**TED Talk or Rant Project Organizer**

Part A:

1. What innovations or new systems made the Agricultural Revolution possible and what were their effects? In what ways is it still present today? How is it different today? (Crossroads – Chapter 7 – pg 231-234)

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| Innovation or System | Effects in the 1700s | Presence Today (similarities) | Differences Today |
| Enclosures | Machines can be used for farms now. Small farm owners lost their jobs.  Combined small strips into large fields. Many farmers had no choice but to sell their farms to rich landowners. | Almost all the farms we have today are enclosed farms because it is very efficient for landowners to farm and manage their pieces of the land. | The enclosure farms nowadays might be bigger and supplied with much more machinery to help maintain the farm. Farms seemed to have been separated by fences in the 1700 while now we just have roads enclosing them. |
| Cash Crop | During the agricultural revolution farming became a business and landowners farmed to earn profit and were willing to invest money in farming techniques that would make them richer. The goal was to produce better results for lower costs. | Nowadays almost all farmers farm for the profit they make out of it. Many of them make investments in machinery and techniques that could make their farming better. | Farming is mostly international these day and commonly the main producers for crops are the third world countries. |
| Seed Drill | Seed drill was invented by Juth Tull who found out that when soil was broken up and enriched with manure, crops grew much better. The machine he created was pulled by horses and planted seeds in rows and since this process was much faster, it caused more seeds to sprout. This helped increased the efficiency and reduced the amount of labor. | The seeding drill is still used very often to this day and it requires less time and labor on the farmer. | Although we still use the same kind of system it has been upgraded and become much more complex, it allows farmers to plant as much as 20 rows at the same time and this saves a lot of time and provides a great profit. |
| Crop Rotation | Lord Townshend was the person who developed a system which rotated crops of turnips, barley, grasses and wheat from field to field. When the clover and turnip crops were grown, they released nitrogen into the soil and replenished it. This allowed him to be able to use the fields every year and increase crop. | We still use a similar crop rotation to have increase in crop production. Preventing plants from diseases and harmful bacterias. | Nowadays we use synthetic fertilizers and other man made organic compound to put back the nutrients in the soil, allowing us to use as much as space as possible. |
| Breeding | Farmers started to realize that by increasing their fodder they could keep more animals. They began to breed cattle for meat instead of milk and sheep were bred to have thicker wool. They also tried to possibly make them more resistant to diseases hoping this would increase profit. | Today farmers still use artificial selection in order to improve their productivity and profits. Example is that dairy farmers look for cows that produce the most milk and only breed those cows. | In the old days breeding was done by the farmers but Nowadays it is done by professional breeders who breed specific animals with specific traits. |

1. How did the Agricultural Revolution pave the way for the Industrial Revolution? (Crossroads – Chapter 7 – pg 235)

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| Because when they separated their farms and fired small farmers, the farmers moved into the big city which caused factories to have more jobs. |

1. How has the Agricultural Revolution impacted us today?

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| Benefits | Drawbacks |
| enhanced transportation, more goods manufactured, establishing middle class and better living conditions for parts of society. | Farmers lost their job and had to move into big cities and work in factories. Pollution started, the working conditions for factories were horrible. |
| *https://www.reference.com/history/were-benefits-industrial-revolution-221077bee569ac0f* | http://futureofworking.com/8-biggest-pros-and-cons-of-industrial-revolution/ |

Part B:

1. What are the major innovations or systems that were new to the Industrial Revolution and what were their effects? (Crossroads – Chapter 7 – pg 236-244) In what ways is it still present today? How is it different today?

