Each student will be required to lead a discussion on one of the following topics for the Current Events Presentation. Topics will be randomly assigned. Each presentation should last AT LEAST 15 minutes, followed by class discussion. The presentation must be done using PowerPoint, however DO NOT just read or put all of the information on your PowerPoint presentation. Feel free to use notecards during your presentation, but again DO NOT just read your notes during the presentation. Be sure to address the questions listed on each topic (in addition to any others) but DO NOT just put my questions in the PowerPoint Presentation and then answer them. Be sure to use additional information to support your answers. When possible, present both sides of the argument and why you took the stand you did. The presentation will be worth 50 points and a separate document will be provided that will address how the presentation will be assessed. Dates for the presentations are listed at the end of this document.

1. Although he campaigned against stem cell research, former President George W. Bush entered the embryonic stem cell research debate by supporting stem cell research on 60 lines of cells that were already available and vetoed legislation passed by both Houses of Congress to allow federal funding for stem cell research. What was significant about this particular veto? What action has President Barack Obama taken in regard to Federal Funding and stem cell research? In addition, Missouri voters had the opportunity to weigh in on this topic at the ballot box with the proposed stem cell initiative. What was the outcome of the vote? Which stem cells in particular cause the debate? Why? What is Somatic Cell Nuclear Transfer and how does this technique differ from getting embryos other ways? How does the issue of cloning relate to this topic? What are some of the arguments for and against stem cell research? Should stem cell research be banned all together or should it continue unregulated? Will the lines allowed by President Bush be enough to develop cures for diseases such as diabetes and Parkinson’s? Why are embryonic stem cells favored in research for cures of diseases over umbilical and adult stem cells? How has this debate fueled the pro-choice/pro-life debate? What debate over this topic is occurring in the Pro-Life movement? How has this topic been dealt with in the Missouri legislature and Governor’s office? What states are leading the way in this area?

2. Whenever gas prices rise it is not uncommon for some politicians propose that the Arctic National Wildlife Refuge (ANWR) and more coastal areas be opened up to oil drilling in Alaska, which has led to a public outcry by most, if not all, environmental groups. Although the House of Representatives in recent years voted to open up ANWR, it has been defeated in the U.S. Senate. President Reagan and both George H.W. Bush and George W. Bush were unsuccessful in their attempts to open the refuge to drilling due to opposition by the Democratic Congress and/or Senate in control at the time. What is
President Barack Obama’s stance on opening ANWR and opening up coastal drilling for oil? What and where is ANWR? What kinds of species inhabit this area? As previously mentioned the high cost of gasoline is used as a reason for opening up this pristine ecosystem and for more offshore drilling. Will opening the refuge now and approving offshore drilling help defray the high cost of gasoline in the near future? Why or why not? Officials in the Bush Administration also argued that ANWR is just a wasteland so therefore the general public will not care if damage occurs. Is the refuge a wasteland? Why or why not? What states currently allow offshore drilling? What states oppose it? What are the predicted amounts of oil under the refuge and if true how long would these supplies last? What arguments are made by the oil industry that drilling in ANWR or offshore pose little environmental damage? What damage does the environmental community predict? Are there other alternatives to solve our energy consumption demands?

3. Transplantation of the kidney, heart, liver, pancreas, lung, and other organs is now possible due to two major breakthroughs. First, solutions have been developed that preserve donor organs for several hours. Second, rejection of transplanted organs is now prevented by immunosuppressive drugs; therefore, organs can be donated by unrelated individuals, living or dead. After death, it is possible to give the “gift of life” to someone else-over 25 organs and tissues from one cadaver can be used for transplants. Survival rate after a transplant operation is good. One problem persists however, and that is the limited availability of organs for transplantation. At any one time, at least 27,000 Americans are waiting for a donated organ. Keen competition for organs can lead to various bioethical inequities. When the governor of Pennsylvania received a heart and lungs within a relatively short period of time, it appeared that his social status may have played a role. When Mickey Mantle received a liver transplant, people asked if it was right to give an organ to an older man who had a diseased liver due to the consumption of alcohol. How can we be certain that the distribution of organs for transplant is equitable or should they just be sold to the highest bidder or let the market determine the price? If organs are taken from those who have just died, who guarantees that the individual is indeed dead? Is it right to genetically alter animals to serve as a source of organs for humans? Should people be allowed to clone a “headless” version of themselves to harvest organs that are genetically identical to themselves? What ethical considerations occur with this type of solution? Some people now travel to China and other developing countries on what are called “transplant tourism” trips to receive an organ. What are some of the ethical complaints that arise with how China and others obtain these organs and should Americans be allowed to travel there to obtain an organ? What can people do that would like to donate an organ?

