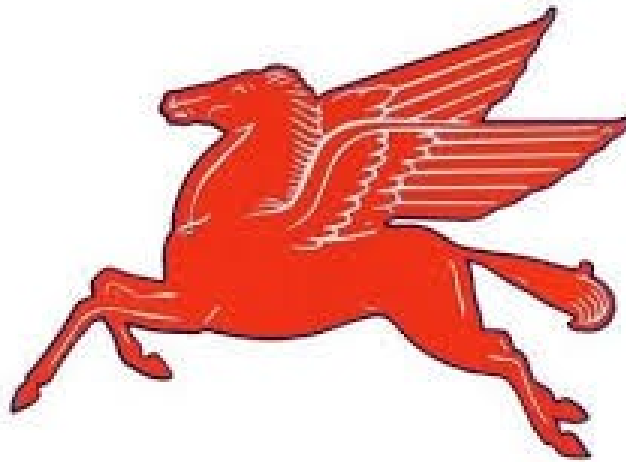


Curriculum Management System

PAULSBORO PUBLIC SCHOOLS



Gifted & Talented Grade 6

UPDATED September 2020

For adoption by all regular education programs as specified and for adoption or adaptation by all Special Education Programs in accordance with Board of Education Policy.

Board Approved: October 2021

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Paulsboro Public Schools

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Mrs. Anisah Coppin, Business Administrator/Board Secretary

Mr. Robert Harris, Director of Special Services

Mrs. Tina Morris, Principal, grades Pre-K to 2

Mr. Matthew J. Browne, Principal, grades 3-6

Mr. Paul Morina, Principal, grades 7-12

Paulsboro Public Schools

Mission Statement

The mission of the Paulsboro School District is to work with students, parents, educators, and community to develop excellence in education while preparing each student to be viable and productive citizens in society. Our goal is to develop the unique potential of the whole student by creating a challenging and diverse learning climate that prepares students for the 21st Century and is rich in tradition and pride.

PACING CHART (2020-2021)

TOPIC	# OF DAYS	DATES	COMMENTS
Robotics	<i>10-20</i>	<i>vary</i>	focus on real world connection
building			sub-topic option
programming			sub-topic option
career exploration			sub-topic option
Engineering	10-20	vary	focus on real world connection
renewable energy			sub-topic option
air & water quality			sub-topic option
construction design			sub-topic option
career exploration			sub-topic option
Science	10-20	vary	focus on real world connection
biomedical			sub-topic option
forensic			sub-topic option
climate change			sub-topic option
career exploration			sub-topic option
Technology	10-20	vary	focus on real world connection
virtual & augmented reality			sub-topic option
circuits & electronics			sub-topic option
Animation & video game design			sub-topic option
digital textiles			sub-topic option
career exploration			sub-topic option

Dates and number of days will vary based on resources available and school schedules.

DEFINITIONS

NJ Student Learning Standards – Clear and specific benchmarks for students' achievement in various content areas. The standards ensure that each child receives a “thorough and efficient education”.

21st Century Life and Careers Standards – These skills that are comprised of the “12 Career Ready Practices” and Standards 9.1 through 9.4. The organization of these standards intends to enable students to make informed decisions that prepare them to engage as active citizens in global society and be prepared for the opportunities of the 21st century workplace.

ELA Companion Standards – Consists of standards for reading and writing in History, Social Studies, Science and Technical subjects. ELA curricula

Gifted and Talented Learners – Students with high-ability who may need more depth and complexity in instruction.

Special Education Learners – Students in need of supports and interventions to improve student achievement

English Language Learners – Students with a native language other than English or who are at varying degrees of English language proficiency.

QUARTER 1 –
Big Idea: Robotics
Topics: Build/Program/ Career Exploration

Standards: NJ Student Learning Standards: NGSS MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem. MS-ETS1-3. Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success. MS-ETS1-	GOAL	
	SWBAT design and build robots. SWBAT program/ code robots to perform tasks/functions. SWBAT explore careers in the field of robotics	
	Essential Questions	Assessments
	<ol style="list-style-type: none"> 1. How will you design and build a robot? 2. What task/ function can the robots perform? 3. What are careers in robotics? 	<p><i>(Include benchmark assessments where possible – This could be a link to the assessment, a page reference in a book to the assessment or an attachment following this document referencing these standards and this goal.)</i></p> <p>Formative assessments include: interactive response, observation, active participation in a team environment, and/or data collection of investigation.</p>
Enduring Understanding		Resources

