Pascack Valley Regional High School District

Pascack Hills High School, Montvale, New Jersey
Pascack Valley High School, Hillsdale, New Jersey

Course Name: Science, Ethics, Technology, and Society (SETS)

Born On: August, 2017
Board Approval: 9/25/17

COURSE DESCRIPTION: SCIENCE, ETHICS, TECHNOLOGY AND SOCIETY

[This course is offered as a CP level course and is centered around examining ethical issues and advances in technology over time and their impact on the way we live and the way our society is structured. Topics that will be discussed include, but are not limited to, Genetic Engineering, Beginning and End of Life Care, Politics and Science, Organ and Tissue Donation, Animal and Human Experimentation, Technology Through the Ages (Stone Age through Present Day), Technology and the Environment, The Technology of War, and Computers, Internet, and Society. This course would be beneficial for any student that is interested in pursuing a career in the sciences, medicine, law, or politics. Students will be expected to complete independent readings, participate in classroom debates, and compose written work regarding the various topics discussed in class.

Overarching goals of the course are as follows:

1. Recognize the interrelationship among science society and ethical considerations.
2. Develop the ability to recognize important bioethics concepts and ways of thinking.
3. Develop critical reasoning skills especially the ability to justify an ethical position.
4. Recognize the importance of scientific knowledge in bioethical decision-making.
5. Understand the powerful role technology has on shaping our culture and society.
6. Recognize how technology is increasing human control over nature.
7. Enhance respectful dialog among individuals with diverse perspectives.**]**

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit I: Introduction to SETS]

Essential Questions:

1. What are ethical questions? Why are they important?
2. How are ethical questions different from other kinds of questions?
3. What strategies exist for addressing ethical questions?
4. What major considerations should people take into account when addressing ethical questions?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Define ethics and ethical questions 2. Explain how relevant facts and stakeholders for an ethical situation are determined, identified, and/or resolved 3. Identify the nine theories of Ethics (Consequentialism, Values Classification, Utilitarianism, Legal Moralism, Situation Ethics, Ethical Realism, Ethical Hierarchy, Principle Ethics, Cognitive Moral Development) 4. Define bioethics 5. Compare and Contrast bioethical and scientific questions	Students Will: • Design an ethical conundrum and solution using the nine theories of Ethics • Discuss and prepare an argument in small groups why bioethics are important and taught in this course • Analyze the "Should Lisa share her medication?" Scenario from NIH Handbook • Identify and discuss scientific misconceptions and why certain groups within our population are distrustful of science • Explain the difference between, ethical, scientific, and legal questions/statement and how they can also overlap (Venn Diagrams)	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Complete quiz from NIH Handbook on identifying ethical, scientific, and legal questions • Quiz on nine theories of ethics and how to use them to analyze ethical conundrums • Evaluate student discussions and solutions to ethical issues using a modified version of the NIH Bioethics rubric	Science Practices 1-8 9.3.HL-BRD.6

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
6. Recognize that while there can usually be several answers and approaches to an ethical question it is important to represent a strong well-reasoned argument for one's position	• Complete NIH Worksheets on "the fastest man on no legs" and the use of PEDs		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit II: Beginning of Life Issues]

Essential Questions:

1. Do all people have the undeniable right to reproduce?
2. When rights conflict (mother/fetus) who should prevail?
3. Are all people created equal?
4. To what extent should technology interfere with/be used in creating life?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Define genetic engineering and genetic manipulation of the fetus 2. Define maternal/fetal conflict – If both cannot survive, who lives? 3. Identify and describe various technological assisted reproduction options (In-vitro, sperm/egg donation, embryo storage, surrogate motherhood) 4. Explain the potential positives, negatives, and controversies of stem cell and fetal tissue research 5. Describe what it means to be a person 6. Describe the impact of Roe vs Wade on women's rights	Students Will: • Partake in the analysis of various case studies that simulate ethical questions that pertain to unit topics • Watch clips from *GATTACA* to stimulate genetic manipulation of fetus discussion • Discuss the rights of women in regard to abortion in pre/post Roe vs Wade America • Identify the players involved in technological assisted reproduction and interview one person involved (OB-GYN, woman who had in-vitro, heath care provider, etc) and present findings to the class • Write a play acting out the issues, counseling, and decisions that need to be made regarding a	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Evaluation of both the debaters and the audience • Evaluation of the essay on the Assisted Reproductive interview • Evaluation of the group Case Studies and student discussion using the NIH Bioethics rubric • Evaluation of the presentation on Assisted Reproduction Technology • Evaluation of the play script • Evaluation of the short paper on stem cells and their use in cloning	HS-LS3-1 HS-LS3-2 HS-LS3-3 HS-LS1-4 9.3.HL-BRD.6