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| Innovation or System | Effects | Presence Today (similarities) | Differences Today |
| Steam & Coal | Coal was very important and burned for heat in the winter. When the steam engine was developed they started using coal as a fuel which leaded in a greater growth in the industry.  Newcome’s steam engine started out as a solution to provide more power to water pumps in underground mines and he invented an engine that harnessed the power of steam, which produced when water was heated by a coal fire. The design was later improved by James Watt who figured out a way to make the machine more practical by allowing the condensing to occur in a seperate chamber. This provided a dependable power source for many machines in factories. | Coal is still used in a lot of different things today. Coal fired power plants currently fuel 41% of the global electricity and play a huge role. | The steam engines are not used anymore. A steam turbine is used in the place of it. Coal is preffered less because of the difficulty and dangers to mine it. |
| Iron | Abaraham Darby, his son and his grandson were the innovators for the improvement of cast iron. They built the first ever cast iron bridge and better metals automatically meant iron pots and pans, iron wheels in factories, iron steam engines and weapons of war. Wrought iron was created in 1784. | Something that has stayed similar is that we use iron to make the same products such as iron pots and pans, railing, iron wheels in factories and etc.  Cast iron and wrought iron are found in many products in households. | Although iron is still used very often, steel is preferred over it. |
| Textiles | The British mills favoured cotton with longer fibres, which was grown in South America causing them to become cotton farmers. This increased the slave trade and the industry grew rapidly as the flying shuttle was invented. Later the Spinning Jenny was invented which had many spindles and was driven by a hand crank, it made thread 10x faster. Richard Arkwright’s water frame was developed next and made up to 128 threads at a time and was run by a water wheel.  Then the Crompton’s Spinning Mule combined the ideas of spinning jenny and the water frame to create the spinning mule which was steam powered. This meant the idea of less jobs but the same quantity of thread was produced. This left many jobless. The textile industry helped make Britain into a rich and powerful country. | Although the machines and things we use are different the resemblance of the movements and looms have stayed the same. | The machinery has been replaced with computer driven enterprise. New technology has advanced manufacturing processes in many fields making things faster. Computer aided means that companies now seek to remain as profitable and competitive. Our generation is having a higher demand for clothing and textiles which forced the industry to provide larger amounts. |
| Transportation | New modes of transportation. Companies built roads out of stone and gravel to shed water and charged tolls. They were abolished in the 1870 and the government took over and took all the responsibilities. Canals used for very large and heavy shipments or for transporting delicate items. This was much faster than traveling by road. Transportation was also changed when the steam engines came into place in 1825 and trains were made. In 1829 Stephensons built the “rocket” which traveled 24mph and had a multi chambered boiler. | Some of the similarities include that we still use waterway canals and the roads are owned and maintained by the government making it their responsibility. | Some of the differences include that roads are now made of asphalt and concrete to pave them. Today steam locomotives aren't used for transportation services and the waterway canals provide drainage, irrigation, water supply, and also hydroelectric power. |
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1. Create a flow chart or mind map that shows how coal, steam power, iron, textile production, factories and new modes of transportation were all connected (hint: start with coal). Explain the connections.

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| Coal -> Steam Power -> Iron -> textile production -> factories  These things are all connected because the Coal is needed to produce to steam power and steam power is needed for Iron and iron is needed in the textile production and the factories need to have a production. |

1. How have the innovations of the Industrial Revolution impacted us today?

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| Benefits | Drawbacks |
| more production companies, different styles of clothing, more transportation systems. | air pollution, dangerous jobs, cutting down  Forest, water pollution. |
| *textbook and chart* | *http://eco-issues.com/TheIndustrialRevolutionandItsImpactonOurEnvironment.html* |

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Part C:

1. What are the major societal changes that were new to the Industrial Revolution and what were their effects/importance? (Crossroads – Chapter 7 – pg 245-254) In what ways is it still present today? How is it different today?

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| Innovation or System | Effects/importance | Presence Today (similarities) | Differences Today |
| Child labor | during the industrial revolution many children were out to work in many different industries. Hired to pick out loose threads or tangles from looms or to clean out chimneys. A lot of these working conditions were unsafe and dangerous but the children had no choice because the poor families needed everyone in their household to work in order to survive. Business owners also liked hiring children because you could work them a lot for little money. | Childrens and teens around the world do still work but they are meant to work in a place that has safe and good working conditions.  Many children in developing countries still work in dangerous places and the problem of child labor is a repeating issue. | International organizers such as the UN have created laws that protect child workers from dangerous work places and the schooling has become mandatory for kids. |
| Working Conditions | The working conditions were horrible, long hours with unsafe conditions and receiving very little pay. Cities became very dirty, crowded, and disease ridden. Factory owners did not pay money to improve the factories. They demanded long shifts and refused to repair the factory. Coal miners worked from sunrise to sunset. People worked 12-16 hours and workers barely got enough sleep or food. | Some of these working conditions still remain and it is very possible that in some countries the same unsafe work conditions could happen. | Some difference is that now there are strict rules and regulations that ensure all workers are working in generally safe conditions and aren't forced to worked overtime. Minimum salary is now required and overtime pay too. You are supposed to have a safe workplace free of health or safety reasons. You have to have machines that are safe and have safety gear for protection of your workers. |
| Class | There were different kinds of social classes that were made, the upper class who were the rich and populated a very small amount of people. The upper middle class which worked as doctors, lawyers and engineers. The lower middle class that worked as market owners and teachers. The lower class consisted of people working in different trades. Lower class people had almost no education and lived in cramped rooms or apartments. | Upper class still consists of a very small amount of the population. The lower class is classified as homeless and unemployed. The middle class is still split. | The difference is that people can move from social class to social class and you aren't restricted to the social class you are born in.  The standard living gap for lower class and upper class is wider than ever. |
| Lassez-faire | During the industrial revolution the government promoted a market which was as free as possible from government interference. It wasn't completely embraced by the government but the business owners liked it because, without any government interference that meant that the workers can have little protection and be fired and replaced for a low cost. | Today Lassez-faire is known as supply-side economics. Supporters of this believe that the governments should not get involved with the businesses which will make taxes really low and provide more jobs. | People think that in our modern society, taxes support government services and will provide the best goods for the highest amount of people. They believe that the government should supply a safety net for their citizens. |
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1. XHow have the societal changes of the Industrial Revolution impacted us today?

