. Finally, look at different pictures

until you find one that shows the edges of the leaf well. The edges are serrated, not smooth. Finish your internet searches by typing in 'white oak tree leaves' and then click on 'images.' These have a very distinct shape because they are made up of seven to eight lobes. White oak leaves are also dark green, appear shiny, and have smooth edges.

**Your Final test will include identifying trees by the bark and leaves, so get a good picture in your mind of different types of bark and leaves. As indicated before, the test format will be the same as we used for birds: I will give you pictures of leaves and bark. I am sure all of you will do well.**

### **Biology week of May 11 – 15**

We need to review pertinent information for the last test of this school year and will begin with bacteria. Most bacteria benefit the environment, but those that cause diseases are called pathogens. Bacteria are beneficial because they convert atmospheric nitrogen into a form usable by plants that are then consumed by animals (including us). Also, cyanobacteria (blue-green algae) create oxygen and serves as a food source for other organisms.

Remember that Carolus Linnaeus developed a system to classify living organisms (e.g., Kingdom, phylum, class, order...). However, not all things fit neatly into this system and an example is the Kingdom Protista. This group can be unicellular or multicellular; has characteristics of plants, fungi, and animals; and may have a cell wall or no cell wall. Therefore, Protista can be autotrophs (self-feeders by producing their own food through photosynthesis) or heterotrophs (consume food obtained from many sources).

Different species within Kingdom Protista include dinoflagellates. The ones that we studied, and should remember, are algae and diatoms. Some algae are bioluminescent (when disturbed, they produce light by biochemical reactions), while others create a red tide that is harmful to the environment. Recall that nutrient-rich waters can cause an explosion in the population of red algae, which produce potentially deadly neurotoxins. In contrast, brown algae plants serve as a home and food source for other organisms (we even use the polysaccharides in this algae to create coatings for paper and as a thickening agent in foods like ice cream). Large populations of diatoms in the ocean are also beneficial because they produce ~25% of atmospheric oxygen and serve as an important food source for marine organisms. Remember that deposits of diatoms are called diatomaceous earth and these are used as fine abrasives, filters, and insulation that is fire resistant.

Molds and fungi are important decomposers (called saprobes) that breakdown dead organic matter into simpler forms the environment can recycle. However, some fungi are harmful to the environment and breakdown living things. These cause diseases in crops (e.g., corn rust) and others are parasites. The process by which fungi eat is called 'extracellular digestion' because it occurs outside of the fungi cell wall. Golgi bodies in cells create lysosomes (vacuoles containing digestive juices) that diffuse through the cell wall of hyphae (tiny thread-like projections from fungi) and breakdown organic matter for digestion. Remember that molds and fungi reproduce by releasing spores. The spores are extremely light and can be blown by the wind from one continent to another.

Yeast is an atypical (odd) fungus because it metabolizes food differently, and has no hyphae. Yeast only partially metabolizes, or ferments, sugar to produce energy. This process creates ethane molecules (that are necessary to produce alcohol) and CO<sub>2</sub>.

Molds are beneficial to people in a variety of ways. Antibiotics (penicillin) are extremely important to us due to the ability to kill harmful bacteria (pathogens). Molds also play an important role in the process of creating some cheeses, cured meats (e.g., sausage and salami), and wine.

The last thing we studied was a member of Phylum Chordata, the bony fish. These fish have bony skeletons unlike sharks that have skeletons made of cartilage. The gills of bony fish are covered by a stiff flap (the operculum), whereas nothing covers the gill slits of sharks. As both of these types of fish swim, water moves over the gills and oxygen diffuses into their blood while CO<sub>2</sub> diffuses into the surrounding water. Different types of bony fish can feed on plankton and algae, other fish, and invertebrates (e.g., polyps in coral and mussels that do not have a backbone). Finally, bony fish reproduce in different ways that include eggs hatching inside the mother, or the female can lay eggs that are then fertilized by the male.

**Please study this material because it is what I will use to generate questions for your test.**