GRADE LEVEL: Fourth and Fifth Grade **SUBJECT: Library & Computer Science** **DATE: 2018-2019**

MONTH/GRADING PERIOD: Quarter 1 **MASTER COPY 4-24-18**

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
COMPUTING DEVICES AND SYSTEMS (CD)					
• Device Components • Keyboarding	**3-5.CD.1** Demonstrate proficiency with keyboards and other input and output devices.	• Identify the parts of the computer. • Identify the parts of the keyboard. • Identify the home row. • Develop touch-keying skills without watching fingers, using correct fingering, posture, and hand position. • Develop rapid motions and correct stroking technique with goals of obtaining automaticity and a wpm rate that is faster than a student's handwriting speed.	• Type to Learn assessment reports • Simple documents such as friendly letters and stories • Teacher observation	• Home row • WPM • Accuracy • Monitor • CPU • Input • Output	CRITICAL
• Computers in Daily Life	**3-5.CD.2** Understand the pervasiveness of computers and computing in daily life (e.g., voicemail, downloading videos and audio files, microwave ovens, thermostats, wireless Internet, mobile computing devices, GPS systems).	• List various types of technology used in daily life. • Label various types of technology used in daily life with indicator of frequency of use.	• List • Classroom discussion		ADDITIONAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
COMPUTING DEVICES AND SYSTEMS (CD)					
• Troubleshooting	**3-5.CD.3** Apply troubleshooting strategies for identifying simple hardware and software problems that may occur during use.	• Identify appropriate troubleshooting strategies for simple hardware and software problems that may occur. • Apply troubleshooting strategies for identifying simple hardware and software problems that may occur during use.	• Online assessment results (Code.org Lesson 16: Play Lab: Create a Story) • Teacher observation	• Pop up • Download • Default browser	IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
PROGRAMS AND ALGORITHMS (PA)					
• Technology resources	**3-5.PA.1** Use technology resources (e.g., calculators, data collection probes, mobile devices, videos, educational software, and web tools) for problem-solving and self-directed learning, and general-purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, facilitate learning, and individual/collaborative writing, communication, and publishing activities.	• Identify and use technology resources, productivity tools, and peripherals to that are appropriate for certain tasks. • Identify which technology resources remediate skills deficits and facilitate learning. • Organize and apply personal login information to gain access to educational software. • Demonstrate proficiency connecting peripheral devices to the computer. • Use appropriate educational software and technology resources for personal remediation to facilitate learning, and for personal productivity and self-directed learning. • Use technology resources to write, communicate, and publish.	• Teacher observation • Classroom discussion • Worksheet	• Excel • Hardware • Keyboard • Left click • Login • Microphone • Monitor • Mouse • Password • Peripherals • PowerPoint • Processor • Projector • Publisher • Right click • Software • USB Flash Drive • User name • Webcam • Word	CRITICAL

GRADE LEVEL: Fourth and Fifth Grade **SUBJECT: Library & Computer Science** **DATE: 2018-2019**

