

# GREEN WOODS CHARTER SCHOOL

## *“The Design, Delivery, and Success of Our Award-winning EIC Curriculum”*

By:

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*Green Woods would like to extend our sincere appreciation to Dr. Patricia Vathis of the PA Department of Education for her continued guidance and support throughout our curriculum development process.*



# What is an EIC Curriculum?

- Using the Environment as an Integrating Context for Learning
- PA Academic Standards for Environment and Ecology are the foundation. 60% of E&E standards are aligned with SS – 80% are aligned with Science
- Multi-sensory/Multiple Intelligences – hiking and using SCEE’s 350 acres of ponds, streams, forest, and fields as a learning laboratory
- SCEE provides content educators that team teach with Green Woods teachers supporting EIC instruction both in the classroom and outdoors
- Classroom instruction focuses on depth as opposed to breath of concepts
- Green Woods teachers use EIC content to enhance and support “process” learning: reading/writing/speaking/listening/technology/creative arts/music
- Students integrate “systems thinking” and make connections across disciplines
- Spiraling and scaffolding of concepts allows for the ongoing development of higher level critical-thinking and problem-solving skills
- Project-based learning and investigating real-world issues make learning relevant

# How was our EIC Curriculum Developed?

- August 2004-March 2005
  - Extensive research of templates & curriculum process
  - Buy-in from teachers and approval from Board of Trustees/ parents
  - Networked for support and potential resources - applied for and received funding
  - March 2005 – curriculum work with PA Department of Education (PDE) begins
  
- June 2005 – Created templates for EIC maps/scope and sequence
  
- September 2005 to June 2006 – Created standards-based EIC curriculum maps
  
- June 2006 – Revised standards-based EIC curriculum maps
  
- July 2006 – Awarded “Exemplary Status Award” from PDE for our work
  
- September 2006 to June 2007 – Implemented revised EIC curriculum maps
  
- July 2007 – Awarded “2007 Governor’s Award for Environmental Excellence”
  
- April 2008 – Finalist – “Philadelphia Sustainability Award”
  
- May 2008 – Awarded School District of Philadelphia “Best Practices Award”
  
- June 2008 – Revised EIC curriculum maps; Presented revised curriculum to PDE

# Sample: K – EIC CURRICULUM MAP

Teacher/Grade: Hart/Kinder. Topic: Stream Month/Time span: October – November/6 wks.  
**EIC Curriculum Map**

*NOTE – KINDERGARTEN STANDARDS ARE ITALICIZED\**

<p><b>Environment &amp; Ecology</b></p> <p>4.1 Watersheds and Wetlands</p> <ul style="list-style-type: none"> <li>Identify the lotic system</li> <li>Explain why water moves or does not move</li> <li>Identify things found in water environments</li> </ul> <p>4.6 Ecosystems and Their Interactions</p> <ul style="list-style-type: none"> <li>Categorize living and non living things</li> </ul> <p>4.7 Threatened, Endangered and Extinct Species</p> <ul style="list-style-type: none"> <li>Four elements in a habitat is essential</li> <li>Why plants and animals are different colors, etc. and how it relates to survival</li> </ul>		<p><b>Reading, Writing, Speaking &amp; Listening</b></p> <p>1.1: LEARNING TO READ INDEPENDENTLY</p> <p>M. Listen to new vocabulary in multiple contexts in order to understand new words and concepts</p> <p>N. Discuss unknown words and word meanings</p> <p>O. Use an increasingly complex and varied spoken vocabulary</p> <p>P. Demonstrate an increasing understanding of new vocabulary introduced in conversations, activities, stories or books</p> <p>1.4: TYPES OF WRITING</p> <p>D. Draw or write informational sentences (letters, descriptions, definitions, collections of facts simple instructions) using illustrations when relevant</p> <p>1.5: QUALITY OF WRITING</p> <p>B. Create a focus for the 'piece' of writing</p> <p>C. Retell about specific experiences, people, objects, events, or stories with a focused topic</p> <p>D. Use appropriate content for the topic</p> <p>E. Organize words into a complete thought</p> <p>F. Use a variety of pictures or words to express a thought</p> <p>G. Revise writing or illustrations to sequence events and add detail</p> <p>H. Publish or present writing</p>	
<p><b>Science &amp; Technology</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>		<p><b>Math</b></p> <p>2.4: MATHEMATICAL REASONING AND CONNECTIONS</p> <p>A. Use math vocabulary comparison terms when making predictions regarding the quantity, size, and shape of objects</p> <p>B. Identify the use of measurement in everyday situations</p>	
<p><b>Civics &amp; Government</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p><b>Geography</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p><b>Arts and Humanities</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p><b>History</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>
<p><b>Health Safety and Physical Education</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p><b>Career Education and Work</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p><b>Economics</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>	<p><b>Family and Consumer Science</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>
<p><b>World Languages</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul>			
<p><b>Goals and Objectives:</b></p> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Identify difference between lotic and lentic systems</li> <li>Describe a dam, and its purposes</li> <li>Differentiate between man-made, nature-made and animal-made dams</li> <li>Experience the use of a dichotomous key to identify macro invertebrates</li> <li>Look for macro invertebrates under rocks in flowing water</li> <li>Identify the needs of all living things and where they can be found in a stream.</li> </ul>			
<p><b>Overview of Integrated Activities:</b></p> <ul style="list-style-type: none"> <li>Hikes to stream</li> </ul>			

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Teacher/Grade: Hart/Kinder. Topic: Stream Month/Time span: October – November/6 wks.  
**EIC Curriculum Map**

<ul style="list-style-type: none"> <li>Introduce vocabulary words (lotic, living and nonliving, dam, food, water, shelter, space, macro invertebrate)</li> <li>Identify living and nonliving things</li> <li>Observe how a stream provides for living things</li> <li>Observe variances in streams (different stream bottoms, flows, and depths)</li> <li>Find macro invertebrates by turning over rocks and using paint brushes to transfer them into buckets and tubs</li> <li>Create a leaf pack and leave it in the stream for 2 – 3 weeks to attract macro invertebrates</li> <li>Observe natural dams, as well as create and disassemble a dam</li> </ul> <ul style="list-style-type: none"> <li>Identify macro invertebrates using a dichotomous key both in pictures and at the stream</li> <li>Identify and apply rules for living versus nonliving things (does it grow, make more of itself, react to changes in the environment)</li> <li>Play games to categorize living and non living things</li> <li>Create a "class written" book that summarizes our stream study. Individually illustrate the book.</li> <li>Invite parents to come for an end of unit share</li> <li>Read alouds:             <ul style="list-style-type: none"> <li><u>Water</u>, Susan Canizares – Identifying different properties of water, describing words</li> <li><u>The River</u>, Nik Pollard – How a stream becomes a river, uses of a river</li> <li><u>If You Find A Rock</u>, Peggy Christian – Similarities and differences in surfaces</li> <li><u>What's Alive</u>, Lisa Trumbauer – Living and non living things</li> </ul> </li> <li>Art Activities –</li> </ul>
<p><b>Assessment</b></p> <ul style="list-style-type: none"> <li>Living/nonliving worksheet</li> <li>Examples of how stream provides food, water, shelter and space (drawn by students)</li> <li>Classification game (anecdotal records)</li> <li>Dams worksheet</li> <li>Journal Entry</li> <li>Stream Study Summary book</li> <li>Anecdotal records</li> <li>Observations of students on hikes and at stream</li> </ul>
<p><b>Resources</b></p> <p>Macroinvertebrate dichotomous key and flash cards</p> <p>Leaf pack bags</p> <p><b>Books:</b></p> <p><u>Animal Babies in Ponds and Rivers</u>, Jennifer Schofield</p> <p><u>Animal Tracks</u>, Arthur Dorros</p> <p><u>Big Al</u>, Andrew Clements</p> <p><u>Fish is Fish</u>, Leo Leonni</p> <p><u>I Am Water</u>, Jean Marzollo</p> <p><u>If You Find A Rock</u>, Peggy Christian</p> <p><u>River</u></p> <p><u>What's Alive</u>, Lisa Trumbauer</p> <p><u>Water</u>, Susan Canizares</p> <p><u>The River</u>, Nik Pollard</p>

