Prospect Park School

Prospect Park School District

Independent Research

Date Completed: August 2019		Date of Board Approval: 9/10/2019	

Overview and Goals:

It is the job of the educational community to prepare students for jobs which have not yet been created. In this 21st Century learning environment students will capitalize on their own interest, desire to learn and passion. The students will pursue a question and engage in the problem solving process.

Topic/Unit Number	Topic/Unit Name	Suggested Pacing/Time Frame
1	What I Want to Know More About?	7 weeks
2	How Can I Share My Passion With Others? Is there Something I Can Do?	16 weeks
3	I Can Change The World	7 weeks

Course meets 1x per week for 3 marking periods (a total of approximately 30 weeks)

Unit Topic:	What Do I Want To Know More About?	Approximate Time frame:	7 weeks	Grade Level:	8
Desired Results (1)					
NJ Student Learning Standards:	6.3 Active Citizenship in the 21st Century: All students will acquire the skills needed to be active, informed citizens who value diversity and promote cultural understanding by working collaboratively to address the challenges that are inherent in living in an interconnected world.				
Interdisciplinary Connections:	RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). RST.6-8.8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. RST.6-8.9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating an understanding of the subject under investigation. NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism. NJSLSA.W9. Draw evidence from literary or informational texts to support analysis, reflection, and research. WHST.6-8.7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. WHST.6-8.8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation. WHST.6-8.9. Draw evidence from informational texts to support analysis, reflection, and research.				
Technology Integration: **21st Century Integration**	8.2.8.B.1 Evaluate the history and impact of sustainability on the development of a designed product or system over time and present results to peers. 8.2.8.B.2 Identify the desired and undesired consequences from the use of a product or system 8.2.8.B.3 Research and analyze the ethical issues of a product or system on the environment and report findings for review by peers and /or experts. 8.2.8.C.1 Explain how different teams/groups can contribute to the overall design of a product. 8.2.8.C.2 Explain the need for optimization in a design process.				

	6 8.2.8.C.3 Evaluate the function, value, and aesthetics of a technological product or system, from the perspective of the user and the producer. 8.2.8.C.5 Explain the interdependence of a subsystem that operates as part of a system. 8.2.8.C.5.a Create a technical sketch of a product with materials and measurements labeled. 8.2.8.C.6 Collaborate to examine a malfunctioning system and identify the step-by-step process used to troubleshoot, evaluate and test options to repair the product, presenting the better solution. 8.2.8.C.7 Collaborate with peers and experts in the field to research and develop a product using the design process, data analysis and trends, and maintain a design log with annotated sketches to record the developmental cycle. 8.2.8.C.8 Develop a proposal for a chosen solution that include models (physical, graphical or mathematical) to communicate the solution to peers. 8.2.8.D.1 Design and create a product that addresses a real world problem using a design process under specific constraints. 8.2.8.D.2 Identify the design constraints and trade-offs involved in designing a prototype (e.g., how the prototype might fail and how it might be improved) by completing a design problem and reporting results in a multimedia presentation, design portfolio or engineering notebook. 8.2.8.D.3 Build a prototype that meets a STEM-based design challenge using science, engineering, and math principles that validate a solution
Career Ready Practices:	CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

Understandings: ● I can make a difference in the world. ● Research provides important information.	**Essential Questions** **1. How can I make a difference in the world?** **2. What is important to me?** **3. What do I want to know more about?** **4. How do I get valid information?**
Students will know… **Key Concepts/ Vocabulary:** **Core Group:** Group who student will present research to, provide and gain feedback about project	**Students Will Understand:** How to research using books and the internet.

Evidence of Learning (2)	
Formative Assessments:	Peer conferences, student/teacher conferences, presentation, journal Students will keep track of their research in a student journal or other way of their choice- folder of notes...
Summative Assessment:	Research Presentation: Students will (in any way of their choosing) present their information to (the class or smaller groups) Students will be graded on effort using a rubric.
Benchmark Assessment:	On demand essay: How can I make a difference?
Alternative Assessments:	ESL (assessment grade based on WIDA Model, Modify text as need for individual student Accept drawings, oral or words instead of paragraph/sentences as needed for students IEP or learning goals

