

Randolph Township Schools Randolph Elementary Schools

Grades 4-5 Library/ Media Curriculum

“Knowledge will bring you the opportunity to make a difference.” ~ Claire Fagin

Elementary Education

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Randolph Township Schools
Department of Elementary Library/ Media
Grades 4-5 Library/ Media Curriculum

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Randolph Township Schools

Mission Statement

We commit to inspiring and empowering all students in Randolph schools to reach their full potential as unique, responsible and educated members of a global society.

Randolph Township Schools Affirmative Action Statement

Equality and Equity in Curriculum

The Randolph Township School district ensures that the district's curriculum and instruction are aligned to the state's standards. The curriculum provides equity in instruction, educational programs and provides all students the opportunity to interact positively with others regardless of race, creed, color, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, religion, disability or socioeconomic status.

N.J.A.C. 6A:7-1.7(b): Section 504, Rehabilitation Act of 1973; N.J.S.A. 10:5; Title IX, Education Amendments of 1972

RANDOLPH TOWNSHIP BOARD OF EDUCATION

EDUCATIONAL GOALS

VALUES IN EDUCATION

The statements represent the beliefs and values regarding our educational system. Education is the key to self-actualization, which is realized through achievement and self-respect. We believe our entire system must not only represent these values, but also demonstrate them in all that we do as a school system.

We believe:

- The needs of the child come first
- Mutual respect and trust are the cornerstones of a learning community
- The learning community consists of students, educators, parents, administrators, educational support personnel, the community and Board of Education members
- A successful learning community communicates honestly and openly in a non-threatening environment
- Members of our learning community have different needs at different times. There is openness to the challenge of meeting those needs in professional and supportive ways
- Assessment of professionals (i.e., educators, administrators and educational support personnel) is a dynamic process that requires review and revision based on evolving research, practices and experiences
- Development of desired capabilities comes in stages and is achieved through hard work, reflection and ongoing growth

Randolph Township Schools
Department of Elementary Library/ Media
Grades 4-5 Library/ Media Curriculum

Introduction

The 21st century student is expected to have an inquiry-based education that can be applied to each content area throughout their academic career. This program supports all academic areas, promotes and instructs students in research, lifelong critical thinking habits, and the love of literature. Throughout this program, students will engage in content-specific projects that guide them in learning and applying technological skills necessary for success as global citizens.

The grades 4-5 curriculum fosters the development of a greater appreciation for the diversity of literature and individual differences. Additionally, students are encouraged to explore the impact of technology on all aspects of society. Throughout the curriculum, students will communicate through programming, digital presentations, and applications to convey thoughts and ideas in a global society.

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Curriculum Pacing Chart
Grades 4-5 Library/Media

SUGGESTED TIME ALLOTMENT	UNIT NUMBER	CONTENT - UNIT OF STUDY
5 weeks	I	Library Citizenship
5 weeks	II	Digital Citizenship
6 weeks	III	Literature Appreciation
6 weeks	IV	Technology Applications
6 weeks	V	Information Literacy
8 weeks	VI	Programming

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT I: Library Citizenship

STANDARDS / GOALS:	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
AASL 1.1.1 Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life. AASL 1.1.2- Use prior and background knowledge as context for new learning.	Knowledge is gained by seeking information from diverse sources, contexts, disciplines and cultures.	How can we show respect for age, gender, position, or culture of a wide variety of literature and library materials?
	The Library/ Media Center is a place to inquire and access a variety of resources while creating new knowledge.	What print and digital resources are available in the Library/ Media Center?
	KNOWLEDGE	SKILLS
AASL 1.1.8 Demonstrate mastery of technology tools for accessing information and pursuing inquiry. AASL 1.1.9 Collaborate with others to broaden and deepen understanding. AASL 1.4.1 Monitor own information-seeking processes for effectiveness and progress, and adapt as necessary. CCSS SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 5 topics and texts</i>, building on	Students will know: Resources are written for a variety of purposes and audiences. Inquiry provides opportunities for readers to identify appropriate resources. Readers establish routines in the Library/ Media Center.	Students will be able to: Understand that readers read for various reasons. Develop an appreciation for the individual differences of each reader's selections. Recognize applicable resources for seeking information. Choose a relevant resource based on the topic of inquiry. Locate and access icons and resources. Interact in a Makerspace through collaboration, creativity, and acceptance of individual thoughts and ideas.