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# Sample: GRADE 1 - EIC CURRICULUM MAP

Teacher/Grade: Kuchinov 1		Topic: Winter, Diversity, Tracks, Hibernation, Dormancy	Month/Time span: December/January 4 weeks
<b>EIC Curriculum Map</b> <i>Pennsylvania Academic Standards:</i>			
<b>Environment &amp; Ecology</b>		<b>Reading, Writing, Speaking &amp; Listening</b>	
<ul style="list-style-type: none"> <li>4.1.4A Identify various types of water environments.</li> <li>4.8.4B Know that environmental conditions influence where and how people live.</li> <li>4.4.4B Identify the role of the sciences in Pennsylvania agriculture.</li> <li>4.6.4A Understand that living things are dependent on nonliving things in the environment for survival.</li> <li>4.6.4B Understand the concept of cycles.</li> <li>4.7.4A Identify differences in living things</li> <li>4.7.4B Know that adaptations are important for survival.</li> </ul>		<ul style="list-style-type: none"> <li>1.1 Learning to Read Independently</li> <li>1.2. Reading Critically in All Content Areas</li> <li>1.3. Reading, Analyzing and Interpreting Literature</li> <li>1.4. Types of Writing</li> <li>1.5. Quality of Writing</li> <li>1.6. Speaking and Listening</li> <li>1.7. Characteristics and Function of the English Language</li> <li>1.8. Research</li> </ul>	
<b>Science &amp; Technology</b>		<b>Math</b>	
<ul style="list-style-type: none"> <li>3.7.4C Identify basic computer operations and concepts.</li> <li>3.7.4D Use basic computer software.</li> <li>3.7.4E Identify basic computer communications systems</li> </ul>		<ul style="list-style-type: none"> <li>N/A</li> </ul>	
<b>Civics &amp; Government</b>	<b>Geography</b>	<b>Arts and Humanities</b>	
<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	
<b>History</b>	<b>Career Education and Work</b>	<b>Economics</b>	
<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	
<b>Health Safety and Physical Education</b>	<b>Family and Consumer Science</b>	<b>World Languages</b>	
<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	
<b>Goals and Objectives:</b>			
<ul style="list-style-type: none"> <li>Students will be able to identify and explain various types of water environments</li> <li>Students will discuss influences and environmental conditions that influence where and how people live</li> <li>Students will be able to identify and discuss why animals migrate, hibernate or are dormant in winter: plants, animals, pond, seasons</li> <li>Students will be able to identify what seasonal changes occur during winter and the cycle of seasons</li> <li>Students will be able to identify differences in living things during the winter season</li> <li>Students will be able to identify characteristics of animals that help them during winter</li> <li>Students will be able to identify tracks of animals that visit the pond: deer, raccoon, rabbit</li> </ul>			
<b>Overview of Integrated Activities:</b>			
Play web of life game at the pond Students will create and cut paper snowflakes Discuss pictures of animals that visit the pond and their characteristics: teeth, claws, movement, coloring, eyesight etc Play Snapping Turtle game Categorize animals according to their walk: straight, hoppers, waddlers Discuss animals that migrate Discuss animals that hibernate Discuss animals that are dormant Discuss animals that are active in winter Hibernation: Technology		Weekly hikes Explore and observe signs of seasons, tracks Temperature recordings of Polliwog pond (ongoing) Introduce and discuss: camouflage, fur, climbing ability, flying, swimming, burrowing Illustrate and present an animal and one of its special characteristics Signs of winter web Find and identify tracks of animals Write about animals that have adapted and their characteristics Why do we need a nose? A tail?	

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Teacher/Grade: Kuchinov 1		Topic: Winter, Diversity, Tracks, Hibernation, Dormancy	Month/Time span: December/January 4 weeks
<b>EIC Curriculum Map</b>			
<b>Assessment</b>			
Students will be able to illustrate and write about the pond during winter Students will be introduced to where and how people live according to their environment and geographic location		Students will identify and write about animals in winter Students will identify and write about plants in winter Students will illustrate and discuss the season of winter and the cycle of seasons Students will identify characteristics of animals that help them during winter	
<b>Resources</b>			
<u>There was a cold lady who swallowed some snow</u> L. Colandro <u>When winter comes</u> N. Van Laan <u>My Penguin Osbert</u> by E. Kimmel <u>Snowmen at night</u> <u>White snow bright snow</u> <u>Stella Queen of the snow</u> M. Gay <u>Dear Rebecca, Winter is here</u> by J. George <u>It's Winter</u> by Linda Glaser <u>Animals in Winter</u> Bancroft and Gelder <u>Go to Sleep, Groundhog!</u> <u>What good is a tail?</u> M. Robinson  Animal Tracks: <a href="http://www.bear-tracker.com/">http://www.bear-tracker.com/</a>		<u>Who knows this nose?</u> By Marlene Robinson <u>Actual Size</u> by Steve Jenkins <u>Big Tracks, Little Tracks</u> by M. Selsam <u>Tracks in the Wild</u> by B. Bowen <u>Animal Tracks</u> A. Dorros <u>How do animals adapt?</u> B. Kalman  Poetry: "Snowflakes", "Tasting Snowflakes", "Frost", "My bed in winter", "Mittens, Hats, or boots", "Snow sculptures", "Animal Babies", Animals of the air, land, and sea Information on Christmas, Hanukkah, Diwali, Kwanzaa See file on winter holidays (craft projects)  SCEE partner: Mrs. Morgan Animals in winter website: <a href="http://www.sciencemadesimple.com/animals.html">http://www.sciencemadesimple.com/animals.html</a>	

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# Sample: GRADE 2 - EIC CURRICULUM MAP