<p>4. Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.</p> <p>21st Century Life and Careers:</p> <p>CRP6. Demonstrate creativity and innovation</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them</p> <p>CRP10. Plan education and career paths aligned to personal goals</p> <p>CRP11. Use technology to enhance productivity</p> <p>CRP12. Work productively in teams while using cultural global competence</p> <p>Technology Standards:</p> <p>8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.</p> <p>ELA Companion Standards:</p> <p>NJSLSA.SL4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience. NJSLSA.SL5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations. NJSLSA.SL6. Adapt speech to a variety of</p>	<p>Design & Building Robots from both models and imagination</p> <p>Program/ build robots to perform various tasks/ functions</p> <p>Careers in robotics</p>	<p>Ipads</p> <p>Wonder Workshop robots</p> <p>UB Tech robot kits</p> <p>LEGO Mindstorm robots</p> <p>Chromebooks</p> <p>Ipads</p>
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<p>contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.</p> <p>MODIFICATIONS:</p> <p>Gifted and Talented Learners: student centered, compact curriculum, flexible pacing, assume ownership of own learning</p> <p>Special Education Learners: written list of instructions, extended time, alternate projects, flexible use of materials</p> <p>English Language Learners: extended time, teacher modeling, simplified instructions, frequent breaks</p>		
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<p>QUARTER 2 –</p> <p>Big Idea: Engineering</p> <p>Topics: Renewable Energy/ Air & Water Quality/ Construction Design/ Career Exploration</p>													
<p>Standards:</p> <p>NJ Student Learning Standards: NGSS MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth’s surface</p>	<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2" data-bbox="604 1318 1432 1360" style="background-color: #cccccc;">GOAL</th> </tr> </thead> <tbody> <tr> <td data-bbox="604 1360 1018 1409" style="width: 50%;">SWBAT research & design sources of renewable energy</td> <td data-bbox="1018 1360 1432 1409"></td> </tr> <tr> <td data-bbox="604 1409 1018 1457">SWBAT research & design measures of air & water quality</td> <td data-bbox="1018 1409 1432 1457"></td> </tr> <tr> <td data-bbox="604 1457 1018 1505">SWBAT research & create construction design</td> <td data-bbox="1018 1457 1432 1505"></td> </tr> <tr> <td data-bbox="604 1505 1018 1554">SWBAT explore careers in the field of engineering</td> <td data-bbox="1018 1505 1432 1554"></td> </tr> <tr> <th data-bbox="604 1554 1018 1610" style="background-color: #cccccc;">Essential Questions</th> <th data-bbox="1018 1554 1432 1610" style="background-color: #cccccc;">Assessments</th> </tr> </tbody> </table>	GOAL		SWBAT research & design sources of renewable energy		SWBAT research & design measures of air & water quality		SWBAT research & create construction design		SWBAT explore careers in the field of engineering		Essential Questions	Assessments
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<p>at varying time and spatial scales.</p> <p>MS-ESS3-1. Construct a scientific explanation based on evidence for how the uneven distributions of Earth’s mineral, energy, and groundwater resources are the result of past and current geoscience processes.</p> <p>MS-LS4-4. Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals’ probability of surviving and reproducing in a specific environment.</p>	<ol style="list-style-type: none"> 1. What is renewable energy? 2. How is air & water quality measured? 3. What is construction design? 4. What are careers in engineering? 	<p><i>(Include benchmark assessments where possible – This could be a link to the assessment, a page reference in a book to the assessment or an attachment following this document referencing these standards and this goal.)</i></p> <p>Formative assessments include: interactive response, observation, active participation in a team environment, and/or data collection of investigation.</p>
<p>21st Century Life and Careers:</p> <p>CRP1. Act as a responsible and contributing citizen and employee</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions</p> <p>CRP7. Employ valid and reliable research strategies</p> <p>Technology Standards:</p> <p>8.2.5.D.1 Identify and collect information about a problem that can be solved by technology, generate ideas to solve the problem, and identify constraints and trade-offs to be considered.</p> <p>8.2.5.D.2 Evaluate and test alternative solutions to a problem using the constraints and trade-offs identified in the design process to evaluate potential solutions</p> <p>ELA Companion Standards:</p>	<p style="text-align: center;">Enduring Understanding</p> <p>Engineering Design Process</p> <p>Careers in Engineering</p>	<p style="text-align: center;">Resources</p> <p>Renewable Energy Resources</p> <p>Air & Water Resources</p> <p>Construction Design Resources</p> <p>Chromebooks</p> <p>Ipads</p>

NJSLSA.SL4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience. NJSLSA.SL5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations. NJSLSA.SL6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

MODIFICATIONS:

Gifted and Talented Learners: student centered, compact curriculum, flexible pacing, assume ownership of own learning

Special Education Learners: written list of instructions, extended time, alternate projects, flexible use of materials

English Language Learners: extended time, teacher modeling, simplified instructions, frequent breaks

QUARTER 3 –

Big Idea: Science

Topic: Biomedical/ Forensic/ Climate Change/ Career Exploration

Standards:

GOAL

<p>NJ Student Learning Standards: NGSS MS-LS1-1. Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. MS-LS4-4. Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment. MS-ESS3-1. Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.</p>	<p>SWBAT research & explore biomedical science. SWBAT research & explore forensic science. SWBAT research & explore climate change. SWBAT explore careers in science.</p>								
<p>21st Century Life and Careers: CRP1. Act as a responsible and contributing citizen and employee. CRP5. Consider the environmental, social and economic impacts of decisions. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. Technology Standards: 8.2.5.A.4 Compare and contrast how technologies have changed over time due to human needs and economic,</p>	<table border="1"> <thead> <tr> <th data-bbox="604 373 1018 443">Essential Questions</th> <th data-bbox="1018 373 1432 443">Assessments</th> </tr> </thead> <tbody> <tr> <td data-bbox="604 443 1018 1010"> <ol style="list-style-type: none"> 1. What is biomedical science? 2. What is forensic science? 3. What is climate change? 4. What are careers in science? </td> <td data-bbox="1018 443 1432 1010"> <p><i>(Include benchmark assessments where possible – This could be a link to the assessment, a page reference in a book to the assessment or an attachment following this document referencing these standards and this goal.)</i></p> <p>Formative assessments include: interactive response, observation, active participation in a team environment, and/or data collection of investigation.</p> </td> </tr> <tr> <th data-bbox="604 1010 1018 1079">Enduring Understanding</th> <th data-bbox="1018 1010 1432 1079">Resources</th> </tr> <tr> <td data-bbox="604 1079 1018 1843"> <p>Aspects of biomedical science Aspects of forensic science Solutions to climate change Careers in Science</p> </td> <td data-bbox="1018 1079 1432 1843"> <p>Biomedical Resources Forensic Resources Climate Change Resources Chromebooks Ipads</p> </td> </tr> </tbody> </table>	Essential Questions	Assessments	<ol style="list-style-type: none"> 1. What is biomedical science? 2. What is forensic science? 3. What is climate change? 4. What are careers in science? 	<p><i>(Include benchmark assessments where possible – This could be a link to the assessment, a page reference in a book to the assessment or an attachment following this document referencing these standards and this goal.)</i></p> <p>Formative assessments include: interactive response, observation, active participation in a team environment, and/or data collection of investigation.</p>	Enduring Understanding	Resources	<p>Aspects of biomedical science Aspects of forensic science Solutions to climate change Careers in Science</p>	<p>Biomedical Resources Forensic Resources Climate Change Resources Chromebooks Ipads</p>
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political and/or cultural influences.

8.2.5.A.5 Identify how improvement in the understanding of materials science impacts technologies.

8.2.8.A.4 Redesign an existing product that impacts the environment to lessen its impact(s) on the environment.

ELA Companion Standards:

NJSLSA.SL4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience. NJSLSA.SL5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations. NJSLSA.SL6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

MODIFICATIONS:

Gifted and Talented Learners: student centered, compact curriculum, flexible pacing, assume ownership of own learning

Special Education Learners: written list of instructions, extended time, alternate projects, flexible use of materials

English Language Learners:

extended time, teacher modeling, simplified instructions, frequent breaks		
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QUARTER 4 –
Big Idea: Technology
Topic: Virtual & Augmented Reality/ Electronics/ Video Game Design/ Digital Textiles/ Career Exploration

Standards: NJ Student Learning Standards: NGSS Students who demonstrate understanding can: MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem. MS-ETS1-3. Analyze data from tests to determine similarities	GOAL	
	SWBAT explore virtual & augmented reality. SWBAT explore circuits & electronics. SWBAT explore animation & video game design. SWBAT explore digital textiles. SWBAT explore careers in technology.	
	Essential Questions	Assessments
	<ol style="list-style-type: none"> 1. What is virtual & augmented reality? 2. What are circuits & electronics? 3. What is animation & video game design? 4. What are digital textiles? 5. What are careers in technology? 	<p><i>(Include benchmark assessments where possible – This could be a link to the assessment, a page reference in a book to the assessment or an attachment following this document referencing these standards and this goal.)</i></p> <p>Formative assessments include: interactive response, observation, active participation in a team environment, and/or data collection of investigation</p>

	Enduring Understanding	Resources
<p>and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success. MS-ETS1-4. Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.</p> <p>21st Century Life and Careers: CRP2. Apply appropriate academic and technical skills. CRP6. Demonstrate creativity and innovation. CRP10. Plan education and career paths aligned to personal goals. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.</p> <p>Technology Standards: 8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models. 8.2.5.C.1 Collaborate with peers to illustrate components of a designed system 8.2.5.C.7 Work with peers to redesign an existing product for a different purpose</p> <p>ELA Companion Standards: NJLSA.SL4. Present information, findings, and supporting evidence such that</p>	<p>Aspects of virtual & augmented reality</p> <p>Aspects of circuits & electronics</p> <p>Aspects of animation & video game design</p> <p>Aspects of digital textiles</p> <p>Careers in technology</p>	<p>Virtual Reality Resources Augmented Reality Resources Circuit Resources Electronic Resources Animation Resources Video Game Design Resources Digital Textile Resources Chromebooks Ipads</p>

listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience. NJSLA.SL5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations. NJSLA.SL6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

MODIFICATIONS:

Gifted and Talented Learners: student centered, compact curriculum, flexible pacing, assume ownership of own learning

Special Education Learners: written list of instructions, extended time, alternate projects, flexible use of materials

English Language Learners: extended time, teacher modeling, simplified instructions, frequent breaks