others' ideas and expressing their own clearly. CCSS SL.5.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace. CCSS SL.5.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. NJCCCS 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.	VOCABULARY: gender, culture, diversity, disability, inquiry, resources KEY TERMS: context, discipline, online subscription, Makerspace	
ASSESSMENT EVIDENCE: Students will show their learning by (including but not limited to): • Create a desktop screen to highlight the online resources available • Design a poster or multimedia presentation that demonstrates a book choice based on diversity KEY LEARNING EVENTS AND INSTRUCTION (including but not limited to): • Mini lessons for each of the following: readers read for various reasons, diversity in literature and student choice, identifying appropriate resources, locate and retrieve resources • Independently access online resources to support lesson tasks • Participate in creative and innovative tasks in a Makerspace		

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT I: Library Citizenship

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
5 Weeks	Appreciation of literature diversity Understanding online resources support learning	<u>Mentor Text</u> <i>The Dewey Deception</i> by Ralph Raab <i>Book Fair Day</i> by Lynn Plourde <i>The Junkyard Wonders</i> by Patricia Polacco. <i>The London Eye Mystery</i> by Siobhan Dowd <i>Rain Reign</i> by Ann M. Martin <i>Rules</i> by Cynthia Lord <i>El Deafo</i> by Cece Bell <i>My Librarian is a Camel</i> by Margriet Ruurs <i>Biblioburro</i> by Jeanette Winter <u>Programs/ Online Resources</u> Wordle ABCya Word Clouds Makerspace Playbook

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT II: Digital Citizenship

STANDARDS / GOALS:	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
AASL 1.2.7 Display persistence by continuing to pursue information to gain a broad perspective.	Technology allows people to think critically, make informed decisions and actively participate in society.	How can technology influence the way people think?
AASL 2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.	Technology enables people to make advancements in medicine, science and the arts.	How do technological advancements affect the way people live?
	Digital citizens recognize their responsibilities in global interactions.	What are the characteristics of a digital citizen?
AASL 2.3.1 Connect understanding to the real world.	KNOWLEDGE	SKILLS
AASL 3.1.6 Use information and technology ethically and responsibly.	Students will know:	Students will be able to:
AASL 3.3.7 Respect the principles of intellectual freedom.	The media presents information to persuade, inform and entertain the public.	Identify how the media influences public attitudes by analyzing content for author's purpose.
CCSS SL.5.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.	New technology is designed to improve everyday life of people and continues to create career opportunities internationally.	Explore examples of cutting-edge technology and describe how these inventions impact future applications.
NJCCCS 8.1.5.D.1 Understand the need for and use of copyrights.	Digital citizens understand an individual's rights of ownership.	Use a coding application to simplify a task.
		Define plagiarism and recognize the consequences of copying published work.
		Practice correct citation to avoid copyright infringement.

NJCCCS 8.1.5.D.2 Analyze the resource citations in online materials for proper use. NJCCCS 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. NJCCCS 8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.	Responsible Internet users are aware of a digital footprint's impact. Readers establish routines in the Library/ Media Center. VOCABULARY: plagiarism, credit, paraphrase, works cited, resource list, bibliography, piracy, originality, coding KEY TERMS: Creative Commons, 3-D printing, work cited, copyright infringement, author's purpose, intellectual property, laser printing, copy and paste, social impact, Makerspace	Explain the concept of intellectual property by demonstrating appropriate responsible, legal and ethical use of information resources. Choose educational internet websites. Demonstrate good character by resisting cyberbullying. Understand the implications of a digital footprint. Utilize tools and resources while interacting in a Makerspace.
ASSESSMENT EVIDENCE: Students will show their learning by <i>(including but not limited to)</i> - Collaboratively create a video to demonstrate media bias and slant on a shared topic. Use print and digital sources to support perspective, then accurately create a works cited document to list sources KEY LEARNING EVENTS AND INSTRUCTION: <i>(including but not limited to)</i> - Mini lessons for each of the following: author's purpose, effects of media bias on the public, 3-D printing and its potential, career opportunities in coding, citing sources, Creative Commons, plagiarism, web design, Internet safety - Utilize coding to demonstrate how technology can be applied in the workplace - Participate in creative and innovative tasks in a Makerspace		