Teacher/Grade: Kristina Skladaitis/2 <sup>nd</sup> Grade		Topic: Recycling, Composting and Natural Resources	Month/Time span: September/3 weeks
<b>EIC Curriculum Map</b> <i>Pennsylvania Academic Standards:</i>			
<b>Environment &amp; Ecology</b>		<b>Reading, Writing, Speaking &amp; Listening</b>	
<ul style="list-style-type: none"> <li>4.2.4 A – Identify needs of people</li> <li>4.2.4 B – Identify products derived from natural resources.</li> <li>4.2.4 C – Know that some natural resources have limited life spans</li> <li>4.2.4 D – Identify by-products and their use of natural resources.</li> <li>4.3.4 A – Know that plants, animals and humans are dependant on air and water</li> <li>4.3.4 B – Identify how human actions effect environmental health.</li> <li>4.8.4 D – Know the importance of natural resources in daily life.</li> <li>4.9.4. A – Know that there are laws and regulations for the environment.</li> </ul>		<ul style="list-style-type: none"> <li>1.1.3 F – Understand the meaning of and use correctly new vocabulary learned in various subject areas.</li> <li>1.1.3 G – Demonstrate after reading understanding and interpretation of both fiction and nonfiction text.</li> <li>1.3.3 F – Respond to nonfiction and fiction works of literature</li> <li>1.6.3 A – Listen to others</li> <li>1.6.3 B – Listen to a selection of literature and relate it to similar experiences</li> <li>1.6.3 D – Contribute to discussions</li> <li>1.6.3. E – Participation in small and large group discussions and presentations.</li> </ul>	
<b>Science &amp; Technology</b>		<b>Math</b>	
<ul style="list-style-type: none"> <li>N/A</li> </ul>		<ul style="list-style-type: none"> <li>N/A</li> </ul>	
<b>Civics &amp; Government</b>		<b>Geography</b>	<b>Arts and Humanities</b>
<ul style="list-style-type: none"> <li>5.1.3 B – Explain the purposes of rules and laws and why they are important in the classroom, school, community, state and nation.</li> </ul>		<ul style="list-style-type: none"> <li>7.4.3 B – Identify the impacts of people on physical systems</li> </ul>	<ul style="list-style-type: none"> <li>9.1.3 H – Handle materials, equipment and tools safely at work and performance spaces.</li> </ul>
<b>History</b>	<b>Career Education and Work</b>	<b>Economics</b>	
<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	
<b>Health Safety and Physical Education</b>	<b>Family and Consumer Science</b>	<b>World Languages</b>	
<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	
<b>Goals and Objectives:</b>			
<ul style="list-style-type: none"> <li>Students will learn to identify items that can be composted, recycled, and reused.</li> <li>Students will be able to differentiate between living and non living things.</li> <li>Students will learn about natural resources and ways we can conserve them.</li> <li>Students will identify plants, animals, water, air, minerals, and fossil fuels as natural resources.</li> <li>Students will learn about the waste stream.</li> <li>Students will identify pollutants and how we can reduce pollution.</li> <li>Students will be able to differentiate between renewable and non renewable resources.</li> <li>Students will explore a variety of books related to recycling and composting.</li> <li>Students will learn about local recycling laws.</li> <li>Students will build a classroom landfill and compost pile and identify their components.</li> <li>Students will explore the Schuylkill Center's compost pile (or an area near Penn's Native Acres) and identify decomposers.</li> <li>Students will learn about products made from trees and then make paper.</li> </ul>			
<b>Overview of Integrated Activities:</b>			
<ul style="list-style-type: none"> <li>Trash Bash (SCEE)</li> </ul>		<ul style="list-style-type: none"> <li>A Few of My Favorites (Project Learning Tree)</li> </ul>	

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Updated 7/14/2008

Teacher/Grade: Kristina Skladaitis/2 <sup>nd</sup> Grade		Topic: Recycling, Composting and Natural Resources	Month/Time span: September/3 weeks
<b>EIC Curriculum Map</b>			
<ul style="list-style-type: none"> <li>Living/Non Living + Renewable/Non Renewable Lessons (SCEE)</li> <li>Explore Recycling &amp; Composting Books</li> <li>Reducing, Reusing, Recycling, Composting Read Alouds</li> <li>Nature's Recyclers (Project Learning Tree)</li> <li>We All Need Trees (Project Learning Tree)</li> <li>Natural Resources Lessons</li> <li>Journal Responses and Entries</li> </ul>		<ul style="list-style-type: none"> <li>Make Your Own Paper (Project Learning Tree) Art?</li> <li>Pollution Search (Project Learning Tree)</li> <li>Build a Landfill (SCEE)</li> <li>Compost Pile Exploration &amp; Decomposer Hike (SCEE)</li> <li>Build a Compost Pile (SCEE)</li> <li>Pollution Lesson</li> <li>Waste Stream Lesson</li> <li>Responses to Literature &amp; Non Fiction Text</li> </ul>	
<b>Assessment</b>			
<ul style="list-style-type: none"> <li>When given a list of items, students will be able to determine objects made from trees.</li> <li>Students will make a classroom list of items that can be reused, recycled and composted.</li> <li>Students will differentiate between living and nonliving things and renewable and non renewable resources on a worksheet.</li> <li>On a quiz or worksheet, students will be able to identify specific objects that come from natural resources and how we can conserve them.</li> <li>On an oral vocabulary quiz, students will be able to define specific vocabulary words relating to our unit.</li> </ul>		<ul style="list-style-type: none"> <li>Students will build a landfill and identify its parts.</li> <li>Students will identify decomposers within a compost pile.</li> <li>Students will build a compost pile and identify its parts.</li> <li>Students will be able to describe the waste stream in their journal writing.</li> <li>On a quiz, students will be able to identify specific pollutants, the source of that pollution, and how we can reduce the pollution.</li> <li>In their journal writing, students will reflect on local recycling laws and how it impacts our school.</li> </ul>	
<b>Resources</b>			
<b>Curriculum:</b>		<b>Waste Control: Recycling Paper</b> by, Franklin Watts	
<ul style="list-style-type: none"> <li><u>Project Learning Tree</u> – Pre K – 8: Environmental Education Activity Guide</li> </ul>		<b>Waste Control: Recycling Metal</b> by, Franklin Watts	
<b>Books:</b>		<b>Waste Control: Recycling Glass</b> by, Franklin Watts	
<ul style="list-style-type: none"> <li><u>Hazardous Waste</u> by, Allen Stenstrup</li> <li><u>Where Does Rubbish Go?</u> by, Sophy Tahta</li> <li><u>Too Much Garbage</u> by, Patricia Lauber</li> </ul>		<b>Waste Control: Recycling Plastic</b> by, Franklin Watts	

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# Sample: GRADE 5 - EIC CURRICULUM MAP

