CS4ALL @ PS133Q

The curious newsletter for tinkering minds!

Kindergarten

Unit 4: Introduction to Sequence & Algorithms

K computer scientists completed their foundational unit of computational thinking! This month we begin applying those CT skills as we delve into sequencing and algorithms.

Students will begin this unit by sequencing day to day algorithms using pseudocode. They will be introduced to bugs and debugging alongside code tracing.

Did You Know?

For the first time the 2021 PISA Mathematics will assess for COMPUTATIONAL THINKING.

Find out more about the application of computer science in PISA's mathematics here.

First Grade

Unit 3b: Introduction to Algorithms & Programming:
Application of Programming Concepts in Scratch Jr.

In Unit 3a, we identified several programming concepts: sequencing, algorithms, events, bugs, debugging, and a soft introduction to loops.

We began Unit 3b by exploring the development environment and user interface of Scratch Junior. Students will apply their Unit 3b conceptual understandings in addition to explicitly learning parallelism and for loops as part of their creative computing through block based coding. They will begin learning implicit understandings of conditionals.

Second Grade

Unit 3b: Introduction to Algorithms & Programming:
Application of Programming Concepts in Scratch

In Unit 3a, we identified several control flow structures: sequencing, algorithms, events, bugs, debugging, terminating conditions in for/while/infinite loops and if/then, if/then else conditionals.

As Scratch is considered to be a Grade 3-5 endeavor, we began Unit 3b by gaining procedural fluency over the development environment and user interface of Scratch. Students have learned parallelism and will apply their Unit 3a conceptual understandings as part of their creative computing through block based coding.

Grades 3–5

Unit 3: Impacts of Computing (A Critical Lens on Equity)

Computer scientists in grades 3-5 have begun their project based learning unit on accessibility. This focus on the impacts of computing asks students to apply a systems thinking lens to critically reimagine a more equitable and inclusive society through the use of computer science practices/concepts.

After critical discussion, students created a driving question to focus their unit. Working in teams we have ideated and refined potential solutions to accessibility issues we observe in the world around us. Project teams must consider sustainability and scalability for real world production and equitable access.

Our showcase will run as a Shark Tank style presentation, featuring "investors" who will (with a limited set of funds) choose to carefully invest in projects that are the most promising in solving today's problems.

If you are interested in participating as a guest investor, please email me.