Please remember that all assignments are due May 8th

American History, week of May 4 – 8

As we learned, the battles at Lexington and Concord in April 1775 are recognized as the start of the American Revolution. The Continental Congress then met and debated how to proceed: whether to declare independence or reconcile with England. During the month of July, three things happened: 1) George Washington became the leader of the Continental army, 2) the Continental Congress authorized printing money to pay troops and organized a committee to deal with foreign nations, and 3) there was a significant battle at Breed's Hill.

(New Material) An army of Minutemen surrounded Boston and had dug in on Breed's Hill, which overlooked the harbor. General Gage decided to strike at the Minutemen during June 1775 in order to take Breed's Hill and gain control of Boston Harbor. There were about 2,200 Redcoats and each carried 100 lbs of gear, as they marched in tight formation up Breed's Hill. The Minutemen were low on ammunition and their commander, Colonel William Prescott, ordered not to fire 'until you can see the whites of their eyes.' The Redcoats retreated; charged and retreated a second time; and finally took the hill when Minutemen ran out of ammunition. There were over 1000 British casualties and this was one of the deadliest battles of the American Revolution. As a result, General Gage was recalled to England and replaced by General Richard Howe. An important loss for the American colonists in the battle of Breed's Hill was the death of Dr. Joseph Warren, who had been promoted to general. Although the battle was fought at Breed's Hill it is known as the Battle of Bunker Hill, which is just a short distance away.

By July 1774, the Continental Congress had debated and passed the 'Olive Branch Petition.' As the name implies, this petition urged King George III to allow for a

return to the former harmony that existed between England and America. King George III rejected the petition and issued a proclamation that the colonies were in rebellion. He urged Parliament to order a naval blockade of the American Coast.

During the next few months, Thomas Paine published a pamphlet that advanced the cause for a revolution against England. This famous publication 'Common Sense' succinctly made the case for rejecting King George (after deaths of colonists in the Battles of Lexington & Concord) and how the time had come to proclaim independence from England. This last point was important because independence would allow America to trade freely with other nations for guns/ammunition and receive foreign aid. A measure of the popularity of 'Common Sense' is that it sold 500,000 copies (the entire population of the American colonies was ~2 million) and Paine used most of this money to further the cause of the revolution.

Events during the summer of 1776 pushed the Continental Congress to act. North Carolina declared independence from England and most of the people in Virginia wanted independence. Soon the Continental Congress formed a committee to prepare a formal 'declaration of independence' and Thomas Jefferson was chosen to write the final document, due to his knowledge of law and skill in writing. Jefferson borrowed the concept proposed by English philosopher John Locke that people enjoyed natural rights to life, liberty, and property. In addition, Jefferson wrote that a government derived it's just powers from the consent of the people and this gave people the right to alter or abolish a government that threatened their inalienable rights (rights that cannot be taken or transferred). Then Jefferson listed ways that the English government violated the inalienable rights of American colonists, which gave just cause for revolution. Upon completion of the Declaration of Independence, it was approved unanimously by the Continental Congress on July 2, 1776 and adopted July 4, 1776.

After the loss of so many troops at the Battle of Bunker Hill and subsequent events in the American colonies, General Howe retreated from Boston and moved the theater of war south. He planned to isolate New England and seize New York City. During the summer of 1776 his land army joined with naval forces and sailed into New York harbor with a total of 32,000 fighting men. This represented the largest expeditionary force ever assembled by England and included Hessian mercenaries from the Hesse region of Germany. General George Washington commanded 23,000 troops and engaged the British. Washington's forces were definitely at a disadvantage because there was no American navy and the soldiers were both poorly equipped and had no formal training in warfare. By late August, 1776, General Washington was forced to retreat across the Delaware River with < 8,000 men. Many deserted, while others were captured or killed. With winter approaching and the enlistment period of his troops ending on December 31st, General Washington desperately needed battlefield victories to improve morale and get his soldiers to re-enlist.

General Washington took a major risk and launched a surprise attack on a garrison of Hessian soldiers stationed in Trenton, New Jersey. On Christmas night 1776, during a fierce storm, Washington and 2400 American troops crossed the ice-choked Delaware River in rowboats. After a forced march to Trenton, they attacked early the next morning. It was a short battle because the Hessian soldiers believed there would be no attack during the storm and had stayed up late celebrating Christmas. Over 1000 Hessian soldiers were killed or captured and eight days later General Washington secured another victory over British forces at Princeton, New Jersey. These were critical victories for General Washington and his army spent the winter camped in Northern New Jersey near Morristown. **Please record these important events in your notebooks.**

There are a few things in the above passage that we need to learn more about via the internet. We will start with the battle of Breed's Hill. Please do an internet search by typing in 'Battle of Bunker Hill' and from the results select 'Battle of Bunker Hill – Facts, Definition & Dates – HISTORY (website: www.history.com).' Please read this as it provides more details than what I provided in the above passage.