MONTH/GRADING PERIOD: Quarter 2 **MASTER COPY 4-24-18**

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
DATA AND INFORMATION (DI)					
• Algorithmic Problem Solving	**3-5.DI.1** Understand and use the basic steps in algorithmic problem solving (e.g., problem statement and exploration, examination of sample instances, design, implementation, and testing).	• Solve a mathematical problem using algorithmic computation. • Solve a computer programming puzzle and test the solution by running the code. • Write code, utilizing drop and drag with loops.	• Coding module	• Algorithm • Code • Loop	CRITICAL
• Computer Free Algorithmic Problem Solving	**3-5.DI.2** Develop a simple understanding of an algorithm (e.g., search, sequence of events, or sorting) using computer-free exercises.	• Solve a mathematical problem using algorithmic computation. • Construct a program with step-by-step instructions. • Construct a set of statements to be acted out to accomplish a task.	• Graph paper programming assessment	• Sequence	CRITICAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
DATA AND INFORMATON (DI)					
• Binary Number System	**3-5.DI.3** Demonstrate how a string of bits can be used to represent alphanumeric information and how 1's and 0's represent information.	• Identify the relationship between the binary number system and computer systems. • Represent information in a variety of binary options. • Identify methods for encoding images into binary. • Relate images to a peer using binary encoding. • Reproduce an image, based on binary code.	• Teacher observation • Class discussion • Binary encoding reproducible • Group activity	• Binary encoding	ADDITIONAL
COMPUTING DEVICES AND SYSTEMS (CD)					
• Keyboarding	**3-5.CD.1** Demonstrate proficiency with keyboards and other input and output devices.	• Identify the keys above and below the home row. • Develop touch-keying skills without watching fingers, using correct fingering, posture, and hand position with keys above and below the home row. • Develop rapid motions and correct stroking technique with goals of increasing automaticity and a wpm rate that is faster than a student's handwriting speed.	• Type to Learn assessment reports • Simple documents such as friendly letters and stories • Teacher observation	• Caps lock • Delete • Backspace • Shift	CRITICAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
PROGRAMS & ALGORITHMS (PA)					
• Technology Resources	**3-5.PA.1** Use technology resources (e.g., calculators, data collection probes, mobile devices, videos, educational software, and web tools) for problem-solving and self-directed learning, and general-purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, facilitate learning, and individual/collaborative writing, communication, and publishing activities.	• Use appropriate technology resources, productivity tools, and peripherals for the task. • Use appropriate technology resources for personal remediation to facilitate learning, and for personal productivity and self-directed learning. • Locate a web browser, search bar, and address bar. • Understand and use key words in a web search that will give the best results. • Recognize which Boolean search terms would broaden or narrow your search. • Evaluate the results of a web search and select the best resource to address your questions. • Increase accuracy of research skills with appropriate key words. • Devise and develop personal search strategies using multiple key words, synonyms, alternate words, and phrases.	• Teacher observation • Classroom discussion • Worksheet to answer questions using variety of trivia questions utilizing internet, periodical, encyclopedia, atlas, almanac, thesaurus, and dictionary reference materials (Fact Monster) • Digital citizenship privacy and communication unit 1 assessment	• Search bar • Address bar • Browser • Keywords • And, or, not (Boolean terms)	CRITICAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
PROGRAMS & ALGORITHMS (PA)					
• Programming	**3-5.PA.3** Implement problem solutions using a block-based visual programming language.	• Solve lab puzzles using block-based programming language.	• Bee-sequence lab on Code.org	• Block • Programming	CRITICAL
NETWORKING & COMMUNICATION (NC)					
• Online Collaboration	**3-5.NC.1** Use online resources (e.g., email, online discussions, collaborative web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products.	• Participate in collaborative problem-solving activities using an online learning platform.	• Simple project using online collaborative programming course		ADDITIONAL
• Productivity Tools	**3-5.NC.2** Use productivity technology tools (e.g, word processing, spreadsheet, and presentation software) for individual and collaborative writing, communication, and publishing activities.	• Use word processing for writing, communicating, and publishing. • Modify font in word processing programs to enhance communication. • Save and access a word processing document. • Align text in a word processing document.	• Simple word processing document	• Cursor • File name • Font • Font point • Bold • Italic • Underline • Alignment • Center • Justify • Save • Word wrap	CRITICAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
IMPACT & CULTURE (IC)					
• Digital Citizenship	**3-5.IC.1** Discuss basic issues related to responsible use of technology and information, and the consequences of inappropriate use.	• Investigate the critical skills related to digital safety, respect, and community. • Evaluate what information is appropriate to share and when. • Determine essential elements of a safe and secure password. • Explain the importance of online privacy. • Evaluate whether information should or should not be publically shared. • Give proper credit to original works correctly.	• Classroom discussion • Digital Citizenship Privacy and Communication Unit 1 Assessment	• Privacy • Overshare • Digital citizenship	CRITICAL

GRADE LEVEL: Fourth and Fifth Grade **SUBJECT: Library & Computer Science** **DATE: 2018-2019**