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
7. Identify gender preferences/# of children laws in various countries throughout the world 8. Describe the differences between therapeutic and reproductive cloning 9. Define Infanticide 10. Describe the obligation of the health insurance system in providing for assisted reproduction and the cost of treating premature babies both in the short and long term 11. Explain how ultrasound is used to screen embryos 12. Explain the use of ultrasound in selective abortions (gender, birth defects, conjoined twins, etc.)	couple whose child may have a genetic disorder • Identify and discuss the roles of society/schools/parents in raising a special needs child (100-125K to educate a student) • Identify the different types of stem cells and the role stem cells play in cell differentiation through a webquest • Read and discuss relevant supreme court decisions including dissenting opinions • Watch clips from the movie *The Island* to stimulate cloning discussion • After completing independent research at home about what makes us human, organize and carry-out a formal debate on whether clones are independent humans or property of the cloned individual • Write a short paper on the role stem cells play in both therapeutic and reproductive cloning		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit III: Politics and Science (to be completed during election years)]

Essential Questions:

1. What is the relationship between science and politics?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Research and discus the politicization of science 2. Research the positions of the two major candidates for president, particularly in regard to global climate change, energy policy, reproductive choice, gun control, stem cell research, and gay marriage	Students will: • Identify current events in the news that pertain to political candidate's position on scientific topics • Perform a mock presidential vote using just scientific topics	• Student's current event report summary	HS-LS1-4 HS-LS4-6 9.3.HL-BRD.6

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit IV: End of Life Issues]

Essential Questions:

1. What does it mean to be alive/dead?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Determine the cultural, legal, and historical basis of what constitutes death 2. Identify who Dr. Jack Kevorkian was, what his contribution to society was, and what laws were written as a result of his work 3. Describe whether individuals have the right to determine when/how they die 4. Explain the role of hospice and palliative care in end of life issues 5. Identify all legal issues around "pulling the plug" and removing nutritional support from people in persistent vegetative states (Teri Schiavo, Karen Ann Quindlan) 6. Define DNR/advanced directive 7. Define death panels and medical rationing	Students will: • Partake in the analysis of case studies that simulate ethical questions that pertain to unit topics – vary the argument for each (not all pro/against) • Formal Debate on physician-assisted suicide and/or the death penalty • Read an excerpt from Mary Shelley's *Frankenstein* and discuss whether the monster is alive/dead • Research and write a paper identifying the US laws that are on the books regarding euthanasia and removal of nutritional support • Complete a timeline showing the historical changes of the death penalty in the United States • Interview their parents/grandparents about whether they would want/have a DNR? What would they consider to be extraordinary life saving procedures?	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Evaluation of both the debaters and the audience • Evaluate the video interview with older relative regarding DNR and life saving procedures • Evaluate the paper based on *Extraordinary Measures* • Evaluate the paper on US Euthanasia laws • Evaluate the death panels and medical rationing worksheet	HS-LS1-4 9.3.HL-BRD.6

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
8. Describe the history of the death penalty in the United States and identify the factors that determine whether a criminal receives the death penalty (Is Justice truly blind?)	• Complete a worksheet answering questions about death panels and medical rationing • Watch *Extraordinary Measures* and write a paper detailing how far you would go to save your child		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit V: Organ and Tissue Donation]

