ABSTRACT

An education in technology is an essential component of a curriculum for the development of 21st century skills. The benefits of collaboration, problem solving, critical thinking, and creativity inherent in a technology education program are crucial to prepare students to function in school and society. Students in grades 3-5 practice basic computer functions and develop keyboarding skills for use in school. Students build upon technology skills each school year beginning in kindergarten. By the end of grade 5, students will have been introduced to and continue to practice touch typing techniques, word processing applications, and global networks for communication. Each grade level provides developmental practice in each of the curricular areas of Technology Operations and Concepts and Digital Citizenship. Benchmark assessments are employed to track individual student progress.

Adopted by the Somerville Board of Education on August 21, 2012
### Technology
**Grades 3 – 5**

<table>
<thead>
<tr>
<th>Month/Marking Period</th>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 New Jersey Core Curriculum Content Standards (NJCCCS)</td>
<td>8.1.4.A.1-5, 8.1.4.B.1, 8.1.4.D.1, 8.1.4.D.3, 8.1.4.E.1-2, 8.1.4.F.1, 8.2.4.C.1-3, 8.2.4.F.1-2</td>
<td>8.1.4.A.1-5, 8.1.4.B.1, 8.1.4.D.1, 8.1.4.D.1, 8.1.4.D.3, 8.1.4.E.1-2, 8.1.4.F.1, 8.2.4.C.1-3, 8.2.4.F.1-2</td>
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**Essential Question:**
- How can I learn to use the keyboard to type efficiently?
- How can digital tools enhance communication?
- How can technological tools be applied?

**Content:**
- **Beginning to Type**
  - **Technology Operations and Concepts**
    - practice proper posture at the computer while keyboarding
    - follow proper start up, log-on, and reboot procedures
    - practice proper computer and computer room etiquette
    - identify and demonstrate the proper use of the monitor, keyboard, mouse, printer, and touch interfaces (e.g., iPad)
    - demonstrate a relationship among core technology elements (e.g., operating system, web browser)
    - recognize and use computer icons on the desktop to navigate files and programs
    - save to the network drive
    - use letter keys, space bar, shift key, number keys, enter, delete, backspace, caps lock, tab, control, alt, and escape
    - identify, locate, and begin using the touch-typing technique
    - identify and use punctuation keys
    - create and use graphic organizers to construct or design a document
    - practice word processing

- **Use of Digital Tools**
  - **Technology Operations and Concepts**
    - follow proper start up, log-on, and reboot procedures
    - use proper computer and computer room etiquette
    - use computer icons on the desktop to navigate files and programs
    - save to the network drive
    - demonstrate familiarity with keyboarding skills
    - practice using the touch-typing technique
    - identify and use punctuation keys
    - create and use graphic organizers to construct or design a document
    - select, move, and delete text
    - indent paragraphs
    - type and format a paragraph
    - center and justify text
    - create and produce a grade-appropriate podcast or blog

- **Developing Use of Microsoft Office Applications**
  - **Technology Operations and Concepts**
    - follow proper start up, log-on, and reboot procedures
    - use proper computer and computer room etiquette
    - navigate files and programs on the desktop
    - save to the network drive
    - demonstrate fluency with keyboarding skills
    - expand touch-typing techniques
    - identify and use punctuation keys
    - create and use graphic organizers to construct or design a document
    - convert information from a graphic organizer into an outline
    - select, move, and delete text
    - indent paragraphs
    - type and format a paragraph
    - select, move, and delete text
    - create and produce a grade-appropriate podcast or blog
    - access the server to open files and programs
### SOMERVILLE PUBLIC SCHOOLS