Next, I want you to do an internet search for 'John Trumbull' and in the results select 'John Trumbull - Wikipedia.' Please read these sections: Early Life, Revolutionary War, and Postwar Years. Then scroll down to the Gallery and look at these famous pictures (four of which hang in the rotunda of the US Capital building in Washington DC). Does it surprise you that one of the pictures hanging in the US Capital is of the death of (doctor) General Joseph Warren at Bunker Hill? Also, look at the portraits of George Washington and Alexander Hamilton. Hamilton was the first Secretary of the Treasury, established a national bank, and was the main author of the economic policies of George Washington's administration.

Finally, please do an internet search using 'Declaration of Independence' and in the results select 'The Declaration of Independence National Archives (website: www.archives.gov).' This is something that everyone needs to read from start to finish. **Please do a written narration of points you feel are important in the Declaration of Independence.**

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

English History week of May 4 – 8

We learned last week how King Edward I spent most of his reign fighting in Wales and Scotland. His son was not a strong ruler and also had problems with the Scots. King Edward II lost the great Battle at Bannokburn to Scottish troops led by William the Bruce, who became King of Scotland. King Edward II had many quarrels with the English barons and was imprisoned by them in Berkeley Castle, where he was murdered. Finally, problems with France arose during King Edward III's reign and this led to the start of the 100 years' war.

Our first reading from 'A History of England' is titled 'Crecy,' p 179–180. This deals with an account of the first battle in the 100 years' war. Near the end of this passage you will read about the Black Knight. This is Edward the Prince of Wales (heir to the throne), yet he dies before his father (Edward III) and never becomes King of England. **Since 'Crecy' was a major battle and ended badly for the French, please summarize the important points in a written narration.**

The battle at Crecy is also known for cannons being used for the first time in a battle. This changed warfare and would make armor-clad knights bearing swords and long bows obsolete. No longer did a knight's strength and skill in wielding a sword or bow determine the outcome of a battle, since a weak man could kill a strong one with cannons & firearms.

King Edward III died in 1377, his reign lasted 55 years and he is considered one of England's great kings. English admiration of King Edward III is mostly due to victories against the Scottish at Halidon Hill (1333) and then the French at Sluys (1340), Crecy (1347), Calais (1347), and Poitiers (1356). The last was important because King John of France was taken prisoner and this led a temporary peace between France and England.

Our next reading is about King Richard II's reign and is titled 'Wat Tyler,' p 184–186. This provides some background about King Richard II and a rebellion that took place. **Please do a written narration about this passage.**

I will condense other events in the reign of King Richard II that are important (please read 'The Banishment of Bolingbroke' p 187–189 in our book). The Duke of Gloucester (who was the youngest son of King Edward III) found it greatly offensive that King Richard II appointed Michael de la Pole as minister (new title is the Earl of Suffolk), because he was a merchant and not from a noble house. Therefore, the Duke of Gloucester formed a party of nobles and accused the king's ministers of treason. Members of Parliament were sympathetic to the nobles and tried the king's ministers. The Earl of Suffolk fled the country, but others were put to death. Even King Richard was seized by an army the nobles assembled and forced to rule according to their wishes.

King Richard II waited while strengthening his position and plotted revenge against his enemies. When his first wife (Anne of Bohemia) died in 1394, he married Princess Isabella (daughter of French King Charles VI). Therefore, England had peace with France and King Richard could focus entirely on his enemies at home. By 1397, King Richard was strong enough to act and charged his enemies with plotting a rebellion. The Earl of Arundel was beheaded, the Earl of Warwick was banished from England, and the Duke of Gloucester was thrown into prison and subsequently murdered. However, the Earl of Warwick (Henry of Bolingbroke) was intent on regaining his estate and power.

When a rebellion broke out in Ireland (1399), King Richard II left England to lead an army and the Earl of Warwick returned. In a matter of days the Earl of Warwick had the support of the Earl of Northumberland and an army, which quickly grew in size. By the time King Richard II returned to England, the Earl of Warwick had become so powerful that Richard had to give up the crown.

Parliament decreed that Henry Bolingbroke (the Earl of Warwick) had a valid claim to the throne; then former King Rickard was taken to Pontefract Castle and killed.

Please record important points from the preceding three paragraphs in your notes. Also, start looking over new material since our last test because we will have a short test on May 13 or 14 to conclude the year.