Essential Questions:

1. Who owns your body?
2. Should capitalism and the free market control the flow of organs?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Find the need and availability of human organs through the National Organ Donor Registry 2. Explain the role of capitalism in organ donation: sale vs donation 3. Research and explore whether the sale of organs will develop a tiered system: rich vs poor, haves vs have-nots 4. Identify the frequency and role of coercion in donating an organ to a family member 5. Research the illegal trade of organs/human tissue on the "Red Market" from both legal and illegal sources 6. Describe whether status and celebrity move a person up the donor list – Is there a level playing field? 7. Identify and explain human instances of indentured servitude and human trafficking	Students will: • Watch CNN videos on human trafficking and find/present examples of local human exploitation • Read *The Immortal Life of Henrietta Lacks* and answer guided study questions for each chapter • Research different positions of obtaining organs via donation, sale, or illegal means and write an opinion piece supported by facts from research • Research The Bodies Exhibit (potential field trip) – Where do the bodies come from? Is this science or entertainment? Write a personal reflection on the matter • Read the case of John Moore and the legal document regarding his lack of rights over his own cells – discuss who actually "owns" you	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Quizzes on chapter readings from *The Immortal Life of Henrietta Lacks* • Opinion Papers on Bodies Exhibit and how organs are obtained • Presentations on examples of human exploitation	HS-LS1-4 9.3.HL-BRD.6

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
8. Compare and contrast legal decisions as to who owns your body (Henrietta Lacks, John Moore, Havasupai Indians)	• Read excepts from the books *Red Market* and *The Body Brokers* • Guest speaker on the process of organ and body donation in the state of NJ		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit VI: Human Experimentation]

Essential Questions:

1. What are the acceptable boundaries of human experimentation?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Identify examples of humans as research subjects 2. Defend their opinion on whether the use of involuntary research subjects such as prisoners, POWs, concentration camp people is right – should prisoners be able to participate in studies in exchange for leniency 3. Explain the ethical dilemma accompanying performing an experiment on a fetus 4. Detail the human experimentation done by Nazi scientist/doctors during WWII	Students will: • View the Documentary – *Acres of Skin* on the experimentation of prisoners at Holmesburg Prison and complete a case study arguing for and against the experiments • Research and present one example of a scientific advance that was the result of involuntary human experimentation • Discuss the ethics of using double blind and placebo experiments on people that are terminal • Complete a webquest on who is capable of giving consent when the research is done on a fetus/child? • Identify the advances that came out of Nazi Era Germany – Is this "fruit of the poison tree?" – Was Nazi Science good science?	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Presentations on involuntary human experimentation • Evaluate the Holmesburg prison case study • Evaluate the discussion of Nazi era science	Science Practices 1-8 9.3.HL-BRD.6

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit VII: Animal Rights vs. Animal Welfare]

Essential Questions:

1. Should animals have the same rights as people?
2. Is it acceptable to keep/display animals for human entertainment?
3. Are all animals created equal?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Clarify the differences between animal rights and animal welfare 2. Identify when passionate protesting becomes domestic terrorism – PETA, ALF 3. Identify the stance of the American Medical Association on animal research 4. Define and elaborate on the ethics of non-survival surgery conducted by veterinary schools 5. Describe the roles of zoos and aquariums as both entertainment and species preservation 6. Explain whether circus are entertainment or abuse 7. Clarify who determines which animals are suitable/worthy to save given money and resources (tiger vs spider, elephant vs mosquito, etc.)	Students will: • Investigate the history of animal protection in the US (ASPCA) and discuss when we moved form animal welfare to animal rights • Determine the efficacy of PETA marketing campaigns – "I'd rather go naked than wear fur" • Develop a PETA style anti or pro animal research PSA • Investigate the history of circuses, ownership of "wild" animals • Research and present advances that were made through animal research – Are computer simulations or tissue culture acceptable replacements? • Research the rise and acceptance of vegetarianism and veganism in society	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Presentation on advances made through animal research • Evaluation of PETA style anti or pro animal research PSA • Evaluation of both the debaters and the audience	HS-LS2-7 HS-LS4-6 HS-LS2-2 9.3.HL-BRD.6

