

Grade 5 Computers
Unit 2: Animation
(4 weeks)

Targeted Standards

- 8.1.P.A.3 Use digital devices to create stories with pictures, numbers, letters and words.
- 8.1.2.B.1 Illustrate and communicate original ideas and stories using multiple digital tools and resources
- 8.2.2.E.3 Create algorithms (a sets of instructions) using a pre-defined set of commands (e.g., to move a student or a character through a maze).
- 8.2.5.E.3 Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.

Rationale and Transfer Goals :

This unit creates opportunities for students to engage in creative computing. It supports the development of personal connections to creativity, imagination, and interests. At its core, this unit promotes computational thinking—drawing upon computational concepts, practices, and perspectives across academic disciplines.

Enduring Understandings: What are the most essential conclusions that students should be guided towards throughout this unit?

Digital tools provide opportunities for people to have new experiences, recognize problems, design solutions, and express their ideas.

Essential Questions: What are the questions that will guide critical thinking about the content of this unit? Essential questions should, in part, be thought-starters toward the enduring understandings.

How can digital tools be used for creating original and innovative works, ideas, and solutions?

Content/Objectives

Instructional Actions

| Content <i>What students will know</i> | Skills <i>What students will be able to do</i> | Activities/Strategies <i>How we teach content and skills</i> | Evidence (Assessments) <i>How we know students have learned</i> |
|--|---|--|---|
| <p><u>Computational Concepts</u> Sequence Loops Parallelism Events Conditionals Operators Data</p> <p><u>Computational Practices</u> Being iterative and incremental</p> <p>Testing and debugging</p> <p>Reusing and remixing</p> <p>Abstracting and modularizing</p> <p><u>Computational Perspectives</u> Expressing</p> <p>Connecting</p> <p>Questioning</p> | <p>Identify a series of steps for a task.</p> <p>Evaluate products and make decisions based upon conditions.</p> <p>Create an animation product that includes discussed elements of computational design.</p> | <p>Introduction to creative computing.</p> <p>-modeling and demonstration of sample projects and program elements</p> <p>Exploration of the arts and creating projects.</p> <p>-model samples of completed projects</p> <p>-discussion of design elements</p> <p>-collaborative work on designs</p> <p>Planning storytelling narrative including characters, scenes, and narratives.</p> <p>-identify and define related concepts</p> <p>-collaboration of story planning.</p> | <p>Formative assessment of student work.</p> <p>Final project</p> |

| Spiraling for Mastery Where does this unit spiral back to other units from this or previous years in order to ensure that students retain mastery of what they've learned? | | |
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| Content or Skill for this Unit | Spiral Focus from Previous Unit | Instructional Activity |
| Basic computer operation skills | Introduction to computers | GCF lessons |
| Using Scratch | Using a checklist as a guide for planning/editing | Student application and practice |
| Planning and evaluation of digital project | | Teacher modeling of computer applications |
| <p>21st Century Skills: What are the 21st Century Skills that are a part of this unit, and where are they experienced?</p> <p>Students will develop creative thinking and collaborative thinking skills. Additionally, this unit continues to develop student media and technology literacy skills.</p> | | |
| <p>Key resources: What are the resources that are essential for this unit (may also be listed in "Activities/Strategies")?</p> <p>Computers with Speakers Smartboard Scratch (computer application) Internet/Network connection Design notebooks</p> | | |