

(<http://csmatters.org/pd-new>) P - 03

0bP - 0b11

How to Teach Programming

Unit Pedagogy

Revision Date: Sep 08, 2019

Duration: 90 50-minute sessions



Lesson Summary

Summary: Teachers will review a journal article, discuss teaching programming issues, and explore two tools (Runestone and coding bat).

Objectives:

Teachers will:

- review and share a journal article.
- discuss teaching programming issues.
- explore how Runestone and coding bat could be used in their class.
- look at a logical sequence of building skills.

Outcome:

(Time: 90 minutes)

1. Review (50 min)
2. Runestone (10 min)
3. Coding Bat (30 min)

Learning Objectives

Teacher Resources

How to Teach Programming Folder (<https://drive.google.com/open?id=0B5vAY-fhOT-idnZBdERhV1pVazQ>)

Lesson Plan

(Time: 90 minutes)

Review (50 min)

- Teachers will be regrouped into groups to review a journal article which is found in the folder.
 - Robins, A., Rountree, J., & Rountree, N. (2003). Learning and teaching programming: A review and discussion. *Computer Science Education*, 13(2), 137-172.
- Discuss how skills have been sequenced in a developmentally appropriate way through the lessons so that students master prerequisite skills before being asked to complete more complex tasks.
- Then, review slides 3-5 for emphasis.
- Next, have teachers table share (slide 6).

Runestone (10 min)

Review slides 7-9 regarding Runestone and have teachers briefly discuss this tool.

Coding Bat (30 min)

Review slides 10-11 and have teachers try coding bat.



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