4. How aware are animals? Do you think they feel the same kinds of things we do? These questions bear on animal rights, a subject much in the news. Many important biological discoveries have come from experiments performed on animals, yet some animal rights activists believe animal experimentation is cruel and should be stopped. They have harassed researchers, even vandalized laboratories and set animals free. Why are
animals used in experiments? Are there uses of animals that should be discontinued? What kinds of guidelines should researchers follow in using animals in experiments, and who should establish and enforce the guidelines? Are there any alternatives to animal testing and how well do they compare to animal testing?

5. The majority of the Scientific community now recognizes that increased levels of greenhouse gases, especially carbon dioxide, is causing the Greenhouse Effect leading to Global Climate Change. Explain how this phenomenon occurs. What are some of the possible consequences of Global Climate Change? Former President George W. Bush pulled the United States out of the Kyoto Protocol Treaty that had been developed to reduce greenhouse gas emissions to 1990 levels. Although the U.S. has been the largest emitter of greenhouse gases until recently, President Bush objected to the lower goals that developing countries had to meet to be in compliance with the treaty. Do you think the U.S. should have abandoned this International Treaty? Why or why not? What are some of the predictions and actual data of how the earth and its inhabitants will be affected by increased global temperatures? President Bush has also touted that carbon dioxide emissions can be reduced using as yet undeveloped technologies, whereas numerous scientists argue that a relatively simple solution is to make cars, and especially trucks and sport utility vehicles, more fuel efficient. Are these two distinctly different approaches feasible? Should U.S. citizens get tax breaks for buying fuel efficient vehicles? Why or why not? Is there anything you can do to reduce the amount of greenhouse gases you produce? The Obama Administration has been touting their plan to lower greenhouse gases. What is the plan and what are some of the controversial parts of the plan? What positions have the U.S. House and Senate taken on reducing carbon emissions? What states are leading the way to lower carbon emissions? What can individual citizens do to reduce their carbon footprint?

6. One of the benefits of the Human Genome Project will be increased understanding of the connection between genes and disease, such as heart disease and cancer. For example, genetic markers for susceptibility to lung and liver cancers have been found on chromosome 10 and 17, and a gene related to heart disease has been traced to chromosome 6. Testing for these genetic markers might warn a person to avoid smoking because he/she is particularly susceptible to lung cancer. Testing could also influence diet or occupational choices. The possibility of extensive genetic testing raises questions about how personal genetic information should be used. For example, should employers or potential have access to such information? Why or why not? Should the information be available to insurance companies? Why or why not? Is there any reason for the government to keep genetic files? Why or why not? Some states require genetic samples from all individuals arrested, regardless of whether or not they are convicted? Should this practice be allowed to continue? Why or why not? Is there any obligation to warn relatives who might share a bad gene, or should individuals be required to do so? Might some people avoid being tested for fear of being a genetic outcast? Or might they be compelled to test against their wishes?
What affect could genetic information have on the abortion rights issue? Can you think of other reasons to proceed with caution or should we proceed full steam ahead?

7. The United States has the highest rate of unplanned pregnancies among teens compared to the other industrialized nations. This is not because U.S. teens are more promiscuous, but because they are the least educated. European children are taught about basic human reproductive biology as early as first grade and contraceptive use in Junior High. Although scientific studies have not found a correlation between sexual education and increased sexual activity among teenagers, some religious groups in the U.S. advocate abstinence only education in public schools because they say teaching about contraceptives will lead to sexual activity. Do you think sexual education should focus only on abstinence, or include health and contraceptive information? Should U.S. High Schools and Colleges have health clinics that make contraceptives available to students? What about in Junior High School where many teens become sexually active? Should schools provide pre-natal care and day-care for teenage parents? If so, how would all of these services be paid for?