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
8. Explain what happens when human and animal populations conflict 9. Identify the pros and cons of using animals for research purposes	• Guest speaker (Human society police officer) on animal rights vs animal welfare • Formally debate over animal rights vs animal welfare		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit VIII: Technology and World History]

Essential Questions:

1. How does new technology impact society?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Explain the major technological breakthroughs from the Stone Age to Modern times 2. Identify the advances made during various technological revolutions (Agricultural, Renaissance, Industrial, Scientific, Computer) 3. Explain and provide examples of how technology has conflicted with religion over the years 4. Identify how societies adapt when new technology is introduced 5. Describe the role disease and their cures have had on world history 6. Describe the role of automation in society – the good, bad, and potential disasters	Students will: • Investigate how the ancient wonders were constructed using very primitive technology • Choose one technological breakthrough from the industrial revolution (from a list) and present how it still impacts today's society • View History Channel documentary *How Beer Saved the World: Its History in the Agricultural and Industrial Revolutions* and *I, Robot* and use both videos to describe how society was positively and negatively impacted by the technological advances • Research the role of religion on the rise and fall of technology • Read excepts from *Science and Technology in World History* by McClellan/Dorn • Choose one disease/cure (from a list) that changed the course of society and history and one disease	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Evaluation of PowerPoint on industrial revolution technological breakthrough • Essay on the positive and negative advances seen in the history channel documentary and I, Robot • Results of the mock trial (maybe) • Quizzes on reading excepts • Evaluate Message board posts (HW) on diseases/cures that changed history/culture	8.1 8.2 HS-LS2-2 HS-LS2-4 9.3.HL-BRD.6

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
	that we currently don't have a cure for that when cured will have a large impact on our society • View video and/or read excepts from Guns, Germs, and Steel to investigate how geography has led to the development of more, or less, technologically advanced nations • Complete a mock trial for Galileo – displaying the conflict between science and religion (may be removed)		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit IX: Technology and the Environment]

Essential Questions:

1. How has technology impacted the environment? In what ways will technology continue to impact the environment in the future?
2. Will there always be communities left behind with the advent of new technology?
3. Is there a tipping point from which the environment cannot recover?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Identify both the positive and negative impacts technology has had on the environment (ex. trade off between nuclear power production and waste) 2. Explain the correlation or lack there of between cancer and high energy transformer towers 3. Identify the prevalence of genetically modified animals and foods and its impact on our eating habits 4. Identify and describe the Superfund toxic cleanup sites 5. Explain why an increase in food production via technological advances has not minimized the number of starving populations 6. Identify whether climate change is fact or fiction and explain why it is a hotly debated topic	Students will: • Develop a position paper on genetically modified plants and animals discussing whether or not they should be widely used/ingested by the population • Choose one alternative energy source and develop a presentation detailing the history, current state, and future developments of that energy source - include whose responsibility it is to cultivate these alternative energy sources (government, companies, other) • Complete a webquest finding the amount of food produced each year in various countries, the amount of GM food produced, and find reasons why the number of starving populations has not dropped	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Evaluate the position papers written in this unit • Evaluation of both the debaters and the audience • Evaluate presentation on alternative energy sources	HS-LS3-1 HS-LS3-2 HS-LS4-3 HS-LS4-4

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
7. Explain the role of the government and independent companies in identifying alternative energy sources	• Develop a paper on the politics behind toxic waste disposal or the link between cell towers and cancer clusters • Formally debate climate change and the green house effect as fact or fiction		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit X: World-wide Population Control]

Essential Questions:

1. Should government play a role in controlling population?
2. Does earth have a human carrying capacity?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Determine the differences between populations in the developed world vs 3rd world and agrarian and technological societies 2. Explain the effect of population on Earth's environment – Does Earth have a carrying capacity? 3. Explain how wars, plagues, and pandemics control population 4. Identify the impact of child birthing laws on population 5. Explain if the government should set targets for population increase/decrease 6. Explain whether water shortages will destabilize communities, populations, and governments in the future	Students will: • Investigate and graph the history of worldwide population – What factors have contributed to the massive population boom in the last 100 years? • Identify the projected carrying capacity of earth, when it will be met, and the impact people would have on our planet if that population was achieved • Select one type of population control (war, plague, natural disasters, etc) and present how that situation impacted worldwide population • Research cultural gender preferences and how those preferences have skewed populations • Investigate what factors keep populations in check (education, wealth, etc) and which factors	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Evaluation of population graph and research • Evaluate Message Board post (HW assignment) on Earth's projected carrying capacity • Evaluation of population control presentation • Evaluation of student discuss on which factors have the potential to destabilize communities and government	HS-LS2-1 HS-LS2-2 HS-LS2-6 HS-LS2-7 9.3.HL-BRD.6

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
	have the potential to destabilize communities in the future • View the video – *The Population Time Bomb*		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit XI: Technology Developments in Warfare and the Space Program]

Essential Questions:

1. Does technology drive war or does war drive technology?
2. Are liberty and security mutually exclusive?
3. What is the future of USA and International space programs?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Describe whether technology drives warfare or warfare drives technology 2. Understand the history and legacy of land mines – "The gift that keeps on giving" 3. Explain how the increase of unmanned attack drones has changed the battlefield 4. Identify the polices of the cold war and explain mutually shared destruction 5. Describe the history of bio-warfare from small pox laced cadavers to anthrax envelopes 6. Explain how nanotechnology will alter the face of war and healthcare 7. Identify whether the space race between USSR and USA was science or politics	Students will: • Select a country and research the history and legacy of landmines in that country using the Halo Trust Website – Include the steps being taken to identify and remove landmines • Develop a presentation on the use of unmanned attack drones (foreign and domestic) – When they are used on us is it constitutional? • Research and compose a short position paper on whether there would ever be another world war or would the idea of mutually shared destruction prevent such a war • Webquest on History of Biowarfare - NOVA	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Evaluate their presentations on the use of drone aircraft • Evaluate position papers on technological costs and the support of the general public for the space program • Evaluate the position paper on the likelihood of a third world war • Evaluate the student discussion on whether America has lost its drive to accomplish "the impossible"	9.3.HL-BRD.6 8.1

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
8. Explains the impact of the space program on society, national pride, and research and development 9. Explain whether there is a future in space (can you have a space program in these financial times?)	• Identify everyday products that were developed by NASA engineers • Research the amount of money that goes into wartime technology and the space program and write a position paper on whether that is a positive use of government funds • View videos on SDI and research the current status of the program • View Apollo 13 and Kennedy's speech about going to the moon – Write a position paper on whether America has lost its drive to accomplish those goals? Would that type of speech still be supported by the general public or do we need an enemy?		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit XII: Women and Technology]

Essential Questions:

1. What is the most important influence in women who pursue careers in science and technology?
2. How has the acceptance of women in the STEM fields changed over the years?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Identify major scientific and technological advances that were developed by women 2. Explore the impact on society of women scientists 3. Describe how the image of the female scientist portrayed by the media has changed 4. Define the "Old Girl's Network" 5. Explain the injustices that were heaped on past women scientists and how society has or has not moved to rectify the situation	Students will: • Identify and research a woman who has a prominent role in current technological fields and present findings to the class • Discuss the growth in the number of women attending universities and enrolling in medical and scientific majors/careers • Research which medical fields men and women tend to gravitate towards to determine whether gender prejudices are still present in some fields • Read excerpts from *Women in Science* by Vivian Gornick	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Evaluation of women in technology and gender prejudices presentations • Evaluate student discussions on women growth in science related fields	8.1 9.3.HL-BRD.6

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit XIII: Technology and Law Enforcement]