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT II: Digital Citizenship

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
5 Weeks	Internet safety and digital footprint Impact of coding on society	<u>Mentor Text</u> <i>Bully</i> by Patrica Polacco Your digital footprint Digital safety <u>Programs/ Online Resources</u> Code.org Tynker Scratch SNAP Credible Sources Tutorial Socrative Plagiarism Kahoot Plagiarism Game Easybib Weebly Animoto What is 3-d Printing 3-D printing video Project Ignite Brain Pop (Copyright, Cyber-bullying, Digital Etiquette, Media Literacy, Online Safety, Online Sources, Social Networking) Makerspace Playbook

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT III: Literature Appreciation

STANDARDS / GOALS:	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
AASL 1.1.6- Read, view, and listen for information presented in any format (e.g., textual, visual, media, digital) in order to make inferences and gather meaning.	Readers must differentiate between fiction and factual events while reading a text.	• Why should readers distinguish between fact and fiction?
	Identify how various literary elements influence/inform the reader's experience of literature.	• How do literary elements aid in comprehension?
AASL 2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings. AASL 3.1.3 Use writing and speaking skills to communicate new understandings effectively. AASL 4.1.3 Respond to literature and creative expressions of ideas in various formats and genres. AASL 4.2.4 Show an appreciation for literature by electing to read for pleasure and expressing an interest in various literary genres.	KNOWLEDGE	SKILLS
	Students will know: Factual events can be included in a work of fiction to enhance understanding and enjoyment. Readers need to consider how interpretation of facts expands their understanding. When interpreting texts, literary elements are helpful. The point of view influences how events of the story are perceived. Locating specific evidence when responding to text is critical to comprehension.	Students will be able to: Utilize factual events to understand a work of fiction. Identify strategies to find information to support their understanding. Recognize and examine literary elements. Apply knowledge of literary elements to deepen understanding of a text. Determine how point of view influences perception of the narrative elements. Provide evidence from the text to support their understanding.

CCSS RL.5.5 Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem. CCSS RL.5.6 Describe how a narrator's or speaker's point of view influences how events are described. CCSS SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 5 topics and texts</i>, building on others' ideas and expressing their own clearly.	Readers make sense of text using their own schema. Makerspaces are locations for students to create, tinker, make, and explore their own thoughts and interests. VOCABULARY: Fact, fiction, literary elements, character, setting, tone, plot, subplot, foreshadow, imagery, genre, symbolism, perspective, setting, point of view, external and internal conflict, schema KEY TERMS: Makerspace	Synthesize information from the text and their own experiences. Utilize tools and resources while interacting in a Makerspace.
ASSESSMENT EVIDENCE: Students will show their learning by (including but not limited to): - Utilizing a text identify how facts contribute to the story and present their findings - Modify a literary element of a text and present the change in the medium of choice KEY LEARNING EVENTS AND INSTRUCTION (including but not limited to): - Mini lessons: literary elements, genres, fact/fiction - Distinguish between fiction and historical fiction using search strategies on Destiny - Participate in creative and innovative tasks in a Makerspace		

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT III: Literature Appreciation

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
6 weeks	Distinguish between fact and fiction Demonstrate understanding of genres	<u>Mentor Text</u> <i>Number the Stars</i> by Lois Lowry <i>Terrible Things</i> by Eve Bunting <i>Pink and Say</i> by Patricia Pollaco <u>Programs/ Online Resources</u> Five Elements of a Story - YouTube video Smart Exchange – Literary Elements Part 1 Safari Montage – “Saving Zasha” Safari Montage – “I Survived the Shark Attacks of 1916” Destiny.rtnj.org Makerspace Playbook

