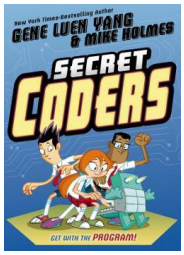
Secret Coders

By Gene Luen Yang, Illustrated by Mike Holmes



Grade Levels: 3-6

Synopsis:
Nothing on Hopper's first day at Stately Academy is working out. She's already made some big mistakes, and what's with those creepy three-eyed birds? Luckily, she finds a friend in fellow basketball-enthusiast Eni, but an eerie janitor stonewalls every mystery they encounter. Through the power of computational thinking, Hopper and Eni unlock the doors one by one.

Authored by former math educator and Comics In Education leader Gene Luen Yang, *Secret Coders* is a fast-paced story to enliven the mind and leave the reader ready for more! Mike Holmes' cool, blocky style and clean narratives presented in monochrome bright green make the analog approach to learning coding amazing!

Author Website:
- http://geneyang.com
- http://www.secret-coders.com

Curricular Connections:
- Coding – Computer Science & computational thinking

Lesson Ideas:
- Activity #1: "Binary Numbers" Game - From the Secret Coders website
  Materials: Printed activity sheets (PDF from *Secret Coders* website, 7+ counters per student (pennies, buttons, etc.) Students will play the same game as Hopper and Eni! Directions are printed directly on the activity sheet. Set up 4-6 stations with sheets, counters, and sample number of your choice – choose a number **under 15**, write it in dark marker on a post-it and place it on the table. Read directions for students, and allow them to rotate to try new numbers and work with different students.
- Activity #2: "Fun With Coding" Game - From the Secret Coders website
  Materials: Printed activity sheets (PDF from *Secret Coders* website), pencils
  Students will play the same game as Hopper and Eni! Directions are printed directly on the activity sheet. Read directions for students, and try "acting out" a program for them (ex: How many steps/turns til I reach the circulation desk?) to help visualize/actualize.
- Activity #3: Programming Jam
  Materials: computer or tablet with Internet access

Explore the amazing resources on code.org home of the Hour of Code! Why wait for Computer Science Education Week when you can code with Star Wars, Minecraft, Angry Birds, or Frozen right now? These editions all offer a different, unique experience. Have students log in through Clever to save their progress securely. Make sure to have students view their code as they progress and remind them they are programming – this could be the start of a coding club at your school! There are Beginner's resources suitable for students as young as Pre-K. For your advanced little coders, try the courses at codeacademy.com

Common Core Standards:

- CCSS.MATH.CONTENT.5.NBT.A.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.
- CCSS.MATH.CONTENT.6.EE.A.1 Write and evaluate numerical expressions involving whole---number exponents.
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Additional Materials:

- "Binary Numbers" Game Activity
- "Fun With Coding" Game Activity

Suggested Companion Titles:

- *American Born Chinese* by Gene Luen Yang