Pine Hill Public Schools Curriculum

Content Area:	Technology		
Course Title/ Grade Level:	4th Grade		
Unit 1:	Internet Safety	Duration:	September-October
Unit 2:	Coding	Duration::	November
Unit 3:	Internet Skills	Duration:	Qtr. 2
Unit 4:	Computers to Communicate: Research & Non-Fiction	Duration:	Qtr. 3
Unit 5:	STEM & Scratch Coding/Programming	Duration:	Qtr. 4
BOE Approved Revision:			
BOE Initial Adoption Date:	August 23, 2016		

Pine Hill Public Schools		
Curriculum		
Unit Title Internet Safety		**Unit #: 1**
Course or Grade Level: Fourth Grade		**Length of Time: September-October**
Pacing	8 weeks/sessions	
Essential Questions	What are my responsibilities as a member of an online community? What information is safe to share with others online? What do I need to keep in mind when researching on the internet?	
Content	● Internet Safety ● Private vs. Personal Information ● Copyright/Citations	
Skills	● Positive communication ● Safe communication ● Citing sources ● Copyrights	
Assessments	● Student Work: worksheets, exit tickets, Digital Passport quiz scores ● Teacher Observation	
Interventions / differentiated instruction	● Peer/Partner work ● Video Instructions	
Inter-disciplinary Connections	● Health: safety ● ELA: reading comprehension	
Lesson resources / Activities	● https://www.digitalpassport.org/educator-registration ● http://4thgradetechnologylessons.weebly.com/lesson-1.html	
2014 NJCCCS		
Standard: 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.		
Strand(s):D. Digital Citizenship: *Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.*		
Standard: 8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.		
Strand: B. Technology and Society: *Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society.*		
Content Statement(s): Advocate and practice safe, legal, and responsible use of information and technology.	**CPI # / CPI(s):** 8.1.5.D.1 Understand the need for and use of copyrights. 8.1.5.D.2 Analyze the resource citations in online materials for proper use.	

Demonstrate personal responsibility for lifelong learning.	8.1.5.D.3 Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media.
Exhibit leadership for digital citizenship	8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
The cultural, social, economic and political effects of technology.	**8.2.5.B.1** Examine ethical considerations in the development and production of a product through its life cycle. **8.2.5.B.5** Explain the purpose of intellectual property law.

	21ˢᵗ Century Themes						
x	Global Awareness		Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy

	21ˢᵗ Century Skills						
	Creativity and Innovation	x	Critical Thinking and Problem Solving	x	Communication and Collaboration	x	Information Literacy
x	Media Literacy	x	ICT Literacy	x	Life and Career Skills		

	Pine Hill Public Schools Curriculum	
Unit Title Coding		**Unit #: 2**
Course or Grade Level: Fourth Grade		**Length of Time: November**
Pacing	2 weeks/sessions	
Essential Questions	How do people communicate with computers? How do people create computer applications?	
Content	● Coding	
Skills	● Creating an algorithm ● Debugging algorithm ● Create program ● Coding vocabulary ● Use events, loops	
Assessments	● Student Work ● Teacher Observation	
Interventions / differentiated instruction	● Peer/Partner Work ● Picture Icons	
Inter-disciplinary Connections	●	
Lesson resources / Activities	● Code.org, Course 1, Stage 7	
2014 NJCCCS		
Standard: 8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: **All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.**		

Strand(s): E. Computational Thinking: Programming: *Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.*	
Content Statement(s): **Computational thinking and computer programming as tools used in design and engineering.**	**CPI # / CPI(s):** **8.2.5.E.1** Identify how computer programming impacts our everyday lives **8.2.5.E.2** Demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information. **8.2.5.E.3** Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output. **8.2.5.E.4** Use appropriate terms in conversation (e.g., algorithm, program, debug, loop, events, procedures, memory, storage, processing, software, coding, procedure, and data).

	21st Century Themes						

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy

	21st Century Skills						

	Creativity and Innovation	X	Critical Thinking and Problem Solving		Communication and Collaboration		Information Literacy
	Media Literacy	X	ICT Literacy	X	Life and Career Skills		

Pine Hill Public Schools		
Curriculum		
Unit Title Internet Skills		**Unit #: 3**
Course or Grade Level: Fourth Grade	**Length of Time: Qtr. 2**	
Pacing	8 weeks/sessions	
Essential Questions	What are the parts of a website? How can I find information online efficiently? How can I evaluate websites and authors? How do I avoid plagiarism?	
Content	● Internet Search Skills ● Evaluating Websites ● Note Taking	
Skills	● Using keywords ● Juding authenticity of information ● Synthesizing information for notes	
Assessments	● Student Work: worksheets, exit tickets ● Teacher Observation	
Interventions / differentiated instruction	● Peer/Partner work ● Video Instructions	
Inter-disciplinary Connections	● ELA: reading comprehension, note taking, research	
Lesson resources / Activities	● Common Sense Media ● Teachers Pay Teachers Resource: Technology Teacher Planning Binder, Grade 4	
2014 NJCCCS		
Standard: 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.		

