CAPISTRANO UNIFIED SCHOOL DISTRICT

# Digital Literacy in the K-12 Classroom

This scope and sequence is aligned to the Common Core State Standard requirements for Mathematics and English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects as well as skills required for the Smarter Balanced Assessment

**Initial Adoption May 1, 2014**

This work in this document has been heavily borrowed from the amazing work done by the good people in the Long Beach Unified School District and the Fresno County office of Education

**Digital Literacy in the K-12 Classroom**

**History and Introduction to this Document**

This scope and sequence of digital literacy skills for K-12 students and teachers in the Capistrano Unified School District has been adapted from the Common Core State Standards K-12 Technology Scope and Sequence created by the Long Beach Unified School District. They in turn utilized the work done by the Fresno Office of Education in creating the Recommended Digital Literacy and Technology Skills to Support the California Common Core Standards. Both educational institutions have done amazing work and should be congratulated and praised for the time and effort put in to their documents.

The skills listed in this document focus on scaffolding digital literacy skills from turning on devices in the first days of school to the intensive skills needed by our 12th graders as they head off into college and careers. Digital literacy will impact every job in the future, and we believe in the importance of starting students young and building on the skills each year. Technology skills, digital citizenship, information literacy, and other skills are all incorporated under the digital literacy umbrella, and all are vital skills to be introduced early and reinforced often as students work towards mastery and higher level skill development.

The skills contained herein include skills that will help students take the new online Smarter Balanced Assessment (SBAC) and reduce test anxiety through digital fluency. The skills also incorporate the NETS*S National Educational Technology Standards for Students that were adopted in 2007. Skills are focused on the English Language Arts Anchor Standards, the Mathematics Anchor Standards, and Mathematical Standards of Practice.

This document provides a roadmap for teachers and administrators to adapt curriculum to ensure that students are building digital literacy competency as well as technological skills for college and career readiness and online assessment.

| English Language Arts Anchor Standards | Mathematics Standards |
|---|---|
| **RL – Reading Standards for Literature** | **MD – Measurement and Data** |
| **RI – Reading Standards for Informational Text** | **G – Geometry** |
| **W – Writing** | **EE – Expressions and Equations** |
| **SL – Speaking and Listening** | **A – Algebra** |
| **L - Language** | **F – Functions** |
| | **SP – Statistics and Probability** |
| | **SMP – Standards of Mathematical Practice** |

# Digital Literacy in the K-12 Classroom

| Digital Literacy Categories | | Alignment to CCSS/ SBAC | Skills | K | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|
| **Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying hardware, software and connectivity.** | **Basic Operations** | **SBAC test taking skills** | Turn on a computer and login | I | R | M | M | M | M |
| | | **SBAC test taking skills** | Use pointing device such as a mouse to manipulate shapes, icons; click on urls, radio buttons, check boxes; use scroll bar | I | R | M | M | M | M |
| | | **SBAC test taking skills** | Use desktop icons, windows and menus to open applications and documents | I | R | M | M | M | M |
| | | **SBAC test taking skills** | File management – saving documents | O | I | R | M | M | M |
| | | **SBAC test taking skills** | Explain and use age-appropriate online tools and resources (e.g. tutorial, assessment, web browser) | | I | R | R | M | M |
| | | **W 6** | Keyboarding<br>• Use proper posture and ergonomics<br>• Locate and use letter and numbers keys with left and right hand placement.<br>• Locate and use correct finger, hand for space bar, return/enter and shift key<br>• Gain proficiency and speed in touch typing (numbers are adjusted WPM)<br>• Students type adjusted 5 WPM x Grade level<br>• 2nd = 5x2 = 10 WPM adjusted, 5th = 5x5 = 25 WPM | I | R 5 | R 10 | R 15 | R 20 | R 25 |
| | **Word Processing** | **W 5, W 6, W 10** | Use a word processing application to write, edit, print and save simple assignments | I | R | R | M | M | M |
| | | **W 5, W 6, W 10** | Use menu/tool bar functions (e.g. font/size/style/, line spacing, margins) | | I | R | R | M | M |
| | | **W 5, W 6, W 10** | Highlight text, copy and paste text | | O | I | R | M | M |
| | | **W 5, W 6, W 10** | Copy and paste images within the document and from outside sources. Insert and size a graphic in a document | | I | R | R | M | M |
| | | **L 4** | Proofread and edit writing using appropriate resources (e.g. dictionary, spell checker, grammar, and thesaurus) | | O | I | R | M | M |

**O – Optional for grade level** **I – Introduce** **R – Reinforce** **M – Mastery (ability to teach others)**

Adapted from the amazing work done by Long Beach Unified School District and The Fresno County Office of Education on Digital Literacy and Technology Skills to Support the California Common Core State Standards and SBAC