Learning Activities and Resources (3)	
Lessons and Activities: 1. Research students/children who have made a difference in the world. 2. Examine the video or read the story "If the world were 100 people…" 3. Brainstorm a list of topics that interest each student. 4. Conduct preliminary research about the topics. 5. Research and present initial research on chosen topic to core group. Students will research and learn about the following people: ● Craig Kielburger- Child slave labor ● Alexandra Scott- Cancer ● Malala Yousafzai -school for girls ● Jack Andraka - cancer ● Ann Makosinski-Flashlight ● Alex Deans- help the blind ● Elif Bilgin- bioplastic ● Boyan Slat-ocean pollution ● Louis Braille: Braille ● Easton LaChappelle- Robotics ● Philo Farnsworth- television ● Samantha Smith- Cold War ● Iqbal Masih- Pakistan- child slavery ● Claudette Colvin- Civil Rights ● Jazz Jennings- LGBTQIA ● Anoyara Khatun- human trafficking	**Curricula Resources:** https://www.youtube.com/watch?v=A3nllBT9ACg **Pure Genius: Building a Culture of Innovation and Taking 20% Time to the Next Level** by Don Wettrick

• Nkosi Johnson- AIDS activist • Thandiwe Chama- Educational Rights • Xiuhtezcatl Martinez- Climate Change • Mari Copeny- Flint Water • Ann Frank- Holocaust • Mikaila Ulmer- Honey Bees • Katie Stagliano- Homeless • Cassandra Lin- environment • Gitanjali Rao- Flint Water Crisis • Ryan Hreljac- Clean water • Yash Gupta- Eye glasses • Mary Grace Henry- Girls education • Maya Penn-Environment • Sophie Cruz- Immigrantion Activist	

Unit Topic:	How Can I Share My Passion With Others? Is There something I Can Do?	Approximate Time frame:	16 weeks	Grade Level:	8

Desired Results (1)	
NJ Student Learning Standards:	6.3 Active Citizenship in the 21st Century: All students will acquire the skills needed to be active, informed citizens who value diversity and promote cultural understanding by working collaboratively to address the challenges that are inherent in living in an interconnected world.
Interdisciplinary Connections:	RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). RST.6-8.8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. RST.6-8.9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating an understanding of the subject under investigation. NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism. NJSLSA.W9. Draw evidence from literary or informational texts to support analysis, reflection, and research. WHST.6-8.7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. WHST.6-8.8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation. WHST.6-8.9. Draw evidence from informational texts to support analysis, reflection, and research.
Technology Integration: **21st Century Integration**	8.2.8.B.1 Evaluate the history and impact of sustainability on the development of a designed product or system over time and present results to peers. 8.2.8.B.2 Identify the desired and undesired consequences from the use of a product or system 8.2.8.B.3 Research and analyze the ethical issues of a product or system on the environment and report findings for review by peers and /or experts. 8.2.8.C.1 Explain how different teams/groups can contribute to the overall design of a product. 8.2.8.C.2 Explain the need for optimization in a design process. 6 8.2.8.C.3 Evaluate the function, value, and aesthetics of a technological product or system, from the perspective of the user and the producer. 8.2.8.C.5 Explain the interdependence of a subsystem that operates as part of a system. 8.2.8.C.5.a Create a technical sketch of a product with materials and measurements labeled. 8.2.8.C.6 Collaborate to examine a malfunctioning system and identify the step-by-step process used to troubleshoot, evaluate and test options to repair the product, presenting the better solution.

	8.2.8.C.7 Collaborate with peers and experts in the field to research and develop a product using the design process, data analysis and trends, and maintain a design log with annotated sketches to record the developmental cycle. 8.2.8.C.8 Develop a proposal for a chosen solution that include models (physical, graphical or mathematical) to communicate the solution to peers. 8.2.8.D.1 Design and create a product that addresses a real world problem using a design process under specific constraints. 8.2.8.D.2 Identify the design constraints and trade-offs involved in designing a prototype (e.g., how the prototype might fail and how it might be improved) by completing a design problem and reporting results in a multimedia presentation, design portfolio or engineering notebook. 8.2.8.D.3 Build a prototype that meets a STEM-based design challenge using science, engineering, and math principles that validate a solution
Career Ready Practices:	CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

Understandings: ● Sharing passion with others allows more people to effect change ● Research provides important information.	**Essential Questions** 1. **How can I work together to effect change?** 2. **What is my responsibility as a contributing citizen?**
Students will know… **Key Concepts/ Vocabulary:** **Core Group:** Group who student will present research to, provide and gain feedback about project	**Students Will Understand:** How to research using books and the internet.

