

# **CODING 101 WITH SCRATCHJR AND SCRATCH**



# CONTACT

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# LEARNING OBJECTIVES

 Be able to define computational thinking

 Be able to define basic coding definitions

 Be able to download ScratchJR and Scratch 3.0

 Know the differences between ScratchJR and Scratch

 Start your own projects

 Resources to help you get started

# WHAT IS COMPUTATIONAL THINKING?

- **Computational Thinking** (CT) is a problem solving process that includes a number of characteristics and dispositions. CT is essential to the development of computer applications, but it can also be used to support problem solving across all disciplines, including math, science, and the humanities.
- Getting from A—>B (Cooking as an example)
- Why coding?

# GETTING STARTED

- Programming Language- is a set of rules and functions that let people use computers, cell phones, tablets, and more devices. Programming languages are designed to make it easy for humans to write complex instructions. They function a lot like human languages: they have explicit grammar and primitive vocabulary. [Scratch](#) is a programming language. Flash, Java, Javascript, Python, and more.
- Sprite- the character(s) being used on your computer screen
- Blocks- puzzle-piece shapes that are used to create code. The blocks connect to each other like Legos.
- Script- is the instructions. In Scratch it is a collection or stack of blocks that interlock with one another.

# SOME ADVICE BEFORE STARTING

Be fearless-  
Don't be afraid  
to try things,  
there is always a  
back button or a  
delete button.

Work through  
problems- if you  
get stuck, take a  
second and  
think.

One step at a  
time!

Be confident. If  
you get stuck  
research a  
solution.

# PBS AND SCRATCHJR

- <https://pbskids.org/learn/scratchjr/>
  - iPad or Tablet
  - Children ages 5-8
- <https://www.scratchjr.org/>
- Wild Kratts Creature Power Activity (Simon Says)

# SCRATCH

- [Scratch.mit.edu](https://scratch.mit.edu)
  - Explore
  - Ideas
- Great for beginning coding elementary-middle school, and first time coders.
- Let's Do The Name Activity



# OTHER FREE RESOURCES

- Code.org
- Hopscotch (mobile app)
- Code Monster <http://www.crunchzilla.com/code-monster>
- Khan Academy Khanacademy.org
- CS Unplugged csunplugged.org
- Glitch.com used to be Thimble- Web Design and Javascript

# Q&A