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Update 7/14/2008

## 5<sup>th</sup> Grade: December – February Global Citizenship in an Ever-Changing Atmosphere

	Topics/Resources	Standards	Essential Questions	Project/Product	
Science	<ul style="list-style-type: none"> <li>• Meteorology</li> <li>• Atmosphere &amp; Global Warming</li> </ul> <p>McDougall-Little Earth Science Project Earth Science Ranger Rick Nature Scope</p>	<p><u>Science &amp; Tech</u> 3.1.7.A, B,C, D 3.2.7.A,B,C,D 3.5.7.C, D 3.7.7.A,B,C,D 3.8.7.C</p> <p><u>Env &amp; Ecology</u> 4.6.7.B 4.8.7 B</p>	<ul style="list-style-type: none"> <li>• What is the Earth's atmosphere, and how does it support and protect life?</li> <li>• How does the Sun supply the energy that drives Earth's weather and climate patterns?</li> <li>• How can weather patterns be measured and predicted?</li> <li>• What are the basic tools of meteorology?</li> <li>• What are Earth's climates, and are humans affecting climate change?</li> </ul>	<p>Project 1: <i>Shh... Constitution</i> – Students divide into 4 groups, book divided into 4 sections. Students complete biosketch, skit, timeline, picture (book)</p> <p>SS = reading, group projects LA = reading, group projects</p>	
Social Studies	<ul style="list-style-type: none"> <li>• Constitution, Government, Citizenship</li> <li>• States &amp; Capitals</li> <li>• International Relations: Case Study on Global Warming (include global citizenship)</li> </ul> <p>History Alive! America's Past Down-to-Earth Guide to Global Warming Internet Resources</p>	<p><u>Env &amp; Ecology</u> 4.2.7.A,B,C,D 4.3.7.A,B,C 4.6.7.B,C 4.7.7.B,C 4.8.7.A,B,C,D 4.9.7.A</p> <p><u>Civics &amp; Gov't</u> 5.1.6.A,B,C,E,H,J,L, M 5.2.6.A,B,C,D,E,F,G 5.3.6.B,C,F,G,H,J 5.4.6.A,B,C,D,E</p>	<p><u>Geography</u> 7.1.6.A,B 7.2.6.A,B 7.3.6.A,B,C,D, 7.4.6.A,B</p> <p><u>Economics</u> 6.2.6.I,K 6.3.6.A,B,D,E,F</p> <p><u>History</u> 8.1.6.A,B,C,D 8.3.6.A,B,C,D</p>	<ul style="list-style-type: none"> <li>• What are the capitals of US states?</li> <li>• What are the basic American principles that led to the Constitution?</li> <li>• What rights are protected in the Bill of Rights?</li> <li>• How does US gov't address global problems?</li> <li>• How is global warming a global issue?</li> <li>• What is global citizenship &amp; how does it relate to global warming?</li> <li>• How do nations work together to address global problems?</li> </ul>	<p>Project 2: <i>Week in Review</i> - Be a meteorologist and a reporter who covers an environmental current event (daily weather prediction, trend, weather event)</p> <p>Sci = meteorology SS = current events &amp; global warming effects LA = Oral Reports, narratives</p> <p>Project 3: <i>Natural Disaster Safety Flyer</i> - Students research warning and safety tips and create an informative flyer</p>
Language Arts	<ul style="list-style-type: none"> <li>• Photo-essay @ Global Warming</li> <li>• Oral Reports @ Weather</li> <li>• Written Flyer @ Natural Disaster Safety</li> <li>• Narratives</li> </ul> <p>H&amp;M Anthology (Nat'l Weather Occurrences) Shh... Writing Constitution Down-to-Earth Guide to Global Warming Eco-Mysteries</p>	<p><u>Reading</u> 1.1 A,B,D,E,F,G,H 1.2 B,C 1.3 A,B</p> <p><u>Writing</u> 1.4 A,B 1.5 B,C,E,F</p>	<p><u>Speak/Listen</u> 1.7 A, B,C</p> <p><u>Research</u> 1.8</p>	<ul style="list-style-type: none"> <li>• How do you tell a story through pictures and texts?</li> <li>• What are the key elements of an informational piece?</li> <li>• What are the non-fiction features?</li> <li>• What are the key elements of mysteries?</li> </ul>	<p>Sci = Natural disaster science Tech = Create flyer LA = Written flyer</p> <p>Project 4: <i>Case study</i> - Global warming photo essay or newspaper</p> <p>Sci = global warming science SS = global warming issues, consequences Tech = publishing, downloading, editing LA = narrative, opinion response</p>
Tech	<ul style="list-style-type: none"> <li>• Controlling a Superstorm</li> <li>• Greenhouse Gas Lab Graph</li> <li>• Global Warming Newspaper</li> </ul> <p>PowerPoint, Excel, Internet, Related Web Resources</p>	<p><u>Science &amp; Technology</u> 3.6.7 B 3.7.7 C 3.7.7 D 3.7.7 E</p>		<ul style="list-style-type: none"> <li>• Which tools are available for organizing data, and when should you use each type?</li> <li>• How can online activities help us experience things?</li> <li>• When and how are templates useful? What are the benefits and drawbacks of using a template?</li> </ul>	
Music	<ul style="list-style-type: none"> <li>• Music: Constitution, States/Capitals</li> </ul>				

# Sample: GRADE 6 - EIC CURRICULUM MAP

Green Woods Charter School

Update 7/14/2008

## 6<sup>th</sup> Grade September – November: The Ancient World on the Move

	Theme/Topic	Standards	Essential Questions	Project/Product	
Science	<ul style="list-style-type: none"> <li>Laws of forces &amp; motion</li> <li>Simple Machines</li> <li>buoyancy</li> <li>Bernoulli's Principle: Flight</li> </ul> <p>McDougall-Little Physical Science Physical Science Matter &amp; Motion Science In the Home: Book 3 Foss Kit</p>	<p><u>Science &amp; Tech</u> 3.1.7. B. 3.2.7.B,C,D 3.4.7.C 3.6.7.B 3.7.7.A,B,C,D,E 3.8.7.A,C</p>	<ul style="list-style-type: none"> <li>What are position, speed, velocity and acceleration?</li> <li>What are Newton's Laws of Motion?</li> <li>What are the forces of gravity, friction and pressure?</li> <li>How do friction and air resistance create lift?</li> <li>What is buoyancy?</li> <li>What are the basic simple machines and how are they used?</li> </ul>	<p>Project 1: Create working Model of Catapult</p> <p>Sci = design machine Tech = digital story LA = instructional writing</p> <p>Project 2: Ancient Wonders of the World – Build model of Ancient Wonder as it was being built, include simple machines.</p>	
Social Studies	<ul style="list-style-type: none"> <li>World Geography</li> <li>Investigating the Past</li> <li>Early Humans</li> <li>Ancient Mesopotamia</li> <li>Ancient Egypt</li> <li>Early history of transportation</li> </ul> <p>History Alive! Ancient World Ancient Transportation Various Ancient Egypt books</p>	<p><u>Civics &amp; Gov't</u> 5.1.6.A 5.4.6.B,E</p> <p><u>Env &amp; Ecology</u> 4.2.7.A,B,C 4.4.7.A,C,D 4.6.7.B 4.8.7.A,B,C</p>	<p><u>Economics</u> 6.4.6.A,B,C,E 6.3.6.A,B,C</p> <p><u>Geography</u> 7.1.6.A,B 7.2.6.A 7.3.6.A,B,C,D 7.4.6.A,B</p> <p><u>History</u> 8.1.6.A,B,C,D 8.4.6.A,B,C,D</p>	<ul style="list-style-type: none"> <li>What are the major geographic features of the world?</li> <li>How did the environment affect early civilizations &amp; their economic systems?</li> <li>How did transportation affect the growth of civilizations &amp; trade?</li> <li>Who were the early hominids &amp; what were their advancements?</li> <li>How did ancient cultures develop trade &amp; transportation?</li> <li>What are the legacies of the Ancient Egyptians?</li> </ul>	<p>Sci = simple machines SS = ancient peoples, places, things Tech = Internet research, mapping new wonders of world LA = write directions &amp; summary</p> <p>Project 3: Dragon Wings – Use story to introduce kites &amp; flight</p> <p>Sci = Principles of flight LA = Read "Dragon Wings"</p>
Language Arts	<ul style="list-style-type: none"> <li>Descriptive Writing</li> <li>Procedural Directions &amp; Summary Writing</li> <li>Book Report</li> </ul> <p>Dragonwings Ancient Egypt books 7 Wonders of Ancient World Time Cat Anthology</p>	<p><u>Reading</u> 1.1.B,C,D,F, G 1.2.A,C 1.3.A, B,C</p> <p><u>Writing</u> 1.4.A,B,C 1.5.B,D,E,F</p>	<p><u>Speak/Listen</u> 1.6</p> <p><u>Research</u> 1.8</p>	<ul style="list-style-type: none"> <li>What are the essential elements of a descriptive piece?</li> <li>What are the key elements of procedural writing?</li> <li>What are the key figurative elements of a story?</li> <li>What are and how do you use comprehension strategies especially visualization?</li> </ul>	<p>Project 4: Time Capsule for King Tut</p> <p>SS = Ancient Egypt history LA = Read "Who Was King Tut"</p> <p>Project 5: Sumerian Travel Brochure</p> <p>SS = Sumerian History LA = Descriptive Writing Tech = Travel Brochure</p>
Tech	<ul style="list-style-type: none"> <li>Ancient Wonders of the World, Google Maps</li> <li>Sumerian Travel Brochure</li> <li>Digital Story Catapult Project</li> </ul> <p>Google Earth, Internet, Microsoft Word, Photo Story, Picassa, Digital cameras</p>	<p><u>Science &amp; Tech</u> 3.6.7 B 3.7.7 C 3.7.7 D 3.7.7 E</p>		<ul style="list-style-type: none"> <li>How can 3-D mapping software affect our learning environment?</li> <li>How do you create a successful brochure? What are the key elements of a brochure?</li> <li>When working with images, what are useful key terms?</li> <li>How can you edit, crop, and otherwise modify a basic image?</li> <li>Describe process of creating basic digital story. Identify/explain each step in detail.</li> </ul>	
Art, Music	<ul style="list-style-type: none"> <li>Art: Canopic Jars (Ancient Egypt)</li> <li>Music: Ancient Egypt</li> </ul>	<p><u>Arts &amp; Humanities</u> 9.1.8 A,B,C,F,H 9.2.8 D,E,F</p>		<ul style="list-style-type: none"> <li>What purpose did canopic jars serve?</li> <li>What design elements did they contain and why?</li> </ul>	