We will finish this assignment by visiting a few places in England and France via the internet. You do not need to draw any of these, just enjoy the pictures. Pontrefacte Castle, where King Richard II was killed, has not aged well. You can look at the ruins and models by typing in 'Pontefracte Castle' and then clicking on 'images.' Please type in 'Warwick Castle' and click on 'images.' There was a wooden fort built on this site in 1068 by William the Conqueror, which was modified and rebuilt to become the home of many Earl's of Warwick. Next we will travel to France and explore some historic places in Poiters (where King Edward III defeated the French and captured King John). Please type in 'Church of Saint-Radegonde, France' and then click on 'images.' Parts of the structure date back to the 6th century. Next type in 'Church of Saint-Hilaire-le-Grand Poitiers' and then click on 'images.' This church was consecrated in 1049. Please type in 'Notre Dame la Grande Poitiers' and select 'Wikipedia' (this church was also constructed in the second half of the 11th century).

Life Science week of May 4 – 8

Let's begin by writing a Conclusion to our lab that involved growing different kinds of plants from seeds. What is our topic sentence going to be for the Conclusion section? Well, we regularly measured tomato and watermelon plants over periods of 28 to 36 days. Then we used these data to calculate growth rates. The rates I calculated were 0.2 and 0.2 cm/day for tomato and 0.2 to 0.3 cm/day for

watermelon plants (notice that I only reported numbers to one decimal point because we couldn't accurately measure to two decimal points using a ruler). This information is what we need to state concisely in a topic sentence, without providing actual numbers. Remember how the topic sentence lets a reader know in a general way what to expect in the body of the paragraph. **Therefore, our topic sentence could be: 'The growth rates of tomato and watermelon plants, raised from seed, were similar over a period of approximately one month.'**

Now you need to present the actual data from our experiment. Tomatoes T1 and T2 had calculated growth rates of 0.2 cm/day over 30 and 36 days. Now think about the different growth rates for W1 (0.2cm/day) and W2 (0.3 cm/day). The difference between W1 and W2 seems small, but in reality W2 grew at a rate that was 50% greater than W1 (that's a major difference and could be included in your conclusion). Finally, state the actual heights of the plants. An example is: tomato and watermelon plants ranged in height from 5.9–6.2 cm and 4.9–9.7 cm, respectively. Remember to include 'respectively' because it indicates the tomatoes are 5.9–6.2 cm tall and the watermelons are 4.9–9.7 cm tall. Make sure your 'Conclusion' begins with the above topic sentence and is followed by the actual growth rates & number of days; note how the growth rate of W2 is 50% greater than W1; and then state the final heights of the tomato and watermelon plants. If there is anything else you want to add to the conclusions, please do. **Your completed 'Conclusion' is something I need to see in order to complete this assignment.**

We are going to finish the Life Science class by taking a closer look at trees, beginning with the bark. Have you ever wondered why the bark is cracked, or seems to being peeling off some trees? Remember that trees are continuously growing and unlike our bodies (where the outer skin is elastic and stretches), tree bark is hard and rigid. Therefore, tree bark either cracks or peels off (another word for this is exfoliates) to accommodate growth of the trunk.

Characteristics we can use to identify different species of trees include the bark and leaves. We want to focus on bark this week and begin with peeling versus cracked. Peeling bark is very helpful in identifying trees such as birch, sycamore, and shagbark hickory. **You will need to draw a picture for the bark of each tree we study (remember to label each drawing).** Please do an internet search by typing 'bark of river birch trees' then click on 'images.' Do the same thing for sycamore and shagbark hickory. Although all three trees have peeling bark, they look very different. The bark of the river birch comes off in large pieces, even sheets that have a light-brown to gray color. In contrast, the sycamore has a patchy appearance and is colored different shades of gray, brown, and green. The shagbark hickory has a very-distinct appearance because the dark-brown bark occurs in long, thin pieces that run up-and-down the tree. If you want to see something really strange, type in 'bark of rainbow eucalyptus tree' and click on images.

Cherry, aspen, and beech trees have prominent features in their bark that run in a horizontal direction. These are called lenticels and are pores that allow the tree to breath. **Please draw a picture for the bark of each tree and label it.** Start your internet search by typing 'bark of cherry trees' and then clicking on 'images.' Notice how the bark of cherry trees is <u>shiny</u> and has a color between gray and brown. Now do an internet search by typing 'bark of aspen trees' and then click on 'images.' Note how the bark is smooth and light gray to white. The prominent black knots (spherical shaped areas) on the trunk are called stem scars; these are places where limbs died and fell off. Finally, do an internet search by typing 'bark of beech trees' and then click on 'images.' Beech trees also have smooth bark and lenticels, but the color is <u>always</u> a light to medium gray.

