A Librarian's Guide to Coding

Created by Allyssa Loya

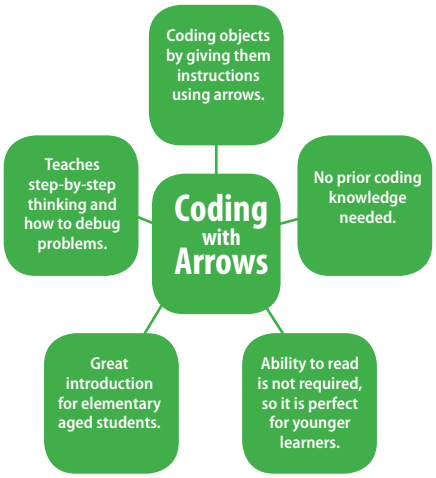
What is code? Lines of code are the instructions that tell a lot of our electronics what to do.

Why is it important for students to learn how to think like a coder? Learning to code has other benefits for students beyond the technology aspect. Even if students don't grow up to be programmers, learning how to code teaches them how to collaborate, communicate, think critically and logically, problem solve, edit, and pay attention to details.

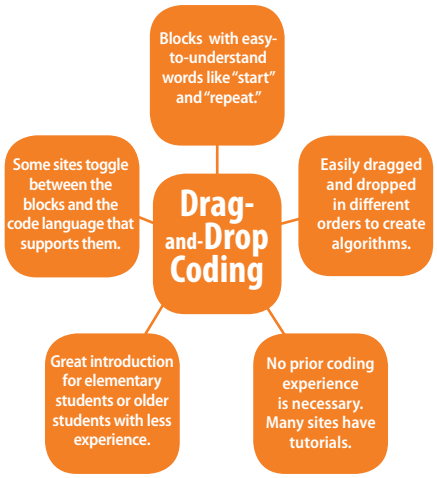
No prior knowledge? No big deal! You don't have to be an expert to start students down the right path. There are numerous resources available now to get beginners started. These resources may look like games with arrows, books with activities, websites with drag-and-drop coding, or tutorials on how to actually write out code. Your role in this is pairing students up with the right resources and letting them take it from there!

3 Levels of Coding

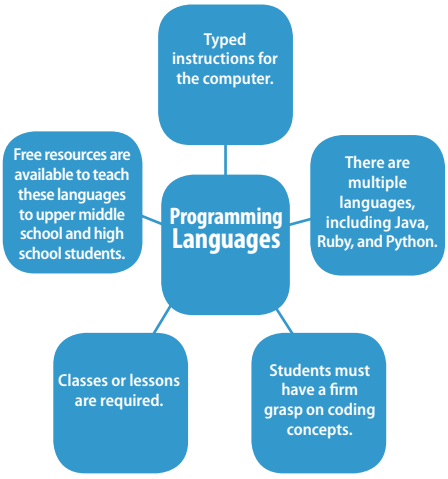
Level 1: Coding with arrows (AKA Directional Coding)



Level 2: Drag-and-Drop Coding (AKA Block Coding)



Level 3: Programming Languages (AKA Writing Code)



How are arrows and blocks related to actual coding? For younger students, using arrows and block coding to program objects helps them learn skills that will teach them to think like a programmer. They are learning how to decompose problems, come up with clear, step-by-step solutions, and fix any errors. This is a great way for them to train their brains!

Tips and Advice:

- It's okay to not know how to code! Most kids are starting where you are with no or very little knowledge. You could also have experienced kids tutor inexperienced kids—and you!
- You can find time to do coding during clubs before or after school or during lunch. Kids love a good lunch club!
- If your first try is a dud, try again! You'll only get better.
- Scope out your resources ahead of time and have a goal. Your goal will determine your route.
- Look for the kids that may not be frequent library goers or may have trouble in class. Working with their hands and figuring out problems might be just what they need.

Coding Resources

(Free and paid)

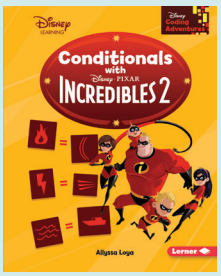
Elementary	Middle School	High School
• CodeCombat	• Scratch	• Code.org
• CodeMonkey	• Tynker	• Scratch
• Scratch	• Codemoji	• Kahn Academy
• Tynker	• Stencyl	• GoogleCS
• CodeMoji	• TechRocket	• thimble.mozilla
• Stencyl	• Code.org	• developer.mozilla
• TechRocket	• Kahn Academy	• Kodu
• Code.org	• GoogleCS	• AppInventor.org
• **Kids Get Coding** book series	• Kodu	• goggles.mozilla
• **Disney Coding Adventures** book series		

Allyssa Loya is an elementary school librarian in North Texas. Her passion for bringing meaningful learning to students led her to cultivate a technology-forward library that includes a makerspace and coding club. She loves sharing her knowledge with her peers and presents on topics that impact future-ready libraries. Allyssa is the author of the Disney Coding Adventures series.

HC: 978-1-5415-2428-6
PB: 978-1-5415-2675-4

HC: 978-1-5415-2431-6
PB: 978-1-5415-2677-8

HC: 978-1-5415-2430-9
PB: 978-1-5415-2678-5



HC: 978-1-5415-2429-3
LB: 978-1-5415-2676-1