Essential Questions:

1. Are liberty and security mutually exclusive?
2. Is the government ever justified to violate a citizen's rights for the greater good of society?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Explain how the use of technology in law enforcement has improved over the last century 2. Describe the principle technologies in use today and their role in interrogation 3. Describe the current uses and pitfalls of DNA analysis in law enforcement 4. Describe how satellites and drones are used to spy on both citizens and foreigners 5. Explain the difference between an act of terrorism and an act of violence 6. Determine when a military trial is used to try a criminal instead of civilian courts 7. Define rendition, due process, the history of Miranda	Students will: • Watch video clips from famous trials where technology was used to convict or acquit a suspect • Identify the main technologies used by law enforcement agencies through a webquest • Complete a crime scene lab where DNA analysis will identify the criminal • Formal debate about whether the government has the right to scan and view all communications (twitter, email, phones) • Discuss the patriot act, homeland security, and the impact that 9/11/01 had on our rights • Research the difference between violence and terrorism and present examples to the class • Discuss the role of Guantanamo Bay Prison and write a position paper on prison	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Crime Scene DNA Lab Activity • Evaluation of student presentations of law enforcement technologies • Evaluation of both the debaters and the audience • Evaluation of violence vs terrorism presentation • Evaluation of a paper comparing our society to the society in the movie Minority Report	8.1 9.3.HL-BRD.6 HS-LS3-2

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
8. Explain who legally has access to your email and all other electronic communication	• Watch *Minority Report* and then discuss if our society is heading toward that futuristic society where you can get arrested for a crime before you commit it		

COURSE NAME: [Science, Ethics, Technology, and Society]
[Unit XIV: Computers, the Internet, Society, and The Arts]

Essential Questions:

1. What has been the impact of social networking on society?
2. How has the introduction of the Internet and telecommunications impacted worldwide business?
3. Does technology bring about new forms of art or does new art require the development of new technology?
4. What is the role of educators and family in monitoring Internet usage?

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
Students will be able to: 1. Identify the creator(s) of the internet and describe how it was developed and deployed world-wide 2. Explain the impact that computers and the internet have had on the standard of living, work environments, and society 3. Explain how social networking sites have altered basic social skills 4. Explain how all texts, emails, and internet page views are permanent and describe the consequences of posting private information or pictures online 5. Explain whether employers have the right to search online profiles of their employees	Students will: • Compose a timeline on the evolution of the internet • Design a short presentation detailing the Internet's economic impact on society • Investigate the school's cyber-bullying policy and the legal ramifications for getting caught cyber-bullying others • Keep a one week long log chronicling text, email, and internet usage by hour • Research one crime that has been committed in the last 10-15 years that was blamed on violent games and present that crime and the legal and social fallout to the class • Interview parents about how their business has changed since the introduction of the www	• Homework, quizzes, tests, lab activities, projects, presentations, webquests, and PBL • Evaluate internet timeline projects • Evaluate the business changes interview • Evaluate the class presentations on the Internet's economic impact on society and video game crime • Evaluate the paper on the negative consequences of social media • Perform a statistical analysis of the data collected by the survey • Evaluate the "silent movie" project	8.1 8.2 9.3.HL-BRD.6

OBJECTIVES	ACTIVITIES & EXPERIENCES	EVALUATION	LEARNING STANDARDS
6. Describe the positive and negative effects gaming has had on our society 7. Explain the increase of cyber-crimes and cyber-bullying 8. Explain the accuracy of material found on the internet and how to source the information gathered 9. Explain how telecommunications has changed the business world 10. Explain the rise of file-sharing, and the legality of downloading music/movies 11. Describe the evolution of film, music, and television technology (silent movies to 3D - phonograph to MP3)	• Write a short paper detailing a negative consequence resulting from a social media post • Design and develop a 5 min “silent movie” depicting a scene from a popular movie • Conduct a survey of the school to determine the technological make-up of their entertainment devices (VCR/DVD player/Blue Ray Player, etc.)		