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|---|---|---|---|---|---|---|---|---|---|
| **Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying hardware, software and connectivity.** | **Spreadsheet (Tables/ Charts and Graphs)** | **MD , SBAC testing skills** | Demonstrate an understanding of the spreadsheet as a tool to record, organize and graph information | | | | I | R | R |
| | | **SBAC testing skills** | Identify and explain terms and concepts related to spreadsheets (i.e. cell, column, row, values, labels, chart graph) | | | O | I | R | M |
| | | **MD , SBAC testing skills** | Enter/edit data in spreadsheets and perform calculations using formulas | | | O | I | R | R |
| | | **MD , SBAC testing skills** | Use mathematical symbols e.g. + add, - minus, *multiply, /divide, ^ exponents | | | | I | R | R |
| | | **RI 7** | Use spreadsheets and other applications to make predictions, solve problems and draw conclusions | | | | I | R | R |
| | **Multimedia and Presentation Tools** | **W 6** | Create, edit and format text on a slide | | I | R | R | M | M |
| | | **W 6** | Create a series of slides and organize them to present research or convey an idea | | | I | R | R | M |
| | | **W 6, SL 5** | Copy and paste or import graphics; change their size and position on a slide | | | O | I | R | M |
| | | **W 6, SL 5** | Use painting and drawing tools/ applications to create and edit work | | | I | R | R | M |
| | | **W 6, RL 7, SBAC testing skills** | Watch online videos and use play, pause, rewind and forward buttons while taking notes | I | R | R | M | M | M |

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|---|---|---|---|---|---|---|---|---|---|
| **Demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school and in society.** | **Acceptable Use, Copyright and Plagiarism** | **Digital Citizenship** | Explain and demonstrate compliance with classroom, school rules (Acceptable Use Policy) regarding responsible use of computers and networks | I | R | R | M | M | M |
| | | **Digital Citizenship** | Explain responsible uses of technology and digital information; describe possible consequences of inappropriate use | I | R | R | M | M | M |
| | | **Digital Citizenship** | Explain Fair Use Guidelines for the use of copyrighted materials,(e.g. text, images, music, video in student projects) and giving credit to media creators | | I | R | R | M | M |
| | | **Digital Citizenship** | Identify and explain the strategies for the safe and efficient use of computers (e.g. passwords, virus protection software, spam filters, popup blockers) | | I | R | R | M | M |
| | | **Digital Citizenship** | Demonstrate safe online communication practices, recognition of the potentially public exposure of communications and appropriate etiquette (student email introduced in 5th grade) | | | I | R | R | R |
| | | **Digital Citizenship** | Identify cyberbullying and describe strategies to deal with such a situation | I | R | R | R | M | M |
| | | **Digital Citizenship** | Recognize and describe the potential risks and dangers associated with various forms of online communications | | I | R | R | M | M |
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|---|---|---|---|---|---|---|---|---|---|
| | Research and Gathering Information | RI 6, RI 7, RI 5, RI 9 | Understand the difference between natural language searching and advanced searching techniques and utilize both techniques to efficiently search for information | I | R | R | R | M | M |
| Demonstrate the ability to use technology for research, critical thinking, decision making, communication and collaboration, creativity and innovation. | | RI 5, RI 7 | Use age appropriate technologies to locate, collect, organize content from media collection for specific purposes, citing sources | I | R | R | R | M | M |
| | | RI 5, RI 7 | Perform basic searches on databases, (e.g. library, card catalog, encyclopedia) to locate information | | | I | R | M | M |
| | | RI 5, RI 7 | Evaluate teacher-selected or self-selected Internet resources in terms of their usefulness and validity for research | I | R | R | R | M | M |
| | | RI 7 | Use content specific technology tools (e.g. environmental probes, sensors, and measuring devices, simulations) to gather and analyze data | | | O | I | R | M |
| | | RI 6, RI 7, RI 9 | Use Web 2.0 tools (e.g. online discussions, blogs and wikis) to gather and share information | | | O | I | R | M |
| | | RL 7 | Identify and analyze the purpose of a media message (to inform, persuade and entertain) | I | R | R | R | R | M |
| | Communi-cation and Collaboration | W 6 | Work collaboratively online with other students under teacher supervision | | | I | R | R | M |
| | | W 6, W 10 | Use a variety of age-appropriate technologies (e.g. drawing program, presentation software) to communicate and exchange ideas | | I | R | R | M | M |
| | | W 6, W 10 SL 2, SL 5 | Create projects that use text and various forms of graphics, audio, and video, (with proper citations) to communicate ideas | | | I | R | R | M |
| | | W 6, W 10 SL 3 | Use teacher developed guidelines to evaluate multimedia presentations for organization, content, design, presentation and appropriateness of citations | | | O | I | R | R |
| | | W 6, W 10 SL 1 | Use district approved Web 2.0 tools for communication and collaboration | | | I | R | R | M |