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT IV: Technology Applications

STANDARDS / GOALS:	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
AASL 4.4.6 Evaluate own ability to select resources that are engaging and appropriate for personal interests and needs. CCSS SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 5 topics and texts</i>, building on others' ideas and expressing their own clearly. CCSS SL.5.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace. CCSS SL.5.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.	Computers need data, humans need information. Data is quantitative, whereas information generated from data can be evaluated.	How does data differ from information?
	Learners require valid and timely information, which is generated and represented from data in the form of charts and graphs.	How can data be managed and shared?
	Applications vary in their ability to perform complex tasks.	How can applications be used to store, organize and present data?
	KNOWLEDGE	SKILLS
	Students will know: Data is accurate, organized, measurable, valid, relevant and complete. Knowledge evolves from information. Information is derived from data. Databases help learners gather information. Data can be organized for evaluation and results can be graphically displayed.	Students will be able to: Describe characteristics of data. Compare and contrast data, information and knowledge by using a graphic organizer. Use online databases to research a real world problem. Chart data using a spreadsheet.

CCSS SL.5.6 Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation. NJCCCS 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. NJCCCS 8.1.5.A.3 Use a graphic organizer to organize information about problem or issue. NJCCCS 8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data. NJCCCS 8.1.5.A.5 Create and use a database to answer basic questions. NJCCCS 8.1.5.A.6 Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data.	Applications have various functions to help learners manage data. Data can be used to present possible solutions to real world issues. Data needs to be qualitative to be valuable. Databases can be created to generate new content. Makerspaces are locations for students to create, tinker, make, and explore their own thoughts and interests. VOCABULARY: Data, output, database, information, knowledge, average, sum, sort, filter, format, cell, column, row, tab, table, query, import, heading, formula, fill, pie chart, bar chart, shading KEY TERMS: Problem solving, real world problems, data results, MS Excel, toolbar, Makerspace	Demonstrate features of MS Excel spreadsheet (fill, average, sum, sort, filter, format). Analyze data findings and present concluding statements. Rate validity of data by using specific criteria. Evaluate a database with tables, queries and reports. Utilize tools and resources while interacting in a Makerspace.
ASSESSMENT EVIDENCE: Students will show their learning by (including but not limited to): • Improve the design of a spreadsheet by using a software program • Use online databases to collect information on a real world issue and participate in a debate		

KEY LEARNING EVENTS AND INSTRUCTION *(including but not limited to):*

- Identify digital databases *(online dictionaries and encyclopedias, National Geographic)*
- Use MS Excel to design spreadsheets and graphs
- Combine data to create new findings
- Participate in creative and innovative tasks in a Makerspace

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT IV: Technology Applications

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
6 weeks	Understanding real world applications of technology Presenting ideas through the use of technology applications	<u>Mentor Text</u> <i>It's a Book</i> by Lane Smith <u>Programs/ Online Resources</u> Online Dictionary Fact Monster Internet Public Library National Geographic Kiddle DK Findout MS Excel tutorial From Education World Excel Lesson plans MS Access tutorials MS Access help – from Lynda Makerspace Playbook

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT V: Information Literacy

STANDARDS / GOALS:	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
AASL 4.4.6 Evaluate own ability to select resources that are engaging and appropriate for personal interests and needs. CCSS RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. CCSS RI.5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text. CCSS RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. NJCCCS 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. NJCCCS 8.1.5.D.1 Understand the need for and use of copyrights.	Effective researchers determine a purpose when asking a question.	• What is the purpose of a question?
	The research process requires using a variety of resources to ensure validity.	• How do researchers know information is reliable and accurate?
	Critical readers judge, compare and analyze information from multiple sources.	• How does the writer's perspective affect how the reader evaluates information?
	Technology is a tool that can be used for collecting, organizing, and sharing information.	• How does technology impact research and communication?
	KNOWLEDGE	SKILLS
	Students will know: Information literacy refers to a set of skills that enable people to recognize when information is needed, then locate, evaluate and effectively use that information. The first step in the information literacy process is to clarify and understand the problem for which information is needed. Primary sources can include books, interviews,	Students will be able to: Define and explain information literacy. Identify and describe a need for information. Formulate several questions to refine informational need. Develop an effective search strategy using multiple