MONTH/GRADING PERIOD: Quarter 3 **MASTER COPY 4-24-18**

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
DATA & INFORMATION					
• Algorithmic Problem Solving	**3-5.DI.1** Understand and use the basic steps in algorithmic problem solving (e.g., problem statement and exploration, examination of sample instances, design, implementation, and test).	• Use computational thinking method of problem solving that helps computer scientists prepare problems for digital solutions. • Create simple algorithms to move a character through a maze using a single command. • Complete a task of building a structure using only provided supplies.	• Code.org: Move It assessment • Teacher observation • Classroom discussion	• Computational thinking • Algorithm	CRITICAL
• Algorithm	**3-5.DI.2** Develop a simple understanding of an algorithm (e.g., search, sequence of events, or sorting) using computer-free exercises.	• Abstract details from a solution so that it can work for many problems. • Break a complex problem into smaller, easier steps.	• Group project • Code.org: Computational Thinking with Monsters	• Abstraction • Decompose • Pattern • Program	CRITICAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
DATA & INFORMATION					
• Simulation	**3-5.DI.4** Describe how a simulation can be used to solve a problem.	• Use models and simulations to explore and solve problems.	• Code.org: Relay programming • Code.org: Real Life Algorithms: Paper Airplanes assessment worksheet "Daily Algorithms" • Code.org: Envelope Variables worksheet	• Variable	ADDITIONAL
• Computer Science	**3-5.DI.5** Understand the connections between computer science and other fields.	• Identify ways that computer science advances other disciplines such as health and medicine, biology, sociology, agriculture, etc.	• Group project: create a list	• Computer science	ADDITIONAL
COMPUTING DEVICES & SYSTEMS (CD)					
• Computer Intelligence	**3-5.CD.4** Recognize that computers model intelligent behavior (as found in robotics, speech and language recognition, and computer animation.)	• Recognize that computers model intelligent behavior. • Provide examples of how computers model intelligent behavior. • Demonstrate how a computer/robot follows a given command or instruction.	• Classroom discussion • Teacher observation	• Artificial intelligence • Automation • Computation	ADDITIONAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
PROGRAMS & ALGORITHMS (PA)					
• Programing	**3-5.PA.3** Implement problem solutions using a block-based programming language.	• Solve lab puzzles using block-based programming language. • Use “if” and “if/else” statements to declare when a certain command should be run. • Determine whether a conditional is met based on criteria. • Define circumstances when certain parts of a program should and should not run. • Traverse a program and predict the outcome given a set of input.	• Code.org: Conditionals with Cards Assessment • Code.org: Course F.	• Block • Programming • Conditionals	CRITICAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
NETWORKING & COMMUNICATION (NC)					
• Productivity Tools	• **3-5.NC.2** Use productivity technology tools (e.g., word processing, spreadsheet, presentation software) for individual and collaborative writing, communication, and publishing activities.	• Use PowerPoint for writing, communicating, and publishing. • Modify elements of PowerPoint to enhance communication. • Save and access a PowerPoint document.	• Simple PowerPoint presentation	• Action buttons • Animation • Background • Blank presentation • Bullets • Clip art • Design Template • Effect • Handout • Hyperlink • PowerPoint • Slide • Slide Layout • Transitions	CRITICAL

GRADE LEVEL: Fourth and Fifth Grade **SUBJECT: Library & Computer Science** **DATE: 2018-2019**