Evidence of Learning (2)	
Formative Assessments:	Peer conferences, student/teacher conferences, presentation, journal Students will keep track of their research in a student journal or other way of their choice- folder of notes...
Summative Assessment:	Research Presentation: Students will (in any way of their choosing) present their information to (the class or smaller groups) Students will be graded on effort using a rubric.
Benchmark Assessment:	On demand essay: How can I make a difference?
Alternative Assessments:	ESL (assessment grade based on WIDA Model, Modify text as need for individual student Accept drawings, oral or words instead of paragraph/sentences as needed for students IEP or learning goals

Learning Activities and Resources (3)	
Lessons and Activities: 1. Students will continue to dive into their research. 2. Students will present their ideas and research to partners and gather feedback 3. Find and execute a way to share information to larger groups of people (build website, start social media page) 4. Students will begin to form ideas on how they can effect change	**Curricula Resources:** https://www.youtube.com/watch?v=A3nllBT9ACg **Pure Genius: Building a Culture of Innovation and Taking 20% Time to the Next Level** by Don Wettrick

Unit Topic:	How Can I Share My Passion With Others? Is There something I Can Do?	Approximate Time frame:	7 weeks	Grade Level:	8

Desired Results (1)	
NJ Student Learning Standards:	6.3 Active Citizenship in the 21st Century: All students will acquire the skills needed to be active, informed citizens who value diversity and promote cultural understanding by working collaboratively to address the challenges that are inherent in living in an interconnected world.
Interdisciplinary Connections:	RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table). RST.6-8.8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. RST.6-8.9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating an understanding of the subject under investigation. NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism. NJSLSA.W9. Draw evidence from literary or informational texts to support analysis, reflection, and research. WHST.6-8.7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. WHST.6-8.8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation. WHST.6-8.9. Draw evidence from informational texts to support analysis, reflection, and research.
Technology Integration: **21st Century Integration**	8.2.8.B.1 Evaluate the history and impact of sustainability on the development of a designed product or system over time and present results to peers. 8.2.8.B.2 Identify the desired and undesired consequences from the use of a product or system 8.2.8.B.3 Research and analyze the ethical issues of a product or system on the environment and report findings for review by peers and /or experts. 8.2.8.C.1 Explain how different teams/groups can contribute to the overall design of a product. 8.2.8.C.2 Explain the need for optimization in a design process. 6 8.2.8.C.3 Evaluate the function, value, and aesthetics of a technological product or system, from the perspective of the user and the producer. 8.2.8.C.5 Explain the interdependence of a subsystem that operates as part of a system. 8.2.8.C.5.a Create a technical sketch of a product with materials and measurements labeled. 8.2.8.C.6 Collaborate to examine a malfunctioning system and identify the step-by-step process used to troubleshoot, evaluate and test options to repair the product, presenting the better solution.

	8.2.8.C.7 Collaborate with peers and experts in the field to research and develop a product using the design process, data analysis and trends, and maintain a design log with annotated sketches to record the developmental cycle. 8.2.8.C.8 Develop a proposal for a chosen solution that include models (physical, graphical or mathematical) to communicate the solution to peers. 8.2.8.D.1 Design and create a product that addresses a real world problem using a design process under specific constraints. 8.2.8.D.2 Identify the design constraints and trade-offs involved in designing a prototype (e.g., how the prototype might fail and how it might be improved) by completing a design problem and reporting results in a multimedia presentation, design portfolio or engineering notebook. 8.2.8.D.3 Build a prototype that meets a STEM-based design challenge using science, engineering, and math principles that validate a solution
Career Ready Practices:	CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

Understandings: ● Sharing passion with others allows more people to effect change ● Research provides important information.	**Essential Questions** 3. **How can I work together to effect change?** **4. What is my responsibility as a contributing citizen?**
Students will know… **Key Concepts/ Vocabulary:** **Core Group:** Group who student will present research to, provide and gain feedback about project	**Students Will Understand:** How to research using books and the internet.

Evidence of Learning (2)	
Formative Assessments:	Peer conferences, student/teacher conferences, presentation, journal Students will keep track of their research in a student journal or other way of their choice- folder of notes...
Summative Assessment:	Solution Presentation Students will (in any way of their choosing) present their solution to (the class or smaller groups) Students will be graded on effort using a rubric.
Benchmark Assessment:	On demand essay: How can I make a difference?
Alternative Assessments:	ESL (assessment grade based on WIDA Model, Modify text as need for individual student Accept drawings, oral or words instead of paragraph/sentences as needed for students IEP or learning goals

Learning Activities and Resources (3)	
Lessons and Activities: 1. Create solutions to problems. 2. Create plan for solution. 3. Invite 1 person who can help affect change to their presentation through a formal letter.	**Curricula Resources:** https://www.youtube.com/watch?v=A3nllBT9ACg **Pure Genius: Building a Culture of Innovation and Taking 20% Time to the Next Level** by Don Wettrick