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| Digital Literacy Categories | | Alignment to CCSS/SBAC | Skills | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying the hardware, software and connectivity.** | **Basic Operations** | **Technology Operations & Concepts** | Identify successful troubleshooting strategies for minor hardware and software issues/problems (e.g., "frozen screen") | I | R | R | M | M | M | M |
| | | **Technology Operations & Concepts** | Independently operate peripheral equipment (e.g., scanner, digital camera, camcorder), if available | I | R | M | M | M | M | M |
| | | **Technology Operations & Concepts** | Compress and expand large files | I | R | M | M | M | M | M |
| | | **Technology Operations & Concepts** | Identify and use a variety of storage media (e.g., DVDs, flash drives, school servers, and online storage spaces), and provide a rationale for using a certain medium for a specific purpose | I | R | M | M | M | M | M |
| | | **W 6** | Demonstrate automaticity in keyboarding skills by increasing accuracy and speed<br>(For students with disabilities, demonstrate alternate input techniques as appropriate)<br>5 WPM (adjusted) x grade level (e.g. 10th x 5 = 50 WPM adjusted) | M 30 | M 35 | M 40 | M 45 | M 50 | M 55 | M 60 |
| | | **Creativity & Innovation** | Identify and assess the capabilities and limitations of emerging technologies | I | R | R | R | M | M | M |
| | **Word Processing** | **W 5, W 6, W 10** | Demonstrate use of intermediate features in word processing application (e.g., tabs, indents, headers and footers, end notes, bullet and numbering, tables. | I | R | R | M | M | M | M |
| | | **W 5, W 6, W 10, SL 5** | Apply advanced formatting and page layout features when appropriate (e.g., columns, templates, and styles) to improve the appearance of documents and materials | I | R | R | M | M | M | M |
| | | **W.5, W6, W 10** | Highlight text, copy and paste text | M | M | M | M | M | M | M |
| | | **W 5, W 6, W 10, SL 1** | Use the Comment function in word processing programs (including online) for peer editing of documents | I | R | M | M | M | M | M |
| | | **W 5, W 6, W 10, SL 1** | Understand and Use "change tracking" features of word processing programs and websites for peer editing | I | R | R | M | M | M | M |

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| **Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying hardware, software and connectivity.** | **Spreadsheet (Tables/ Charts and Graphs)** | **F, SMP 5, RI 7** | Use spreadsheets to calculate, graph, organize, and present data in a variety of real-world settings and choose the most appropriate type to represent given data | I | R | R | R | M | M | M |
| | | **F, SMP 5, RI 7** | Enter formulas and functions; use the auto-fill feature in a spreadsheet application | I | R | R | R | M | M | M |
| | | **F, EE, SMP 5, RI 7** | Use functions of a spreadsheet application (e.g., sort, filter, find) | I | R | R | M | M | M | M |
| | | **EE, SMP 6** | Use various number formats (e.g. scientific notations, percentages, exponents) as appropriate | I | R | M | M | M | M | M |
| | | **F, SMP 5, RI 7** | Use advanced formatting features of a spreadsheet application (e.g., reposition columns and rows, add and name worksheets) | I | R | R | M | M | M | M |
| | | **SMP 5, RI 7** | Differentiate between formulas with absolute and relative cell references | | | I | R | M | M | M |
| | | **SMP 5, RI 7** | Use multiple sheets within a workbook, and create links among worksheets to solve problems | | O | I | R | M | M | M |
| | | **SMP 5, RI 7** | Import and export data between spreadsheets and other applications | | O | I | R | M | M | M |
| | **Mathematical Applications** | **G, SMP 5** | Draw two and three dimensional geometric shapes using a variety of technology tools | I | R | R | M | M | M | M |
| | | **EE, SMP 5** | Use and interpret scientific notations using a variety of technology applications | | | I | R | M | M | M |
| | | **EE, A, F, SP, SMP 5 W 8, SL 5** | Explain and demonstrate how specialized technology tools can be used for problem solving, decision making, and creativity in all subject areas (e.g., simulation software, environmental probes, computer aided design, geographic information systems, dynamic geometric software, graphing calculators) | I | R | R | R | M | M | M |