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| Benefits | Drawbacks |
| the establishment of middle class created better living conditions for certain parts.  Tried to stop the ongoing problem about child labor and ensure children under 12 were not employed.  Created a set of hours and minimum wage to make sure that the workers were not treated poorly. | It introduced child slavery to the world although it is not much of an outgoing issue anymore.  The gap between lower class and upper class was wider than ever when the structure of class came to place. |
| *Textbook* | Textbook |

Part D:

1. How did Britain react to the new changes of the Industrial Revolution?

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| Reaction | Importance | Presence Today (similarities) | Differences Today |
| Poor Law | The poor law was created in the 17th century to address the poverty. Even though it was revised revised in 1834 it didn't get rid of the poverty and unemployment. This made the local authorities responsible but there were still many poor people left without relief. Many seemed shelter and food in workhorses and some tried to profit people under their care. | There still many people that live in poverty in our society and we have authorities and individuals that are trying to stop this. Its very difficult to keep the poverty and unemployment under control. | Poverty is still very big but we have created different systems that support the poor. We have welfare, food banks and other programs to help people get off the street and not starve. |
| Social reformers | Throughout the 18th to 19th century social reformers tried to improve the life of the lower class, they were concerned about education, child labor, housing,and free schooling. With the support of donors free schooling and food was provided for the needy children and they sent them to work as servants in Canada or Australia. They also tried to pass laws to limit the hours of work and set minimum wage. | Unfortunately today we are still fighting to provide education housing and schooling for everyone all across the world we are also trying to make equal working conditions happen and set minimum wages for everyone even though there is a lot of laws created to try to ensure that this is it it is very hard to keep it under control and make sure there are violations. | Children in many different countries are provided with education now and opportunities for them to success. They have also created the minimum wage and set hours to create a more sustainable life. |
| Factory acts | In 1802 it became illegal that children work for more than 12 hours in the cotton mills and in 1819 it became illegal to hire a child that was under 9 years old in the textiles industry. This did not apply to other children in different industries. And in 1812 worker’s associations became legal and an early form of labor unions were established. | It is still illegal for industries to hire child workers and there are certain regulations that make sure kids dont work long hours. Routine inspections are now still required to make sure the employees are working in a safe condition. | In many countries 12 is the minimum age for working but some countries have not established this law yet and children 5 and over are working in factories, carpet weaving and agriculture. Many of the laws have developed and progressed into what they are today. |
| abolition of slavery | During the industrial revolution the Britain bought and slaved more than 3 million slaves to provide workers. But in 1722 Somersett’s Case ruled that there was no law that allowed slavery and in 1807 the British Parliament passed the Slave Trade Act that made slave trade illegal. Finally in 1833 slaveries were abolished in Britain and the government had to pay for loss of business in freeing the slaves. | Having and using slaves is still illegal today but it is still used almost everywhere. There are many people trapped in various amounts of slavery. | Some differences are that it has become impossible to trade slaves or have slaves but people find a loophole. Slaves aren't as valuable so if they were to get sick they would get dumped on the street and die.  In Canada we dont have slavery and we try to stay on top of this issue and try to eliminate them. |
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1. How have Britain’s reactions to the Industrial Revolution impacted us today?

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| Benefits | Drawbacks |
| workhouses and shelters were created that still have an effect on us.  Free education provided for children  Slavery was banned  Set hours were created for employees and minimal wages required to be paid | No major drawback that I could find but making sure the rules were being followed was difficult. |
| *textbook* | textbook |