Strand(s):

D. Digital Citizenship: *Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.*

E: Research and Information Fluency: *Students apply digital tools to gather, evaluate, and use information.*

Content Statement(s):	CPI # / CPI(s):
Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.	. 8.1.5.E.1 Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.
Advocate and practice safe, legal, and responsible use of information and technology.	8.1.5.D.1 Understand the need for and use of copyrights. 8.1.5.D.2 Analyze the resource citations in online materials for proper use.

<td colspan="8" align="center">**21ˢᵗ Century Themes**</td>							

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Pine Hill Public Schools Curriculum		
Unit Title Computers to Communicate: Research and Non-fiction		**Unit #: 4**
Course or Grade Level: Fourth Grade	**Length of Time: Qtr. 3**	
Pacing	10 weeks/sessions	
Essential Questions	How can I search for information online? How do I make sure I am not violating copyright laws? How can I share what I've learned with others?	
Content	● Research skills ● Sharing information	
Skills	● Using keywords ● Note taking ● Citations ● Word Processing/Presentation ● Sharing Information with Others	
Assessments	● Student Work: graphic organizers, notes, final project ● Teacher Observation	
Interventions / differentiated instruction	● Peer/Partner work ● Leveled graphic organizers	
Inter-disciplinary Connections	● ELA: research, writing, reading comprehension, note taking	

Lesson resources / Activities	● Common Sense Media ● Teachers Pay Teachers Resource: Technology Teacher Planning Binder, Grade 4 ● 4th Grade science/social studies curriculum ● http://oakdome.com/k5/lesson-plans/fourth-grade-Q2-lesson-plans.php

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Standard: 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

Strand(s): A. Technology Operations and Concepts: *Students demonstrate a sound understanding of technology concepts, systems and operations.*

B. Creativity and Innovation: *Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.*

C. Communication and Collaboration: *Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.*

D. Digital Citizenship: *Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.*

Content Statement(s):	CPI # / CPI(s):
Understand and use technology systems	8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
Select and use applications effectively and productively.	8.1.5.A.2 Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures. 8.1.5.A.3 Use a graphic organizer to organize information about problem or issue. 8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.
Apply existing knowledge to generate new ideas, products, or processes. Create original works as a means of personal or group expression.	8.1.5.B.1 Collaborative to produce a digital story about a significant local event or issue based on first-person interviews.
Communicate information and ideas to multiple audiences using a variety of media and formats.	8.1.5.C.1 Engage in online discussions with learners of other cultures to investigate a worldwide issue from multiple perspectives and sources, evaluate findings and present possible solutions, using digital tools and online resources for all steps.
Advocate and practice safe, legal, and responsible use of information and technology.	8.1.5.D.1 Understand the need for and use of copyrights. 8.1.5.D.2 Analyze the resource citations in online materials for proper use.
Demonstrate personal responsibility for lifelong learning.	8.1.5.D.3 Demonstrate an understanding of the need to practice cyber safety, cyber security, and

		cyber ethics when using technologies and social media.		
Exhibit leadership for digital citizenship		8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.		

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Pine Hill Public Schools **Curriculum**		
Unit Title STEM & Scratch Coding/Programming		**Unit #: 5**
Course or Grade Level: Fourth Grade	**Length of Time: Qtr. 4**	
Pacing	10 weeks/sessions	
Essential Questions	How can I use what I know about writing computer code to make a game, story, or product of my own?	
Content	● Copyright/Intellectual Property ● Programming ● Vocabulary	
Skills	● Original ideas ● Writing algorithms ● Using loops, events, and procedures ● Vocabulary: algorithm, debug, code, loop, event, procedure	
Assessments	● Student Work: worksheets, product ● Teacher Observation	
Interventions / differentiated instruction	● Peer/Partner work ● Video Instructions ● Picture Icons in Instructions	
Inter-disciplinary Connections	● ELA: sequencing ● Math: logical reasoning	
Lesson resources / Activities	● http://4thgradetechnologylessons.weebly.com/lesson-1.html ● https://scratch.mit.edu/	
2014 NJCCCS		

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