# Sample: GRADE 7 - EIC CURRICULUM MAP

Green Woods Charter School

Update 7/14/2008

## 7<sup>th</sup> grade September to November: Disease and its Impact on Philadelphia

	Topic/Resources	Standards	Essential Questions	Project/Product	
Science	<ul style="list-style-type: none"> <li>Cellular Biology: bacteria, plant and animal cells</li> <li>Viruses, diseases</li> <li>Heredity, DNA, and modern genetics</li> </ul>	<u>Science &amp; Technology</u> 3.1.7.C 3.2.7.A, 3.3.7.A, B, C	<ul style="list-style-type: none"> <li>What are the basic parts of plant, animal, and bacterial cells?</li> <li>How do cells carry out their basic functions and reproduce?</li> <li>Why are viruses considered to be non-living things?</li> <li>How do viruses and some unicellular organisms cause disease?</li> <li>How are genes passed from parents to offspring in predictable patterns?</li> <li>What is DNA?</li> </ul>	<p><b>Project 1a: Virus model</b>—students make a model of a virus</p> <p><b>Project 1b: Design a protozoa</b>—write an expository text, which includes a description of organism; In Art, create your protist in 3-D</p> <p><b>Project 2: Newspaper</b>—Including several pieces from entire trimester, such as character obituaries, informational piece, real estate ad, coffee house advertisement, etc.</p>	
Social Studies	<ul style="list-style-type: none"> <li><u>Fever 1793</u> Laurie Halse Anderson</li> <li><u>American Plague</u> by Jim Murphy utilizing primary sources</li> <li><u>Independence National Park: Daily Life and Diversity Unit:</u> <a href="http://www.independencenationalparkinstitute.com/inp/index.htm">www.independencenationalparkinstitute.com/inp/index.htm</a></li> <li>Other readings and documents in binder</li> <li>Primary Sources</li> <li><a href="http://www.archives.gov/education/lessons/worksheets/">www.archives.gov/education/lessons/worksheets/</a></li> </ul>	<u>History</u> 8.1.9A,B,C,D 8.2.9A,B,C,D 8.3.9A,B,C,D  <u>Env. &amp; Ecology</u> 4.2 B,C 4.3 A,B 4.8 A,B,C,D	<u>Civics &amp; Govt.</u> 5.1.9E,H,J 5.2.9C,E,G  <u>Geography</u> 7.1.9A,B, 7.3.9 A,D,E 7.4.9A,B,C	<ul style="list-style-type: none"> <li>What is the difference between primary and secondary source documents?</li> <li>What was life like in Philadelphia during the 18<sup>th</sup> century?</li> <li>What influence did the Yellow Fever epidemic have on medicine, public health and the political climate of Philadelphia and the United States during this the time period?</li> </ul>	<p><b>Project 3: Biographies</b>—Richard Allen, Benjamin Rush, Charles Wilson Peale, Dolly Payne Todd, George Washington, Martha Washington, Oney Judge, James Forten, Bishop White, Matthew Carey</p>
Language Arts	<ul style="list-style-type: none"> <li>Fever 1793</li> <li>American Plague</li> <li>Taking Liberty: The Story of Oney Judge, George Washington's Slave</li> <li>Other readings and documents in binder</li> </ul>	<u>Reading:</u> 1.1A,B,C,D,E,G,H 1.2A,E, F 1.3A, C,D  <u>Writing:</u> 1.4 A, B 1.5B,C,D,E,F  <u>Speaking &amp; Listening:</u> 1.6 C, D Research 1.8	<ul style="list-style-type: none"> <li>What are some key literary and figurative language elements (foreshadowing, symbolism, character traits, cause and effect)?</li> <li>What are the key elements of a biography?</li> <li>What are the key elements of poetry?</li> <li>What are the key elements of historical fiction?</li> <li>What are the key elements of expository/informational writing?</li> <li>What are some ways to critically reflect on your readings? (Step Up To Writing)</li> </ul>	<p><b>Project 4: Hot Seat Questions</b>—To Tell the Truth</p> <p><b>Project 5: Timelines</b>—1700 to 1850; Inspiration timeline web</p> <p><b>Project 6: Map and locations</b>—1793 vs. 2006, created by hand; poetry piece on each location; PowerPoint interactive mapping project</p>	
Tech	<ul style="list-style-type: none"> <li>Entry level resumes</li> <li>Fever Newspapers</li> <li>Interactive Timeline</li> <li>Coffeehouse Ads</li> <li>Fever Mapping</li> </ul> <p>Word, PowerPoint, Internet, Publisher, Inspiration</p>	<u>Science &amp; Technology</u> 3.6.7 B 3.7.7 C 3.7.7 D 3.7.7 E	<ul style="list-style-type: none"> <li>How has technology changed the way we communicate as people?</li> <li>What design elements are necessary to consider when creating a multiple-page document with images?</li> <li>Describe the process of incorporating multiple files and documents into an interactive product.</li> <li>Discuss the benefits and drawbacks of using templates.</li> </ul>	<p><b>Project 7: Talk Show</b> for end of book assessment</p>	
Art	<ul style="list-style-type: none"> <li>Create a 3-D soft sculpture of protest designs</li> </ul>	<u>Arts &amp; Humanities</u> 9.1.8 A,B,C,D,H	<ul style="list-style-type: none"> <li>How can 2-D images be reinterpreted as 3-D forms?</li> </ul>		

