# April Gr. 5 Technology

Content Area: **Technology**
Course(s):
Time Period: **April**
Length: **4-5 Weeks**
Status: **Published**

## Unit Overview

This unit continues the sequence of lessons on coding.

## Enduring Understandings

Coding is the language we use to create programming.

## Essential Questions

How do we write code?

## Instructional Strategies & Learning Activities

**Objective: Intro to Coding - ONLINE activites code.org (Course F)**
The student will be able to begin to learn and understand basic concepts about coding - algorithms, loops, & conditionals - creating code in a "blockly" language which writes Javascript 'under the hood'.

**Differentiation**:
Self-paced

**Assessment**:
Teacher dashboard reports

## Integration of Career Readiness, Life Literacies and Key Skills

Students will learn about careers in coding.

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| 9.4.5.CI | Creativity and Innovation |
| 9.2.5.CAP | Career Awareness and Planning |

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| 9.2.5.CAP.1 | Evaluate personal likes and dislikes and identify careers that might be suited to personal likes. |
| 9.2.5.CAP.2 | Identify how you might like to earn an income. |
| 9.2.5.CAP.3 | Identify qualifications needed to pursue traditional and non-traditional careers and occupations. |
| 9.4.5.CI.3 | Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity (e.g., 8.2.5.ED.2, 1.5.5.CR1a). |
| 9.2.5.CAP.4 | Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements. |
| 9.4.5.CT | Critical Thinking and Problem-solving |
| 9.4.5.CT.4 | Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3). |
| 9.4.5.DC.4 | Model safe, legal, and ethical behavior when using online or offline technology (e.g., 8.1.5.NI.2). |
| 9.4.5.IML.6 | Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions (e.g., RI.5.7, 6.1.5.HistoryCC.7, 7.1.NM. IPRET.5). |

## Technology and Design Integration

See activities above and standards below.

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| AP | Algorithms & Programming |
| 8.1.5.AP.1 | Compare and refine multiple algorithms for the same task and determine which is the most appropriate. |
| 8.1.5.AP.2 | Create programs that use clearly named variables to store and modify data. |
| 8.1.5.AP.3 | Create programs that include sequences, events, loops, and conditionals. |
| 8.1.5.AP.4 | Break down problems into smaller, manageable sub-problems to facilitate program development. |
| 8.1.5.AP.5 | Modify, remix, or incorporate pieces of existing programs into one's own work to add additional features or create a new program. |
| 8.1.5.AP.6 | Develop programs using an iterative process, implement the program design, and test the program to ensure it works as intended. |

## Interdisciplinary Connections

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| LA.RI.5.4 | Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area. |
| LA.W.5.2.D | Use precise language and domain-specific vocabulary to inform about or explain the topic. |
| LA.W.5.6 | With some guidance and support from adults and peers, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting. |
| LA.W.5.7 | Conduct short research projects that use several sources to build knowledge through investigation of different perspectives of a topic. |

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| LA.SL.5.1 | Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly. |
| LA.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. |
| LA.L.5.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. |
| LA.L.5.2 | Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. |
| LA.L.5.3 | Use knowledge of language and its conventions when writing, speaking, reading, or listening. |
| LA.L.5.4 | Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies. |

## Differentiation

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.

- **Definitions of Differentiation Components**:

    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - Product – how the student will demonstrate understanding of the content.
    - Learning Environment – the environment where learning is taking place including physical location and/or student grouping

**Differentiation occurring in this unit:**

Differentiation will be offered as listed in the above activities.

## Modifications & Accommodations

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.

**Modifications and Accommodations used in this unit:**

IEP and 504 Accommodations will be utilized.

## Benchmark Assessments

**Benchmark Assessments** are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.

**Schoolwide Benchmark assessments:**

Aimsweb benchmarks 3X a year

Linkit Benchmarks 3X a year

DRA

**Additional Benchmarks used in this unit:**

Teacher made assessments to measure growth.

## Formative Assessments

Assessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).

**Formative Assessments used in this unit:**

Discussion

Teacher observation

projects

## Summative Assessments

**summative assessments** evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.

**Summative assessments for this unit:**

Projects

Assessments listed above

## Instructional Materials

Materials as needed for projects

## Standards

See standards listed above.