NJCCCS 8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology. NJCCCS 8.1.8.D.2 Demonstrate the application of appropriate citations to digital content. NJCCCS 8.1.8.D.4 Assess the credibility and accuracy of digital content. NJCCCS 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. NJCCSC 8.1.8.E.1 Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.	letters, surveys, maps, photos, articles and more. Students who are information literate access information efficiently and effectively. Critical thinkers discriminate between fact and opinion. Students who are information literate evaluate information critically and thoughtfully. An author’s favorable or unfavorable bias can influence presentation of information. Useful resources should be selected and irrelevant information can be dismissed. Responsible scholars give credit to other researchers by acknowledging their ideas. New information can be presented through illustration, a written composition, a 3D model, a video or other formats. Makerspaces are locations for students to create, tinker, make, and explore their own thoughts and interests. VOCABULARY: compile, evaluate, research, organize, information, cite, plagiarism, database, query, URL, keywords, perspective	print and digital resources to successfully fulfill informational need. Practice using specific keywords in a search. Evaluate the reliability of print and digital resources. Compare information within multiple print and digital sources. Evaluate information for trustworthiness by reflecting on author's perspective and potential bias. Apply evaluative criteria to determine the relevance of the information. Synthesize strategies to record results of information searching by paraphrasing and note-taking. Compose a citation document. Create a presentation of new information using multimedia techniques. Communicate new information to peers and adults. Utilize tools and resources while interacting in a Makerspace.
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	KEY TERMS: online sources, Works Cited, Evaluation of Information, subject terms, resource-based learning, Makerspace	
ASSESSMENT EVIDENCE: Students will show their learning by: • Creating a presentation of new findings using video, Prezi, PowerPoint, or other media • Determine a research topic of interest, locate resources, evaluate usefulness of resources, and compose a citation document KEY LEARNING EVENTS AND INSTRUCTION: • Record “What I need to know” statements to outline informational needs • Form open-ended, relevant questions on a topic • Identify keywords and search terms • Independently locate multiple resources in the Library/ Media Center • Assess resources for quality and relevance to topic • Independently evaluate resources for bias, discrepancies, and reliability • Record information using note taking strategies • Organize information from several print and digital resources and cite sources used • Communicate new information effectively to an audience • Actively reflect on and individually improve end product(s) • Participate in creative and innovative tasks in a Makerspace		

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT V: Information Literacy

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
8 Weeks	Evaluate informational resources Locate relevant sources Develop multimedia presentations	<u>Mentor Text</u> <i>But I Read It on the Internet!</i> by Toni Buzzeo <i>The Pirates of Plagiarism</i> by Lisa Downey <u>Programs/ Online Resources</u> BrainPOP video "Citing Sources" Citing Sources for Kids BrainPOP video "Critical Reasoning" BrainPOP video "Note-taking Skills" BrainPOP video "Paraphrasing" BrainPOP video "Plagarism" Citing Sources from ReadWriteThink.org Teaching Information Literacy Skills Prezi True Flix Freedom Flix National Geographic

RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT VI: Programming

STANDARDS / GOALS:	ENDURING UNDERSTANDINGS	ESSENTIAL QUESTIONS
CT.L1:6-01. Understand and use the basic steps in algorithmic problem-solving.	As in all writing, there are conventions to writing code.	Why is structure important in writing?
CT.L2-01. Use the basic steps in algorithmic problem solving to design solutions.	Code should be written for efficiency and readability.	How does editing improve writing?
	Solving problems requires perseverance and communication skills.	Why is developing a strong work ethic essential to success?
CT.L2-06. Describe and analyze a sequence of instructions being followed.	KNOWLEDGE	SKILLS
CT.L2-08. Use visual representations of problem states, structures, and data.	Students will know: Syntax refers to the spelling and grammar of a programming language. Computers only understand instructions if the programmer uses the correct syntax. Programmers use looping to execute multiple instructions up to a desired number of times. Programmers make decisions using “if-then-else” statements to improve a programs’ efficiency.	Students will be able to: List commonly used syntax (<i>ex: commas, proper sentence structure</i>). Understand the relationship of syntax to programming language. Identify incorrect syntax in a program. Edit syntax in coding program. Demonstrate looping techniques in a coding program. Identify “if-then-else” statements in programing. Apply coding skills by using loops/iterations.
CT.L2-12. Use abstraction to decompose a problem into sub-problems.		
CPP.L1:6-05. Construct a program as a set of step-by-step instructions to be acted out.		
CPP.L1:6-06. Implement problem solutions using a block-based visual programming language.		
CT.L3A-03. Explain how sequence,		

selection, iteration, and recursion are building blocks of algorithms	Programmers locate errors and revise code continually. Makerspaces provide opportunities to explore coding. VOCABULARY: iteration, blocks, execute, loop, initialize, looping, repetition, debug, syntax, efficient, elegant, comments, decision, readability, persistence, programming, coding, navigate, language, revise, re-write, software, hardware, revision KEY TERMS: If-then-else statements, conditional statements, problem solving, Makerspace	Apply “if-then-else” statements to improve the program. Locate errors in written examples of code. Revise code to increase program’s efficiency. Utilize tools and resource to code in a Makerspace.
ASSESSMENT EVIDENCE: Students will show their learning by <i>(including but not limited to):</i> - Design an interactive program for others to navigate (Scratch, Tynker, or Code.org) including iterations and conditional statements KEY LEARNING EVENTS AND INSTRUCTION <i>(including but not limited to):</i> - Write clear objectives for a program’s completion - Plan the program by defining the problem - Begin with the end in mind by planning the solution - Code the program (Scratch, Tynker or Code.org) - Test the program, evaluate results, and revise as needed - Revise a peer’s program by rewriting code - Participate in creative and innovative coding tasks in a Makerspace		

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RANDOLPH TOWNSHIP SCHOOL DISTRICT
Library/ Media
UNIT VI: Programming

SUGGESTED TIME ALLOTMENT	CONTENT-UNIT OF STUDY	SUPPLEMENTAL UNIT RESOURCES
8 weeks	Understand basic coding principles Analyze coding programs Create code for unique programs	<u>Mentor Text</u> <i>Nick and Tesla</i> series by Bob Pflugfelder <i>Coding games in Scratch</i> by John Woodcock <i>Learn to Program with Scratch: A Visual Introduction to Programming with Games, Art, Science, and Math</i> by Majed Marji <i>DK Workbooks: Coding in Scratch: Games Workbook</i> by John Woodcock <u>Programs/ Online Resources</u> Code.org (<i>Flappy birds</i>) Khan Academy Debugging activity Scratch CodeMonkey Hopscotch iPad app Brain Pop “computer programming”

Appendix A

Library/ Media Crosswalk

Grades K-1

	September	October	November	December	January	February	March	April	May	June
Media	Digital Citizenship (5 weeks)		Technology Applications (6 weeks)			Programming (8 weeks)				
Makerspace (Sept.-June)										
Library	Library Citizenship (5 weeks)		Literature Appreciation (6 weeks)				Information Literacy (6 weeks)			

Grades 2-3

	September	October	November	December	January	February	March	April	May	June
Media	Digital Citizenship (5 weeks)		Technology Applications (6 weeks)			Introduction to Programming (8 weeks)				
Makerspace (Sept.-June)										
Library	Library Citizenship (5 weeks)		Literature Appreciation (6 weeks)				Information Literacy (6 weeks)			

Grades 4-5

	September	October	November	December	January	February	March	April	May	June
Media	Digital Citizenship (5 weeks)		Technology Applications (6 weeks)			Programming (8 weeks)				
Makerspace (Sept.-June)										
Library	Library Citizenship (5 weeks)		Literature Appreciation (6 weeks)				Information Literacy (6 weeks)			