# Sample: GRADE 8 - EIC CURRICULUM MAP

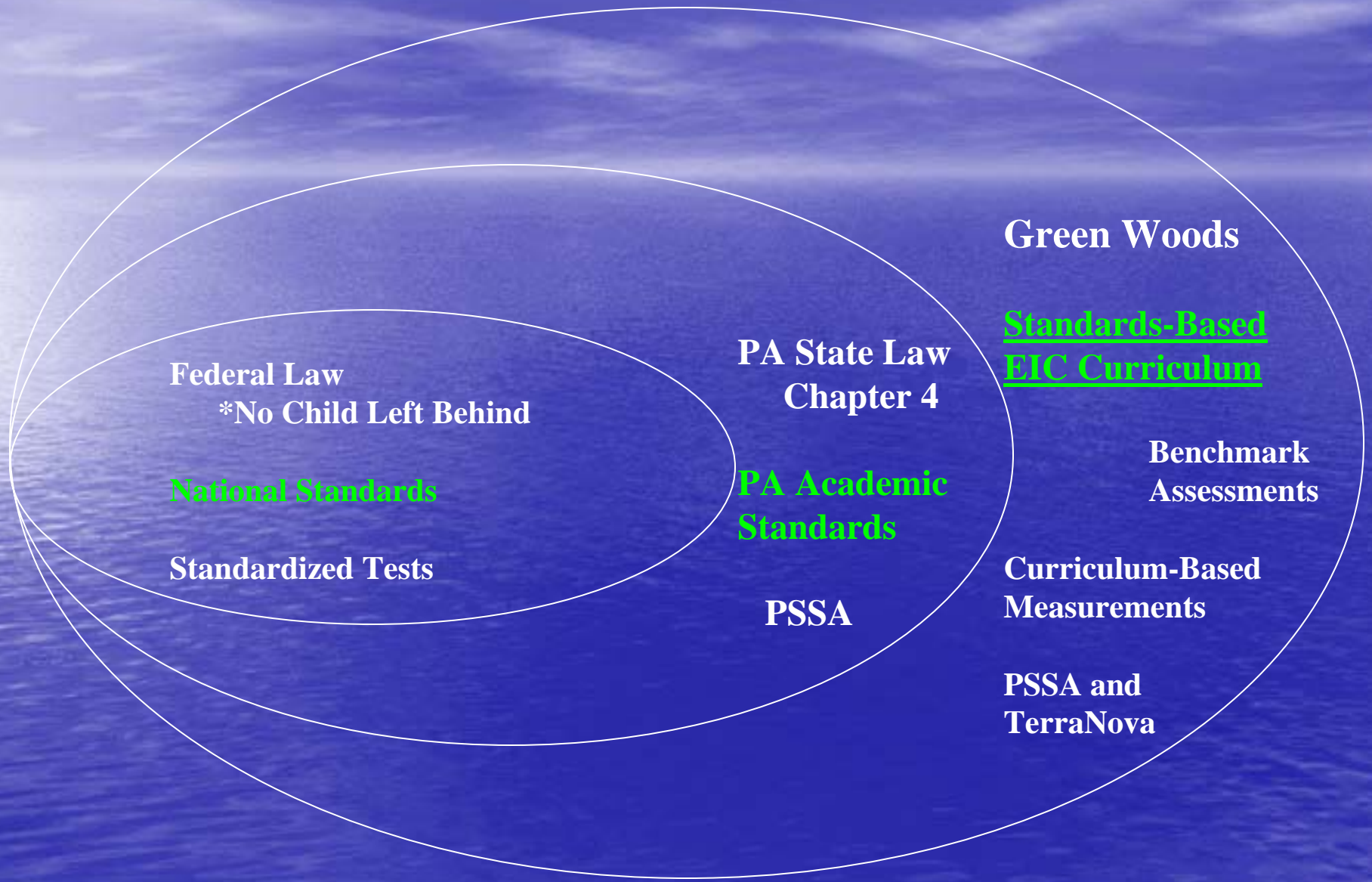
Green Woods Charter School

Update 7/14/2008

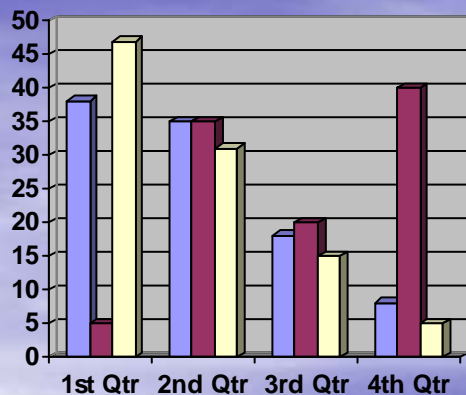
## 8<sup>th</sup> grade December to February: Changes in Our Land and People