### Technology
Grades 3 – 5

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<tr>
<td><strong>Skills and Topics:</strong></td>
<td>• access specific teacher-directed files and websites stored in grade-level folders</td>
<td>• practice word processing through project-based assignments</td>
<td>• center and justify text</td>
</tr>
<tr>
<td><strong>Digital Citizenship</strong></td>
<td>• review proper etiquette when using the Internet</td>
<td>• input data, produce charts, and interpret graphs on a spreadsheet</td>
<td>• practice word processing through project-based assignments</td>
</tr>
<tr>
<td></td>
<td>• review Somerville Board of Education’s Computer Use and Internet Contract</td>
<td>• create and produce a grade-appropriate digital presentation</td>
<td>• input data, produce charts, and interpret graphs on a spreadsheet</td>
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<tr>
<td></td>
<td>• discuss the purpose of an acceptable use policy and consequences for inappropriate use of technology</td>
<td>• access specific teacher-directed websites stored in grade-level folders</td>
<td>• create and produce a grade-appropriate Google doc</td>
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<td></td>
<td>• discuss appropriate language to be used in electronic communications</td>
<td>• present possible solutions or viewpoints using digital tools</td>
<td>• access specific teacher-directed websites stored in grade-level folders</td>
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<td></td>
<td>• practice simple searches using a child-friendly search engine</td>
<td>• input media to a digital interdisciplinary project</td>
<td>• investigate a problem or issue from multiple perspectives and present possible solutions using digital tools citing online resources</td>
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<td></td>
<td>• understand basic Internet terminology</td>
<td>• access specific teacher-directed apps</td>
<td>• input media to a digital interdisciplinary project</td>
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<td>• practice cyber safety and ethics when using the Internet</td>
<td>• Digital Citizenship</td>
<td>• access specific teacher-directed apps</td>
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<tr>
<td><strong>Information Access Research Tools</strong></td>
<td>• locate specific information by searching a database</td>
<td>• display proper etiquette when using the Internet</td>
<td>• demonstrate proper etiquette when using the Internet</td>
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<td>• identify hardware problems and suggest solutions via digital tools</td>
<td>• comply with Somerville Board of Education’s Computer Use and Internet Contract</td>
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<tr>
<td><strong>Problem-Solving and Decision-Making Tools</strong></td>
<td>• practice simple searches using a child-friendly search engine</td>
<td>• explain the purpose of an acceptable use policy and consequences for inappropriate use of technology</td>
<td>• create a presentation for younger students about the purpose of the acceptable use policy</td>
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<td>• understand basic Internet terminology</td>
<td>• use appropriate language to be used in electronic communications</td>
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<td>• practice cyber safety and ethics when using the Internet</td>
<td>• engage in a variety of developmentally-appropriate learning activities with students in other classes, schools, or countries using electronic tools (e.g., Skype, FaceTime, email, VoiceThread)</td>
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<td>• center and justify text</td>
<td>• perform targeted searches using a search engine</td>
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## Grades 3 – 5

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</table>
| **Skills and Topics:** | **Information Access Research Tools** | • locate specific information by searching a database and evaluate the accuracy and relevance of that information  
**Problem-Solving and Decision-Making Tools** | • identify hardware problems and suggest solutions to solve them  
• utilize and manipulate computer applications to independently or collaboratively solve problems  
• demonstrate the need to manipulate computer apps | • understand basic Internet terminology  
• present cyber safety and ethics when using digital tools  
• demonstrate a relationship among core technology elements as they relate to the Internet  
**Information Access Research Tools** | • evaluate the accuracy and relevance of specific information located through databases and input into digital presentations  
**Problem-Solving and Decision-Making Tools** | • identify hardware problems and suggest solutions to solve them  
• utilize and manipulate computer applications to independently or collaboratively solve problems |

<table>
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<th>Integration of Technology:</th>
<th>Internet, Web Quests, wireless laptop computers, computer laboratory, SMART Boards, SMART Response System, VoiceThread, Google Docs, email, MacBooks, PCs, iPads, video streaming, podcasting</th>
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<tr>
<td><strong>Writing:</strong></td>
<td>Conclusions and analysis of exploratory activities</td>
</tr>
<tr>
<td><strong>Formative Assessments:</strong></td>
<td>Teacher observations, opening activities, authentic assessments benchmarks</td>
</tr>
<tr>
<td><strong>Summative Assessments:</strong></td>
<td>Projects, pre assessment surveys, presentations</td>
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<tr>
<td><strong>Performance Assessments:</strong></td>
<td>Interdisciplinary projects</td>
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### 21st Century Themes:
- Global Awareness
- Civic Literacy
- Financial, Economic, Business, and Entrepreneurial Literacy
- Health Literacy

### 21st Century Skills:
- Creativity and Innovation
- Media Literacy
- Critical Thinking and Problem Solving
- Life and Career Skills
- Information and Communication Technologies Literacy
- Communication and Collaboration
- Information Literacy

### Resources:

### Careers:
Applicable career options are discussed as they arise throughout the technology program. Career options include, but are not limited to, the following career clusters: Arts, A/V Technology, and Communications Career Cluster; Business, Management, and Administration Career Cluster; Education and Training Career Cluster; Government and Public Administration Career Cluster; Health Science Career Cluster; Hospitality and Tourism Career Cluster; Human Services Career Cluster; Information Technology Career Cluster; Law, Public Safety, Correction, and Security Career Cluster; Manufacturing Career Cluster; Marketing Career Cluster; Science, Technology, Engineering and Mathematics Career Cluster; Transportation, Distribution, and Logistics Career Cluster.

*2010 Common Core Content Standards:
- RI: Reading Informational Text
- WHST: Writing in History/Social Studies, Science and Technical Subjects
- SL: Speaking and Listening
- L: Language
- NBT: Number and Operations in Base Ten
- OA: Operations and Algebraic Thinking
- G: Geometry
- S: Statistics and Probability
- MD: Measurement and Data