8. Every year about a million Americans are diagnosed as having cancer. This means that about 75 million Americans now living will eventually have cancer, and one in five will die of the disease. There are many kinds of cancers and many causes of the disease. For example, smoking has been shown to cause most lung cancers. There is evidence that a high-fat, low-fiber diet is a factor in breast, colon, and prostate cancer. And agents in the workplace such as asbestos are also implicated as causes of cancer. Hundreds of millions of dollars are spent each year in the search for effective treatments for cancer, far less money is spent on preventing cancer. Why might this be the case? What kind of lifestyle changes could we make to help prevent cancer? What kinds of prevention programs could be initiated or strengthened to encourage these changes? Should health insurance coverage be based strictly on lifestyle activities (i.e. should non-smokers have lower premiums, etc.?)? What factors might impede such changes and programs? Should we devote more of our resources to treating cancer or preventing it? Explain.

9. Due to recent medical advances, infertile couples have several options to increase their opportunity to have a child. Many of these procedures however are not without controversy and possible unintended consequences. Fertility drugs stimulate the release of more than one egg and thus may lead to multiple births. In-vitro fertilization involves the fertilization of the egg outside of the women’s body and several embryos are thus implanted to increase the chances of one taking hold. Most couples are asked to sign a “selective reduction” form, which basically means the couple agrees that if several embryos implant, some will be sacrificed to insure the survival of one of the embryos. Many couples refuse at this point, and again multiple births are the consequence. Many times couples refuse based on religious convictions. Some argue that this approach is a double-standard because they are going against God’s wishes in the first place by using technology to overcome their
inability to reproduce on their own. The Catholic Church has made it known that it does not condone either reproductive assistance or selective reduction. In many cases, multiple births lead to developmental and mental conditions in some of children. Due to the increased risks and costs incurred by multiple births, should couples be allowed to utilize these reproductive procedures if they refuse “selective reduction”? Should there be a compromise on the maximum number of embryos allowed to survive? What changes have been made to reduce the chances of a multiple birth from occurring? Some infertile couples have begun to lobby Congress for laws requiring insurance companies to cover medical costs relating to reproductive procedures because, they argue, having a child is a right. This has caused other groups, such as those representing cancer patients, etc., to voice their opposition. They argue that diverting money toward reproduction will cause those with other diseases to lose vital health care that will keep them alive. Do you think having a child is a right or is the opposition correct in stating that it is more important to provide various health care services rather than covering infertile couples? Others have also mentioned the irony of how families of reproductively assisted multiple births are treated compared to those have several children over many years. Why are families with multiple births typically given free homes, cars, services, reality shows, etc. because it would be extremely difficult to make it on their own, but a poor family with several children is not extended the same luxuries?

10. Today it is fairly easy to make transgenic plants and animals, also called Genetically Modified Organisms (GMOs). What are transgenic organisms/GMOs? What types of benefits have these organisms had on society? How does this genetic engineering differ from domestication of plants and animals 10,000 years ago? What are some important safety and ethical issues raised by this use of recombinant DNA technology? What are some of the possible dangers of introducing genetically engineered organisms into the environment? What are some reasons for and against leaving decisions in these areas to scientists? To business owners and executives? What are some reasons for and against more public involvement? How might these decisions affect you? How do you think these decisions should be made? What countries ban the use and/or import of GMOs? What laws regulate the use/sale of GMOs in the U.S.? Are there any states restricting the use/sale of GMOs? Should food be labeled specifically if GMOs are used?

