

## Core Skills Analysis

### Computer Science

- Matthew learned the basics of coding concepts using Scratch, which is a block-based visual programming language, helping him understand programming logic without needing to write text-based code.
- He developed problem-solving skills by creating sequences of commands to make Scratch characters (sprites) perform tasks, fostering computational thinking.
- Matthew practiced debugging by identifying and correcting errors in his Scratch projects during one-on-one instruction, reinforcing persistence and analytical reasoning.
- He gained familiarity with the Scratch interface, including how to use different code blocks, control flow, and simple event-driven programming concepts.

### Tips

To further develop Matthew's understanding of programming and logical thinking, encourage him to experiment with creating different types of Scratch projects, such as animations, games, or interactive stories. Introduce him to concepts like loops, conditionals, and variables in a playful context to deepen his coding fluency. You can also explore collaborative coding activities where Matthew works with peers or family members to design projects together, fostering communication and teamwork skills. Additionally, integrating storytelling into coding projects can help connect logical structures with creativity, making learning more engaging and meaningful.

### Book Recommendations

- [Coding Projects in Scratch](#) by Jon Woodcock: A hands-on guide for kids to learn Scratch coding through fun projects and step-by-step instructions.
- [Hello Ruby: Adventures in Coding](#) by Linda Liukas: An imaginative storybook that introduces young children to computational thinking and programming concepts.
- [Super Scratch Programming Adventure!](#) by The LEAD Project: A graphic novel-style introduction to Scratch programming, entertaining and educational for young learners.

### Learning Standards

- CCSS.MATH.PRACTICE.MP1: Make sense of problems and persevere in solving them - demonstrated through debugging and coding challenges.
- CCSS.MATH.PRACTICE.MP7: Look for and make use of structure - recognizing programming patterns in Scratch blocks.
- CCSS.ELA-LITERACY.SL.2.1: Participate in collaborative conversations - applicable if coding projects involve sharing ideas.

### Try This Next

- Create a worksheet where Matthew plans a Scratch project by drawing sprites and writing step-by-step commands in sequence.
- Design a quiz with questions about basic Scratch blocks and their functions, such as 'What does a 'repeat' block do?' or 'How do you make a sprite move?'.