

# Some K-5 computing education resources (draft)

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## Background

This post includes some K-5 *computing education* (or *computer science education* or *computational thinking*- or *coding*-focused) resources. I'll use the term computing education in this post to refer to these terms, recognizing that there are distinctions between them that matter a great deal for many purposes. This list is just a starting point and it is not exhaustive; there are likely better compendia; and, this is a new(ish) area for me. While these were motivated by a review of resources related to K-5 computing education, many of them are designed/intended to be used by teachers and students across grades K-12. **This is really a draft** and I welcome additions, clarifications, and any other improvements that anyone suggests to this; reach out to me on Twitter ([@jrosenberg6432](https://twitter.com/jrosenberg6432)) or by email (jmrosenberg AT utk dot edu).

## Curricula

- Exploring CS: <http://www.exploringcs.org/>
- Creative Computing: <http://scratched.gse.harvard.edu/guide/curriculum.html>
- Code.org's CS Fundamentals: <https://code.org/educate/curriculum/elementary-school>
- TechTales workshops: <https://techtaleonline.com/>
- Computer Science in San Francisco: <https://sites.google.com/sfusd.edu/k-2cs/>

## Single Activities:

- Scratch <https://scratch.mit.edu/>
- Data Science Games: <https://learn.concord.org/dynamic-data-science>
- CS First (also a curriculum): <https://csfirst.withgoogle.com/c/cs-first/en/curriculum.html>
- CS Unplugged: <https://csunplugged.org/en/resources/>
- Action Fractions: <https://www.canonlab.org/actionfractionslessons>
- Frog Pond: <https://tidal.northwestern.edu/frogpond/> (agent-based)
- Code.org's Hour of Code: <https://code.org/hourofcode/overview>

## Introductory readings

- CT Leadership toolkit (Section B, p. 7-9): <https://id.iste.org/docs/ct-documents/ct-leadership-toolkit.pdf?sfvrsn=4>
- K-12 Educational Technology Handbook (chapter on computational thinking): [https://edtechbooks.org/k12handbook/computational\\_thinking](https://edtechbooks.org/k12handbook/computational_thinking)
- K-12 Educational Technology Handbook (chapter on coding): [https://edtechbooks.org/k12handbook/coding\\_in\\_k-12](https://edtechbooks.org/k12handbook/coding_in_k-12)
- ISTE CT teacher resources: [https://id.iste.org/docs/ct-documents/ct-teacher-resources\\_2ed-pdf.pdf?sfvrsn=2%5C](https://id.iste.org/docs/ct-documents/ct-teacher-resources_2ed-pdf.pdf?sfvrsn=2%5C)

## Other

- Reflective prompts for teachers: [https://scratched.gse.harvard.edu/ct/files/Teacher\\_Reflection\\_Tool.pdf](https://scratched.gse.harvard.edu/ct/files/Teacher_Reflection_Tool.pdf)
- CT4Edu toolkit (for teachers): <http://ct4edu.org/wp-content/uploads/2019/04/CT-Toolkit.pdf>