11. Do you approve of choosing a baby’s gender even before it is conceived? A new technique has been developed that can separate X-bearing sperm from Y-bearing sperm. First, the sperm are dosed with a DNA-staining chemical. Because the X chromosome has slightly more DNA than the Y chromosome, it takes up more dye. When a laser beam shines on the sperm, the X-bearing sperm shine a little more brightly than the Y-bearing sperm. A machine sorts the sperm into two groups on this basis. The results are not perfect. Following artificial insemination, there’s about an 85% success rate for a girl and about a 65% success rate for boys. Some might argue that it goes against nature to choose gender. But what if the mother is a carrier of an X-linked
genetic disorder such as hemophilia or Duchenne muscular dystrophy? Is it acceptable to bring a child into the world with a genetic disorder that may cause an early death? Wouldn’t it be better to select sperm for a girl, who at worst would be a carrier like her mother? Some authorities do not find gender selection acceptable even for this reason. Once you separate reproduction from the sex act, they say, it opens the door to children that have been genetically designed in every way. As a society, should we accept certain ways of interfering with nature and not accept other ways? Why or why not? What techniques have been used in the past to try to determine a particular sex? What kind of success rate did they have? What are some possible consequences if the sex ratios get skewed?

12. A woman suffered serious head injuries in an automobile accident that caused her to lapse into a coma. An EEG (brain scan) indicated that her cerebral cortex (the part of the brain involved in higher thought processes) had stopped functioning, indicating that she is in a persistent-vegetative state. Her lower brain centers continued to control activities such as heartbeat and breathing. Her family asked that she be taken off all medication and tube feeding so she could “die with dignity”. Legal authorities refused to allow the hospital to withdraw treatment. Should the family’s wishes be respected? Should the woman’s life be maintained at all costs? If yes, who should pay for the necessary medical care? Under what, if any, circumstances do you think life support should be withdrawn from a severely brain-damaged person? How would you want this to be handled if you were such a patient? Do you think the Federal Legislature should get involved like it did in the Terry Shivo case? Why or why not? What can people do to try to insure that their wishes are meet if in the event they enter a persistent vegetative state and what life-support removed?

13. Recently a few states have passed laws allowing the use of marijuana for medicinal needs or for recreational use. Which states have medical marijuana laws and for what diseases is marijuana used as a treatment? What efforts are being made in Missouri to legalize medical marijuana? What is the Federal Government’s stand on legalizing the medicinal use of marijuana? What are the pros and cons of using marijuana medicinally? Are there any alternatives these patients can use instead of marijuana? Do you think the use of marijuana for medicinal purposes should be legalized? Why or why not? Which states allow the use of recreational marijuana? What restrictions do these laws have regarding the use, possession, etc. for recreational use? Do you think Missouri should legalize marijuana for recreational use? Why or why not?

14. Recent studies have documented the obesity problem in both children and adults in the U.S. How is obesity defined? What percentage of children and adults are classified as being obese? Where does Missouri rank in regard to the percentage of obese people? What factors are implicated as causing the rise in obesity rates in the U.S.? What health problems are associated with obesity? Should health insurance companies set different rates for those individuals classified as overweight or obese? One individual has sued the fast food industry for practices that lead to his obesity. Do you think this
individual should be compensated by the fast food industry? What can people do to decrease their chances of becoming obese? What are some of the current surgeries that are being used to treat obesity in teenagers and adults? Are these safe treatments? What are some of the controversies associated with Michelle Obama’s plan to have school’s provide more nutritious lunches to their students?

15. Over the last decade during the summers there have been record years for forest fires in the West, along with Texas and Oklahoma. In 2012 we witnessed numerous fires in Missouri. These fires have been due in part to droughts that have encompassed the regions mentioned. Additionally forest management over the last 50 years is also to blame. With the introduction of Smokey Bear millions of Americans have been taught to help prevent forest fires. How did Smokey Bear get his start? Many Western forests require fire as part of their natural history, i.e. it is needed for germination and prevents competition from other species. Unfortunately, the practice of fire suppression has caused the build up of tinder in the forest, in addition to allowing uninhibited growth of underbrush. This disrupts the ecological balance of the forests, in addition to making them more susceptible to intense blazes if a fire does occur. Some forest managers use prescribed burns to help alleviate this problem. This practice has drawn criticism from the timber industry, who claim that trees should be removed instead. Former President Bush entered the debate and advocated the selective removal of trees from forests to reduce the fire danger. That proposal had environmental groups up in arms. They claimed that trees should only be removed near settlements to prevent damage to homes and businesses and that opening up the forests to logging will increase habitat loss. Provide more detail on the pros and cons of both proposals. What, if any, stand has President Barack Obama taken on this issue? How many acres have burned during this fire seasons so far? How much money was spent fighting these fires? How many firefighters have been killed during the past few summers in addition to this one? Do you think forest fires should be allowed to burn or be put out? Should taxpayer money be spent saving homes located in fire prone areas? Should these people be required to have fire insurance? Should politicians or scientists, determine what course of action should be taken in our national forests?