	Topic/Resources	Standards	Essential Questions	Project/Product	
Science	<ul style="list-style-type: none"> <li>Energy Choices</li> <li>Coal: formation, types, extraction, use and impacts</li> </ul>	<p><u>Science &amp; Technology</u> 3.1.10.A, B 3.2.10.A, B, C 3.4.10.B 3.5.10.A, B 3.8.10.A</p> <p><u>Environment &amp; Ecology</u> <b>4.2.10.A, B, C, D</b> 4.3.10.A, B 4.8. 10.A, B, C, D 4.9.10.A.</p>	<ul style="list-style-type: none"> <li>What does the energy come from for my home and my school?</li> <li>What is fossil fuel?</li> <li>How is coal mined?</li> <li>How is electricity generated? How is electricity from coal similar to/different from other energy generation methods? What are the inputs and outputs?</li> <li>What is the relationship between coal and the number one water pollution problem in Pennsylvania?</li> </ul>	<p><b>Project 1:</b> Build a Swamp—How coal is formed, make written observations.</p> <p><b>Project 2:</b> Role Play Projects: Take on the persona of an immigrant to NEPA during this time period</p> <ol style="list-style-type: none"> <li><i>Journal Questions (SS)</i>—Pick a job from the time period, and create an authentic name for an immigrant in that era. Research the culture from the time period and write accordingly</li> <li><i>I Am Poem (LA)</i>—Create a poem about you as that person and one about yourself now</li> <li><i>Create a Village (SS)</i>—Make up a patch village in the classroom and present a role play activity. Take on the persona of an immigrant to NEPA.</li> <li>Write a resume for yourself and your immigrant persona (LA)</li> </ol>	
Social Studies	<ul style="list-style-type: none"> <li>Coal Mining/ Immigration/ Industrial Revolution</li> <li>Environmental/ Economics</li> <li>Growing Up In Coal Country by Bartoletti</li> <li>When Coal Was King by Lewis Poliniak</li> <li>The Coal King Slaves</li> <li>Primary Sources</li> <li><a href="http://www.archives.gov/education/lessons/worksheets/">www.archives.gov/education/lessons/worksheets/</a></li> </ul>	<p><u>History</u> 8.1.9A,B,C, D 8.2.9 A,B,C,D 8.3.9A,B,C, D</p> <p><u>Economics</u> 6.3.9A,B,C, E 6.5.9A</p>	<p><u>Geography</u> 7.1.9A,B, 7.3.9 A,D,E 7.4.9A,B</p> <p><u>Civics &amp; Govt.</u> 5.1.9E,H,J 5.2.9 A,B,C 5.4.9 B,C</p>	<ul style="list-style-type: none"> <li>How did coal mining in northeast Pennsylvania contribute to the creation of towns and cities in the region and beyond?</li> <li>How did the coal mining industry influence the types of immigrants that moved to NEPA? How did immigration relate to coal mining?</li> <li>What were the reasons that miners and mill workers formed labor unions? What role did child labor play in this development? Who were the key players in the movement?</li> <li>What is the environmental legacy of the industrial revolution? (See last question in science)</li> </ul>	<p><b>Project 3:</b> Research paper regarding job or assigned person: Breaker boy, nipper/spragger, mule driver, miner's buddy/miner, mother/wife, mill worker, mine owner, union activist (Mother Jones, JP Morgan, Clarence Darrow, John Mitchell)</p>
Language Arts	<ul style="list-style-type: none"> <li>Coal: A Human History</li> <li>Coal Miner's Bride</li> <li>Breaker</li> <li>Growing Up In Coal Country</li> <li>Counting on Grace</li> <li>Optional (Immigration)</li> <li>Becoming Naomi Leon, Esperanza Rising, and the Immigration series</li> </ul>	<p><u>Writing</u> 1.4A,B,C, H 1.5 A, B,,D</p> <p><u>Speaking &amp; Listening</u> 1.6,D,E</p>	<p><u>Reading</u> 1.1E,F,G,H 1.2A,C 1.3B,C,F</p> <p><u>Research</u> 1.8</p>	<ul style="list-style-type: none"> <li>What are the key features in non-fiction texts?</li> <li>How to analyze and write poetry with a focus on figurative language</li> <li>How to analyze literary devices (ex: character development, theme, point of view)</li> <li>How to respond critically to your reading (ex: essential vs. nonessential, fact vs. opinion)</li> <li>What are the key components of conducting an interview?</li> <li>What are the key components of an advertisement of a descriptive essay?</li> </ul>	<p><b>Project 4:</b> Create a Poster- Make a poster that will entice immigrants to move to northeastern PA to work in the mines.</p> <p><b>Project 5: Heritage Research</b></p> <ol style="list-style-type: none"> <li>Make and bring in recipes from the culture studied. Create a "Coal Country immigrants" recipe book (can be fundraiser as well). SS</li> <li>Create an advertisement for the cookbook. LA</li> <li>Interview family members to create a family history. Learn interviewing skills. Take digital images as part of storytelling.</li> <li>Write a descriptive essay about a family tradition or story LA</li> <li>Create a business plan for the creation and selling of cookbook SS</li> </ol>
Technology	<ul style="list-style-type: none"> <li>Digital Storytelling— Personal Narrative</li> <li>Windows Movie Maker, Picassa, Internet, Digital resources</li> </ul>	<p><u>Science and Technology</u> 3.6.7 B 3.7.7 C, D, and E</p>	<ul style="list-style-type: none"> <li>How can technology be used effectively to communicate stories to a wide variety of audiences?</li> <li>What types of technological tools (i.e. cameras, scanners, audio recorders, etc) are needed for effective digital storytelling?</li> </ul>	<p><b>Project 6:</b> Geological Timeline of PA showing formation of coal</p> <p><b>Field Trip:</b> Coal Mine &amp; Museum</p>	

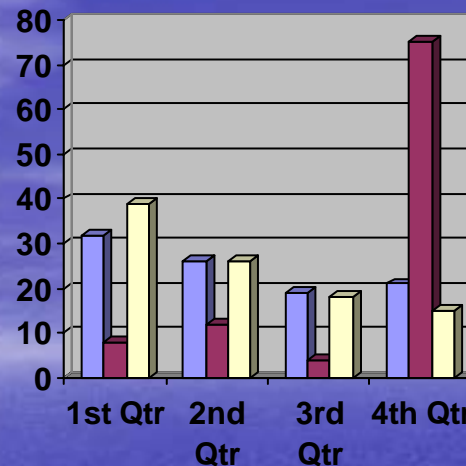
# EIC Curriculum, Standards, Standardized Tests



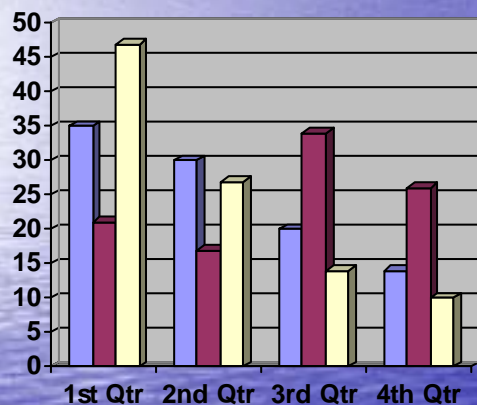
# Fall 2006 TerraNova Science



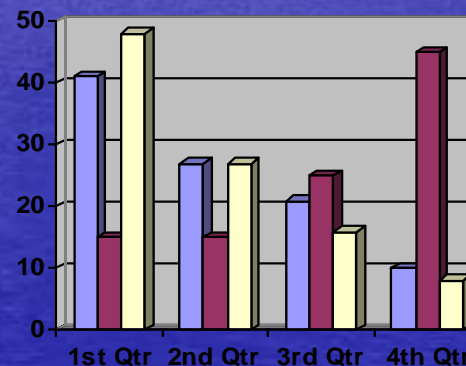
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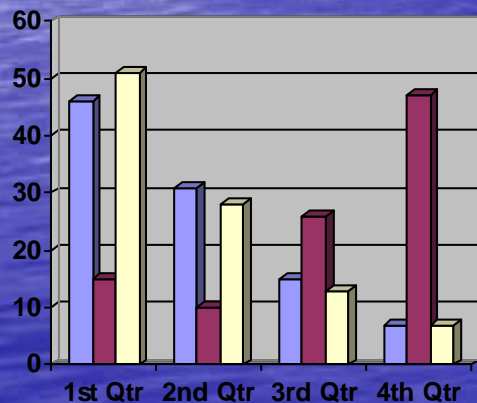
Grade 4



