Session Title
Swim Away! - Making an Underwater Chase Game in Scratch

Presenters
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Elevator Pitch
Variables, conditional statements, and loops have a lot of applications within computer science as well as in other curricular content areas. In this session, students will learn and use these pieces of programming and more to create a chase game in Scratch using a block-based programming language. Students will be encouraged to express creativity in their game design.

Overview
In this session, students will create a video game in Scratch using block-based programming. We will begin by playing through a fully completed game and utilizing computational thinking to understand the various aspects of its design. Students will then begin designing their own games. In doing so, students will be able to design the characters (sprites) and backgrounds in their game or choose from a set of pre-designed sprites and backgrounds. Students will be guided through how to block code various aspects of the gameplay design they experienced at the beginning of the session and have a chance to replicate those design choices or modify them to suit their own game vision. At the end of the session, students will be able to publish and share their game with others or choose to continue developing the game on their own.

Teacher Expectation

A teacher could use this platform for a variety of curricular contexts and applications. Science teachers exploring relationships between organisms in ecosystems could use the game design to identify specific types or relationships (predator/prey, commensalistic, parasitic, mutualistic, etc) and encourage students to represent these relationships in the gameplay. Additionally, connections can be made between the CS practices inherent in the use of computational thinking, conditional statements, variables, and loops to standards and practices in other content areas. Teachers should ensure that their district doesn’t restrict access to scratch.mit.edu on student devices prior to the day of the in-person conference.