16. Recently we have witnessed allegations of major league baseball players having used Performance Enhancing Drugs (PEDs) and the positive test results of players such as Jhonny Peralta and Ryan Braun to name a few. What are some examples of PEDs? Why are athletes of all levels and sports tempted to take them? Who are some other high profile athletes that have recently tested positive or admitted to using PEDs? What kind of punishment have they received? What kind of harmful health effects are associated with taking PEDs? What steps are professional sports taking to decrease the use of these drugs? What, if any, steps are being taken by colleges and high schools to educate athletes? How are athletes able to obtain these drugs? What role, if any, should Congress have in this debate? As states begin to
legalize the use of recreational and medical marijuana, should it be taken off the banned PED list in sports? Why or why not?

17. In the wake of the destruction of Hurricane Katrina and Super Storm Sandy, a debate began to emerge in regard to the rebuilding of the affected areas. Numerous studies have shown the benefits that intact swamps, wetlands and barrier islands have on reducing the impacts hurricanes have on coastal communities. Some authorities have said that the impacted areas will be rebuilt “bigger and better” than ever without regard to the benefits of setting aside areas that would be allowed to provide a natural buffer to flooding and the destructive winds. Scientists see this as an opportunity to re-establish natural areas to reduce the economic and social impacts of hurricanes. A similar debate emerged in Missouri after the Flood of ‘93 and again during the Flood of ‘08, regarding the use of floodplains. One prime example was the Chesterfield Valley. After a levee break, the floodplain was inundated with floodwater and numerous businesses were destroyed. After the water receded, many levees were re-built to higher levels and in many areas the floodplains house more commercial activity than before. How do you think the Coastal region will re-build, “bigger and better” or more environmentally aware? Why? How do think it should be addressed? Since New Orleans sits below sea level and is kept dry by a series of pumps and levees, should the areas that were most impacted be re-populated or set aside as green space for possible future storms? For those people that decide to move back into storm ravaged areas, should they be required to buy hurricane and/or flood insurance? Should they be allowed to move back without it? How should we deal with these types of situations when people insist on living in areas that are prone to natural disasters, such as hurricanes, flooding, forest fires, etc.? What role should the government play in this debate?

18. Hydraulic fracturing, also called fracking, has caused a new “oil and natural gas boom” in certain parts of the United States. How does fracking work? What states are seeing the most fracking activity? What effect is this boom having on their economies? What are some of the downsides of having a rapid growth in population in a region due to fracking? What are some of the health effects associated with fracking? What chemicals are in the fracking fluid? What ecological effects are associated with fracking? Is there a relationship between the increased number of earthquakes in Oklahoma and the number of fracking wells in that state? How is fracking regulated? Do any states ban fracking? How has fracking affected the amount of oil and natural gas the United States produces on the global scale?
Presentation Dates:

**September 17**  
#4-Animal Testing  
#8-Cancer: Treatment vs. Prevention  
#12-“Right to Die”  
#13-Medical Marijuana

**October 1**  
#1-Stem Cell Research  
#3-Organ Transplants  
#6-Human Genome Project  
#10-GMOs

**October 27**  
#2-Arctic National Wildlife Refuge  
#5-Global Climate Change  
#15-Forest Management  
#17-Hurricane/Flood Recovery  
#18-Fracking

**November 10**  
#7-Sexual Education  
#9-Reproductive Services  
#11-Gender Selection  
#14-Obesity in the U.S.  
#16-PEDs in Sports