The bark of oak and maple trees is cut by cracks that are oriented in vertical and horizontal directions. Individual pieces of bark are shaped like irregular

rectangles. A way to distinguish the two types of trees is that oak bark is rougher compared to the bark covering maple trees. **Please draw a picture for the bark of each tree and label it.** Start your internet search by typing 'bark of oak trees' and then clicking on 'images.' Do another internet search by typing 'bark of maple trees' and then clicking on 'images.' In contrast, Locust trees have bark that is cut by cracks in vertical and diagonal directions. Also, the bark tends to be thicker with individual cracks reaching depths of 2.5 inches. Please do a final internet search by typing 'bark of locust trees' and clicking on 'images.'

Your Final test will include identifying trees by the bark, so draw good pictures and get a clear mental image of each tree mentioned above. The test format will be the same as we used for birds: I will give you pictures of bark to identify the tree.

Biology week of May 4–8

We are going to move to Chapter 27 (Phylum chordata), since there is so little time left in the school year. Chordates are vertebrates because they possess a spinal cord (notochord) and backbone composed of vertebrae. As Summerton is so close to Lake Marion (and not far from the shore), we are going to study bony fishes. **In your 'Riot and Dance' book, please read from p 334 (Class Osteichthyes) to p 337.** As the name implies, 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. Bony fish can feed on plankton and algae, other fish, and/or invertebrates (e.g., polyps in coral and mussels that do not have a backbone). Reproduction can occur by eggs hatching inside the mother, with the young being nourished by yolk sacs (ovoviviparity) or nourished by the mother's body (viviparity). In contrast, the female can lay eggs that are then fertilized by the male (oviparity). **Please record this information in your notes.**

You probably know something about how fish breathe using gills. **Make sure that you take a close look at Figure 27.13 on page 337**. Note how the gill arches are surrounded by filaments containing blood vessels, which extend outward into capillaries. As the fish swims, water moves over the gills and oxygen diffuses into blood moving through the filaments. Does diffusion require energy? No, because the concentration of oxygen in water is higher than in the fish's blood (remember how things naturally move from areas of high to low concentration). Whereas CO_2 is higher in the fish's blood compared with the water. The critical thing is that water needs to be flowing across the fish's gills in order for it to extract oxygen from water and expel CO_2. **Please record this information in your notes and start reviewing material we have covered since finishing mitosis. Our final test for the year will include material after mitosis.**

Most of us are familiar with the fish in Lake Marion, but there are some very different kinds of fish in the oceans of the world. We are going to study ten of these via the internet. **Please draw and label the fish that you find most interesting.** Begin your internet search by typing 'parrot fish' and then click on 'images.' Notice the beak mouth that the fish uses to break up coral in order to eat polyps. Next type in 'butterfly fish' and then click on 'images.' This fish has a long mouth to suck polyps out of coral. The next fish is probably not one that you would like to meet. Type in 'angler fish' and then click on 'images.' Next type in 'Asian sheepshead wrasse' and then click on 'images.' What is strange about this fish is that it can change genders. Next type in 'jawfish' and click on 'images.' Surprisingly, the male jawfish keeps fertilized eggs in its mouth for 1–2 weeks. Next type in 'tassled scorpion fish' and then click on 'images.' Adults have beards, their color is perfect for hiding in coral reefs, and they are poisonous. Next type in 'frogfish' and then click on 'images.' The frogfish can change its color over a period of weeks, but what makes this fish unique is how it moves. Frogfish seldom use their tails, but rather utilize their fins to walk along the bottom or gulp down water and forcefully expel it through their gills. Next type in 'boxfish' and click on 'images.' This fish actually has a square skeleton and can use its fins in such a way that it swims very well. Why do you think the fish is brightly colored

(think of a characteristic of the scorpion fish or how brightly colored snakes and frogs on land are poisonous)? If boxfish are injured or threatened, they release a neurotoxin into the water. Next type in 'psychedelic frogfish' and then select 'Wikipedia.' The complex stripping is like a fingerprint; scroll down until you can see the image of its flat face. Finally, type in 'lionfish' and click on 'images.' The strips are arranged in a zebra-like pattern and as you guessed from the bright colors, lionfish are poisonous.

[Honors Class, we are just going to read and do a written narration for one section in Microbe Hunters, p 87–92. The only reason Pasteur went to South France in order to try and cure silkworms was out of respect for his old professor (Dumas). We know that Pasteur was an experimental scientist, so think about the results of his silkworm experiment (collecting the eggs of mating pairs that did not have black spots). Why didn't this lead to healthy offspring? Give it some thought and consider if there may have been more than one problem affecting the silkworms.]

Spanish week of May 4–8

Sadly, there has only been a little progress for the Spanish class. We really need to complete the conversation aspect of lesson 10. As part of your grade is based on class participation, it would be beneficial to move onto lesson 11 and translate the passage; then move onto parts A & B

Nature notebooks week of May 4–8

I think only two people showed me their nature notebooks last week. Please, get outside some and enjoy nature while doing a sketch.