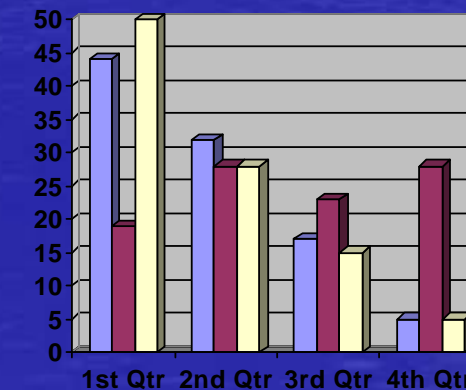
Grade 5



Grade 6



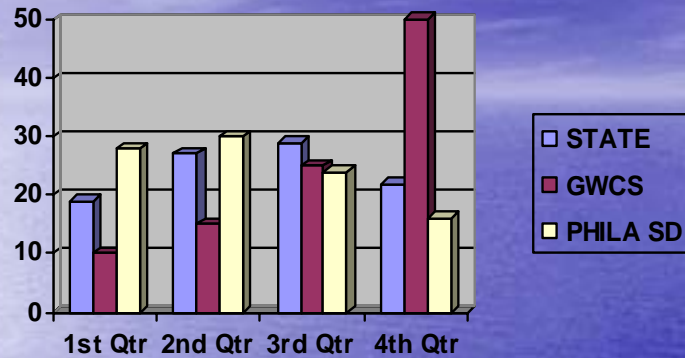
Grade 7



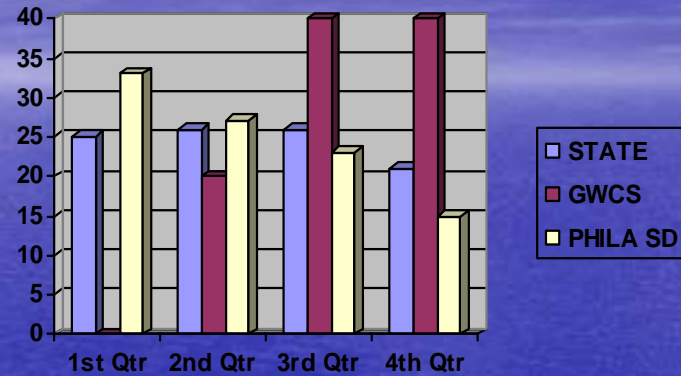
Grade 8

1<sup>st</sup> Qtr = 1st -25th percentile  
 2<sup>nd</sup> Qtr = 26th – 50th percentile  
 3<sup>rd</sup> Qtr = 51st -75th percentile  
 4<sup>th</sup> Qtr = 76th – 99th percentile

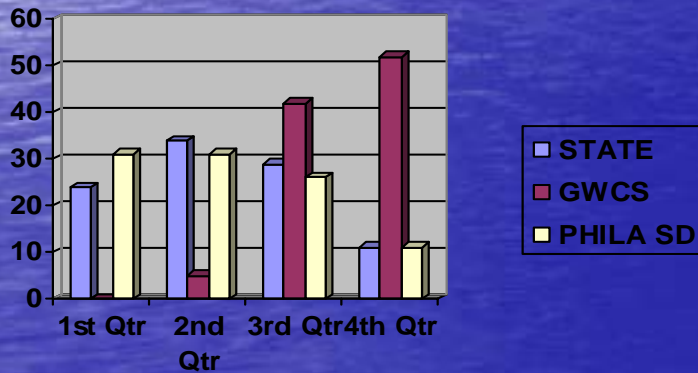
# Fall 2006 Terra Nova Reading and Math



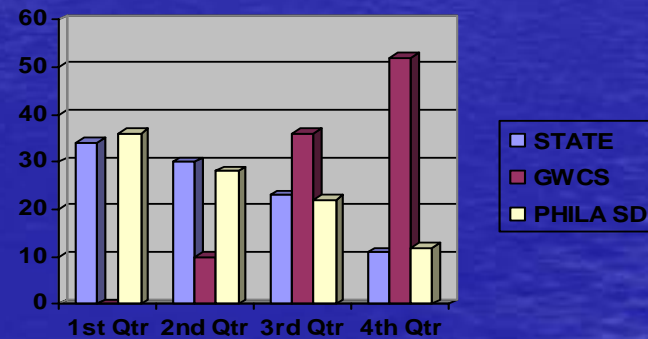
Grade 4 Reading



Grade 5 Reading



Grade 7 Reading



Grade 8 Math

# Spring 2008 PSSA Results

## % Scoring Proficient or Advanced

### Green Woods

- Grade 3 Reading 80%
- Grade 3 Math 80%
- Grade 4 Reading 72%
- Grade 4 Math 86%
- \*Grade 5 Reading 57%
- \*Grade 5 Math 71%
- Grade 6 Reading 72%
- Grade 6 Math 78%
- Grade 7 Reading 84%
- Grade 7 Math 78%
- Grade 8 Reading 94%
- Grade 8 Math 94%

### School District of Phila.

- Grade 3 Reading 52%
- Grade 3 Math 55%
- Grade 4 Reading 43%
- Grade 4 Math 55%
- Grade 5 Reading 36%
- Grade 5 Math 50%
- Grade 6 Reading 40%
- Grade 6 Math 50%
- Grade 7 Reading 48%
- Grade 7 Math 48%
- Grade 8 Reading 55%
- Grade 8 Math 49%

\*Each year Green Woods accepts new students by lottery in 5<sup>th</sup> grade after Green Woods students get accepted to Masterman.

# NCLB, AYP & the PSSA

Percent Scoring At/Above Proficient  
Green Woods 2008 PSSA Mathematics Results  
relative to NCLB/AYP Target

Green Woods	PSSA Year	% at/above Proficient
Grade 3	2008	80.0
vs. 2008 Target (56%)		+24.0
Grade 4	2008	85.7
vs. 2008 Target (56%)		+29.7
Grade 5	2008	71.4
vs. 2008 Target (56%)		+15.4
Grade 6	2008	77.8
vs. 2008 Target (56%)		+21.8
Grade 7	2008	77.8
vs. 2008 Target (56%)		+21.8
Grade 8	2008	93.8
vs. 2008 Target (56%)		+37.8

Percent Scoring At/Above Proficient  
Green Woods 2008 PSSA Reading Results  
relative to NCLB/AYP Target

Green Woods	PSSA Year	% at/above Proficient
Grade 3	2008	80.0
vs. 2008 Target (63%)		+17.0
Grade 4	2008	71.4
vs. 2008 Target (63%)		+8.4
Grade 5	2008	57.1
vs. 2008 Target (63%)		-5.9
Grade 6	2008	72.2
vs. 2008 Target (63%)		+9.2
Grade 7	2008	83.3
vs. 2008 Target (63%)		+20.3
Grade 8	2008	93.8
vs. 2008 Target (63%)		+30.8

# High School Placement

Green Woods 2007 and 2008 graduates have been accepted to:

- Central High School
- Science Leadership Academy
- Girl's High
- LaSalle College High School
- St. Joseph's Prep
- CAPA
- Saul High School

# Can the EIC curriculum be implemented in any school setting?

YES!

Through effective partnership building, an EIC curriculum can be designed and implemented in any school setting.

EIC-based learning is about using a school's surroundings and community as a framework within which students can construct their own learning, guided by teachers and administrators using proven educational practices.



EARTH DAY  
2008!





Exploring, Discovering,  
Questioning, Learning,  
Achieving

