

Lesson 7:  
Buggy Projects

**Lesson 7 Overview:** Lesson 7 defines and celebrates the process of debugging. Children explore common “bugs” in their ScratchJr programs and strategies for troubleshooting.

**Powerful Ideas from Computer Science:** Debugging, Design Process  
**Powerful Ideas from Literacy:** Editing, Audience Awareness

**I. Warm Up: Order Matters**

- Review Grace Hopper book by displaying four scenes from the book out of order.
- Discuss: Are these scenes in the correct order? How Can we fix them?

**II. Opening Tech Circle: What is Debugging?**

- Explain that "debugging" is a word used in computer science to describe when people find errors in their computer programs and use different strategies to solve the problem. Share the history of the word “bug”.
- As a class, create a list of strategies for finding bugs in programs.

**III. ScratchJr Time: Changing Appearance & Create the Bug**

- Review Hide/Show & Grow/Shrink blocks. Introduce the Reset Size block.
- Students create a program with a bug character, inspired by the moth Grace Hopper found inside her machine. Children program their bug to have a bug (a bug inside of a bug) and do something different than it is “supposed to.”
- Children explain to their partner what the bug is supposed to do.

**IV. Word Time: Planning Bugs**

- Children reflect on their own debugging process in their Design Journals.

**V. Closing Tech Circle: Debugging Reflection**

- Children share strategies they used when debugging in their own projects. Add any new strategies used to class list.

**Vocabulary:**  
Debugging

**ScratchJr Blocks:**  
Hide/Show  
Grow/Shrink  
Reset Size

