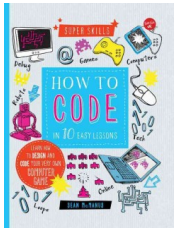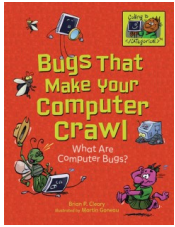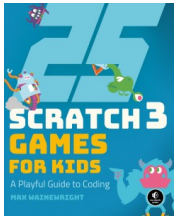# Algorithms & Programming

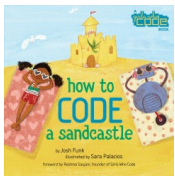## Grades K-4 VA SOL Computer Science Resources

How to Code in 10 Easy Lessons
by Sean McManus
Provides an introduction to computer programming using Scratch software and creating web pages using HTML in ten lessons that each introduce a different coding skill.
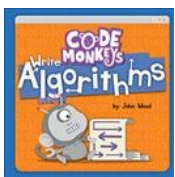
Bugs That Make Your Computer Crawl: What are Computer Bugs?
by Brian P. Cleary
Don't swat that bug--fix it! The CATegorical cats offer a fun and accessible introduction to computer bugs.
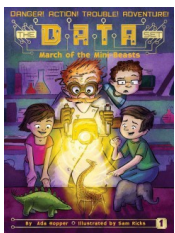
25 Scratch 3 games for Kids: A Playful Guide to Coding
by Max Wainewright
An introduction to the basics of programming with instructions to create 25 different games that teach core coding fundamentals such as loops, variables, and functions, as well as open-ended exercises.

How to Code a Sandcastle
by Josh Funk
Pearl and her trusty rust-proof robot, Pascal, need to build a sandcastle before summer vacation is over, and they're going to do it using code.

Code Monkeys Write Algorithms
by John Wood
Find out how code monkeys build sets of instructions called algorithms using flow charts.

March of the Mini Beasts
by Ada Hopper
Three whiz-kid from a scientifically inclined family, known as the DATA Set, are thrown into a madcap adventure when they befriend a mad scientist whose latest invention causes toys to turn into monsters.
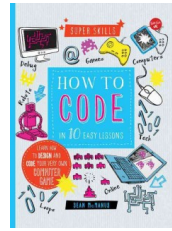
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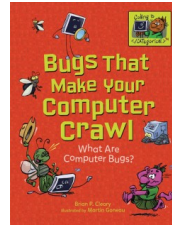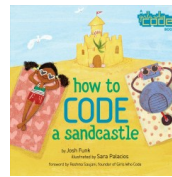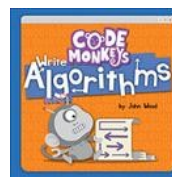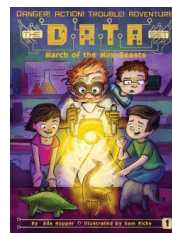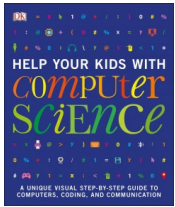
Algorithms & Programming

Grades 5-8 VA SOL Computer Science Resources

Get Coding! Learn HTML, CSS, and JavaScript and Build a Website, App and Game
by Young Rewired State
An introduction to computer programming explains how to build websites, applications, and games using HTML, CSS, and JavaScript.

Help Your Kids with Computer Science
by Inc. Dorling Kindersley
This visual guide to modern digital life uses diagrams and colorful graphics to show children everything they need to know about how computers and the internet work, as well as help them understand how to stay safe online.
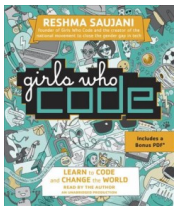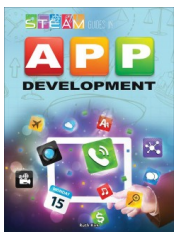
Creating a Web Site: Design and Build Your First Site!
by Greg Rickaby
You'll learn all the HTML and CSS you need to make your site look and act the way you want it to, and you'll learn how to add video, images, widgets, and more to make the design your very own!

Girls Who Code: Learn to Code and Change the World
by Reshma Saujani
An illustrated introduction to the relevance of coding that shares down-to-earth explanations about coding principles and real-life stories of coding pioneers.

Steam Guides in App Development
by Ruth M. Kirk
We use apps in our smart phones and tablets for many purposes. But did you know that people with varied talents work hard to develop them? Learn about this exciting world and the role you might be able to play in it.

Code a Minecraft Mod in Javascript Step by Step
by Joshua Romphf
Starting off with brainteasers and working up to real coding, these fun and exciting activities will teach everything needed to know how to write a brand new mod.
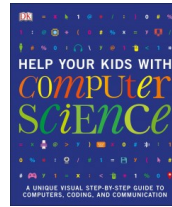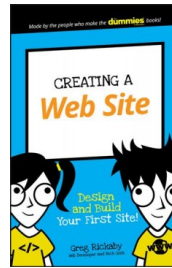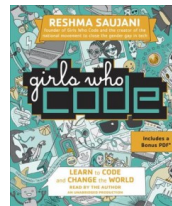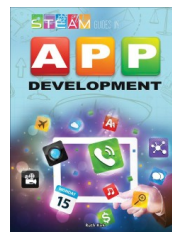

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