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| | Multimedia and Presentation Tools | SL 5, SL 4 | Create and present presentations with limited text or single images per slide in order to avoid plagiarism, engage audiences, and prove content knowledge | I | R | R | R | M | M | M |
| Demonstrate proficiency in the use of computers and applications as well as an understanding of the concepts underlying hardware, software and connectivity. | | SMP 3, SL 5 | Create presentations for a variety of audiences and purposes with use of appropriate transitions and animations to add interest | R | R | M | M | M | M | M |
| | | SMP 5, W 6 | Use a variety of technology tools (e.g., dictionary, thesaurus, grammar checker, calculator/graphing calculator) to maximize the accuracy of work | R | R | M | M | M | M | M |
| | | SL 5 | Make strategic use of digital media in presentations to enhance understanding | R | R | R | R | M | M | M |
| | | W 6, SL 5 | Use painting and drawing tools/ applications to create and edit work | R | R | M | M | M | M | M |
| | | RL 7, RI 7, SBAC testing skills | Use note-taking skills while viewing online videos and using the play, pause, rewind and stop buttons | R | R | M | M | M | M | M |
| | | SMP 3, SL 5 | Independently use appropriate technology tools (e.g., graphic organizer, audio, visual) to define problems and propose hypotheses | I | R | R | R | R | M | M |
| Demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school and in society. | Acceptable Use, Copyright and Plagiarism | Digital Citizenship | Comply with the district's Acceptable Use Policy related to ethical use, cyberbullying, privacy, plagiarism, spam, viruses, hacking, and file sharing | R | M | M | M | M | M | M |
| | | Digital Citizenship | Explain Fair Use guidelines for using copyrighted materials and possible consequences (e.g., images, music, video, text) in school projects | R | M | M | M | M | M | M |
| | | Digital Citizenship | Analyze and explain how media and technology can be used to distort, exaggerate, and misrepresent information | I | R | R | R | M | M | M |
| | | Digital Citizenship | Give examples of hardware and applications that enable people with disabilities to use technology | I | R | R | M | M | M | M |
| | | Digital Citizenship | Explain the potential risks associated with the use of networked digital environments (e.g., internet, mobile phones, wireless, LANs) and sharing personal information | R | R | M | M | M | M | M |

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| **Demonstrate the ability to use technology for research, critical thinking, decision making, communication, collaboration, creativity and innovation.** | **Research (Gathering and Using Information)** | **RI 5, RI 7** | Identify probable types and locations of Web sites by examining their domain names (e.g., edu, com, org, gov, au) | I | R | M | M | M | M | M |
| | | **RI 5, RI 7** | Use effective search strategies for locating and retrieving electronic information (e.g., natural language vs. Boolean logic operators) | R | R | M | M | M | M | M |
| | | **RI 5, RI 7** | Use search engines and online directories. Explain the how various search engines differ and how they rank results | I | R | R | R | M | M | M |
| | | **RI 7** | Use appropriate academic language in online learning environments (e.g., post, thread, intranet, discussion forum, drop box, account, and password) | I | R | M | M | M | M | M |
| | | **RI 5, RI 7, SMP 3** | Explain how technology can support communication and collaboration, personal and professional productivity, and lifelong learning | I | R | R | M | M | M | M |
| | | **RI 5, RI 7** | Write/Create correct in-text citations and reference lists for text and images from all sources in acceptable formats | R | R | R | M | M | M | M |
| | | **RI 5, RI 7** | Use Web browsing to access information (e.g., enter a URL, access links, create bookmarks/favorites, print Web pages) | R | R | M | M | M | M | M |
| | | **RI 7, RI 10, SMP 5** | Use and modify databases and spreadsheets to analyze data and propose solutions | I | R | R | M | M | M | M |
| | | **RI 7, SMP 3** | Develop and use guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects | I | R | R | R | M | M | M |
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|---|---|---|---|---|---|---|---|---|---|---|
| **Demonstrate the ability to use technology for research, critical thinking, decision making, communication, collaboration, creativity and innovation.** | **Communication and Collaboration** | **W 6, W 10, SL 5, SMP 5, RI 7** | Use a variety of media to present information for specific purposes (e.g., reports, research papers, presentations, newsletters, Web sites, podcasts, blogs), citing sources | R | R | M | M | M | M | M |
| | | **W6, W 10, SL 2, SL 5, SMP 3** | Demonstrate how the use of various techniques and effect (e.g., editing, music, color, rhetorical devices) can be used to convey meaning in media | I | R | R | R | M | M | M |
| | | **RI 6, RI 7, RI 9, SMP 3, SL 5** | Use a variety of district approved Web 2.0 tools (e.g., e- mail discussion groups, blogs, etc.) to collaborate and communicate with peers, experts, and other audiences using appropriate academic language | R | R | M | M | M | M | M |
| | | **W 6, W 10, SL 3** | Use teacher developed guidelines to evaluate multimedia presentations for organization, content, design, presentation and appropriateness of citations | R | R | R | M | M | M | M |
| | | **RI 6, RI 7, RI 9, SMP 3** | Plan and implement a collaborative project with students in other classrooms and schools using telecommunications tools (e.g., e-mail, discussion forums, groupware, interactive Web sites, video-conferencing, collaboration software) | I | R | R | R | M | M | M |
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