MONTH/GRADING PERIOD: Quarter 4 **MASTER COPY 4-24-18**

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
PROGRAMS & ALGORITHMS (PA)					
• Technology Resources • Productivity Tools	• **3-5.PA.1** Use technology resources (e.g., calculators, data collection probes, mobile devices, videos, educational software, and web tools) for problem-solving and self-directed learning, and general-purpose and self-directed learning, and general-purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, facilitate learning, and individual/collaborative writing, communication, and publishing activities.	• Identify information needed to solve an informational problem. • Determine all possible sources. • Apply technology resource seeking strategies to locate and access information. • Extract relevant information. • Organize information from multiple sources.	• Research-based project	• Research	CRITICAL
• Data tools	• **3-5.PA.2** Use digital tools to gather, manipulate, and modify data for use by a program.	• Collect survey information using digital collection tool. • Modify and manipulate data in an excel spreadsheet.	• Whole group survey project	• Survey	ADDITIONAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
NETWORKING & COMMUNICATION (NC)					
• Productivity Tools	• **3-5.NC.2** Use productivity technology tools (e.g., word processing, spreadsheet, presentation software) for individual and collaborative writing, communication, and publishing activities.	• Identify the main parts of the Excel window and work with the buttons on the toolbar. • Enter text and numbers into cells on a basic spreadsheet from the data collected. • Transform the data into a bar graph and line graph to compare and evaluate the usefulness of presenting data in different formats.	• Microsoft Excel Project 4th grade- Camping Trip Supplies Expenses • Microsoft Excel Project 5th grade- Back to School Supplies Expenses	• Cells • Columns • Excel • Labels • Rows • Spreadsheet • Values	CRITICAL
IMPACT & CULTURE (IC)					
• Digital Impact • Cyberbullying	**3-5.IC.2** Identify the impact of technology (e.g., social networking, cyber bullying, mobile computing and communication, web technologies, cyber security, and virtualization on personal life and society.)	• Investigate the difference between being a passive bystander versus an up stander in cyberbully situations. • Compare different forms of cyberbullying and the roles of those involved. • Interpret scenarios that illustrate the importance of empathizing with targets of cyberbullying. • Identify concrete solutions for dealing with cyberbullying situations.	• Classroom discussion • Collaborative conversations navigating digital dilemmas • Digital Citizenship Cyberbullying Unit Assessment	• Bystander • Cyberbullying • Target • Upstander	IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
IMPACT & CULTURE (IC)					
• Source Evaluation	**3-5.IC.3** Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and biases that occur in electronic information sources.	• Evaluate keywords for their relevance and helpfulness. • Evaluate online resources by checking details on domain, publisher, date, author, sources cited. • Analyze and uncover potential bias. • Judge the relevance and appropriateness of information sources.	• BrainPop Online Sources Quiz	• Relevant • Reliable • Bias • Domain • Evaluate • Publisher • Slant	CRITICAL
• Ethical Issues • Copyright • Credit	**3-5.IC.4** Understand ethical issues that relate to computers and networks (e.g., equity of access, security, privacy, copyright, and intellectual property.)	• Define copyright, credit, and plagiarism, and apply them to their own creative work. • Reflect and verbally articulate on the ethical importance of giving credit to others for their work. • Determine how to receive credit for digital creations. • Give proper credit to media content used in student creations. • Construct a bibliography.	• Creative Credit Mission worksheet from Common Sense Digital Passport • Bibliography page	• Bibliography • Citation • Copyright • Creative Commons • Credit • Ethical • Intellectual property • Plagiarism • Source	IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
READING: NONFICTION					
Features and Structures • Primary and Secondary Sources	**4.RN.3.3** Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided in the accounts.	• Distinguish (tell the difference) between firsthand and secondhand accounts of an event. • Describe the focus and information provided. • Compare and contrast a first and secondhand account of the same event or topic.	• Class discussion • Graphic organizer	• Primary source • Secondary source	IMPORTANT
• Multiple Perspectives	**5.RN.3.3** Analyze multiple accounts of the same event or topic, noting important similarities and differences in the perspectives the account represent.	• Distinguish differences between perspectives of the same event. • Compare and contrast multiple accounts of the same event or topic.	• Class discussion • Graphic organizer	• Perspective	IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
WRITING					
The Research Process **Finding, Assessing, Synthesizing, and Reporting Information** • Short research • Questions • Features • Print sources • Digital sources • Reliability • Citations • Bibliography • Presentation	**4.W.5** Conduct short research on a topic. • Identify a specific question to address (e.g, *What is the history of the Indy 500?*). • Use organizational features of print and digital sources to efficiently locate further information. • Determine the reliability of the sources. • Summarize and organize information in their own words, giving credit to the source. • Present the research information, choosing from a variety of formats.	• Identify a specific question to address. • Use organizational features of print and digital sources to efficiently locate further information. • Determine the reliability of the sources. • Summarize and organize information in own words, giving credit to the source. • Present the research information, choosing from a variety of formats. • Describe/define plagiarism. • Paraphrase information in own words.	• Research project	• Research • Print source • Digital source • Reliable source • Bibliography • Plagiarism • Paraphrase	IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
WRITING					
The Research Process **Finding, Assessing, Synthesizing, and Reporting Information** • Short research • Questions • Features • Print sources • Digital sources • Reliability • Citations • Bibliography • Presentation	• **5.W.5** Conduct short research assignments and tasks on a topic. • With support, formulate a research question (e.g, *what were John Wooden's greatest contributions to college basketball?)*. • Identify and acquire information through reliable primary and secondary sources. • Summarize and paraphrase important ideas and supporting details, and include direct quotations where appropriate, citing the source of information. • Avoid plagiarism and follow copyright guidelines for use of images, pictures, etc. • Present the research information, choosing from a variety of formats.	• Identify a specific question to address. • Use organizational features of print and digital sources to efficiently locate further information. • Determine the reliability of the sources. • Summarize and organize information in own words, giving credit to the source. • Present the research information, choosing from a variety of formats. • Describe/define plagiarism. • Paraphrase information in own words. • Cite sources.	• Research project	• Research • Print source • Digital source • Reliable source • Bibliography • Plagiarism • Paraphrase	IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
MEDIA LITERACY					
• Author Purpose	**4-5.ML.1** Identify how information found in electronic, print, and mass media is used to inform, persuade, entertain, and transmit culture.	• Identify the purpose of electronic, print, and mass media. • Use details from the media source to support the purpose. • Explain the media source's impact on society.	• Class discussion	• Author's purpose • Inform • Persuade • Entertain • Media	IMPORTANT
• Media Claims	**4.ML.2.1** Recognize claims in print, image, and multimedia and identify evidence used to support these claims.	• Summarize the claims of print, image, and multimedia. • Identify evidence to support claims from media.	• Class discussion	• Claim	IMPORTANT
• Media Claims	**5.ML.2.1** Review claims made in various types of media and evaluate evidence used to support these claims.	• State claims made in different forms of media. • Evaluate evidence used to support claims.	• Class discussion	• Claim • Evidence	IMPORTANT
• Media • Opinion	**5.ML.2.2** Identify the role of the media in focusing people's attention on events and in forming their opinions on issues.	• Identify the role that media has in getting people to focus on events. • State how this role influences people in forming their opinions on an issue.	• Class discussion	• Opinion	IMPORTANT