

Case Study: Summer Camps & Clubs at Queens Library



Introduction

In 2019, the Queens Library system in New York implemented Vidcode's Coding Club Kits across 7 libraries. Initially, the program served as a summer camp in a larger STEM program, and then grew into an after-school club in Fall 2019.

Summer camps

Queens Library started their Vidcode program the summer of 2019 with a 3-week summer program aimed to teach computational thinking and computer programming as part of a larger Summer STEM program. The program aimed to engage students between the ages of 9 and 13 in coding digital projects on the Vidcode platform, culminating in student portfolios and final shows for each library. In the Vidcode Summer Camps, students learned JavaScript through making 20-30 creative and visual projects. The program and curriculum were designed to help participants increase their coding skills, develop stronger STEM identities, and ultimately broaden students' awareness of and access to STEM careers. Summer camps kicked off with an initial one-day Vidcode training for the staff running programs. ultimately broaden students' awareness of and access to STEM careers. Summer camps kicked off with an initial one-day Vidcode training for the staff running programs. Pre-and post assessments and in-person visits measured outcomes in



Overall, students' understanding of CS concepts improved by 28% on average.

Students' identity around programming and technology, and confidence in their abilities as programmers increased by 27% on average.



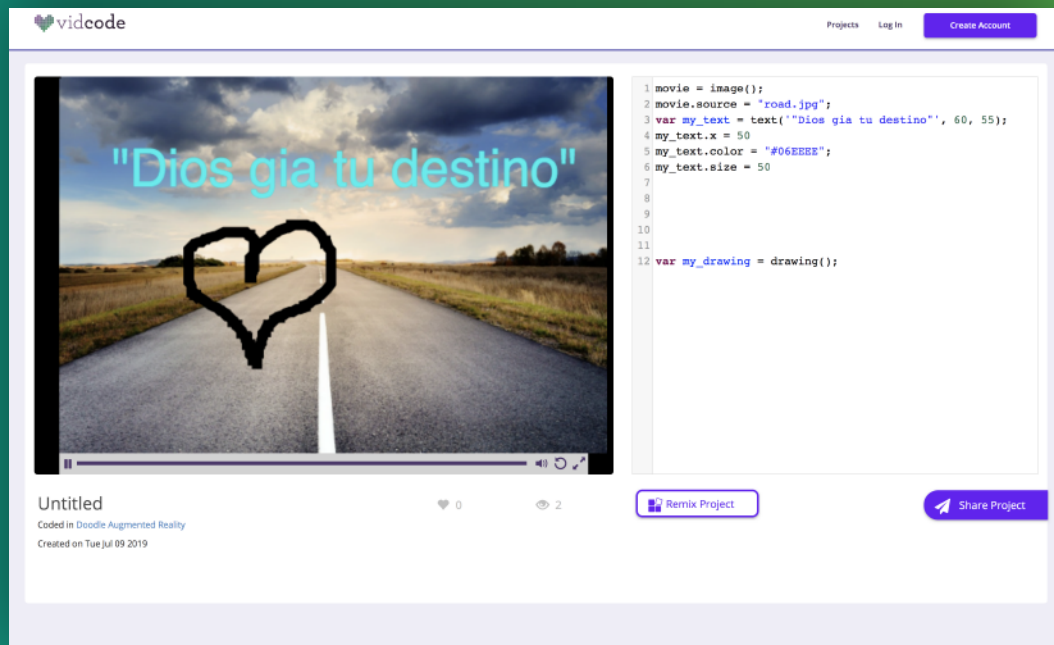
students' coding skills, computational thinking, and STEM and coding identities. In-person visits and conversations with participants and facilitators showed that students were able to focus on the tutorials and projects that were most interesting for them. Students worked independently, with facilitators introducing concepts and helping with debugging, and brought their own media into their projects. Students across sites were able to explain their projects and code using advanced JavaScript vocabulary. One student said that she was excited that she was able to learn about coding in a way that she could see applying to and helping the robotics team she was a part of at her school.

Students progressed through Units 1-3 of Vidcode's tutorials, using variables, arrays, loops, randomness, and functions to create digital projects.

Clubs

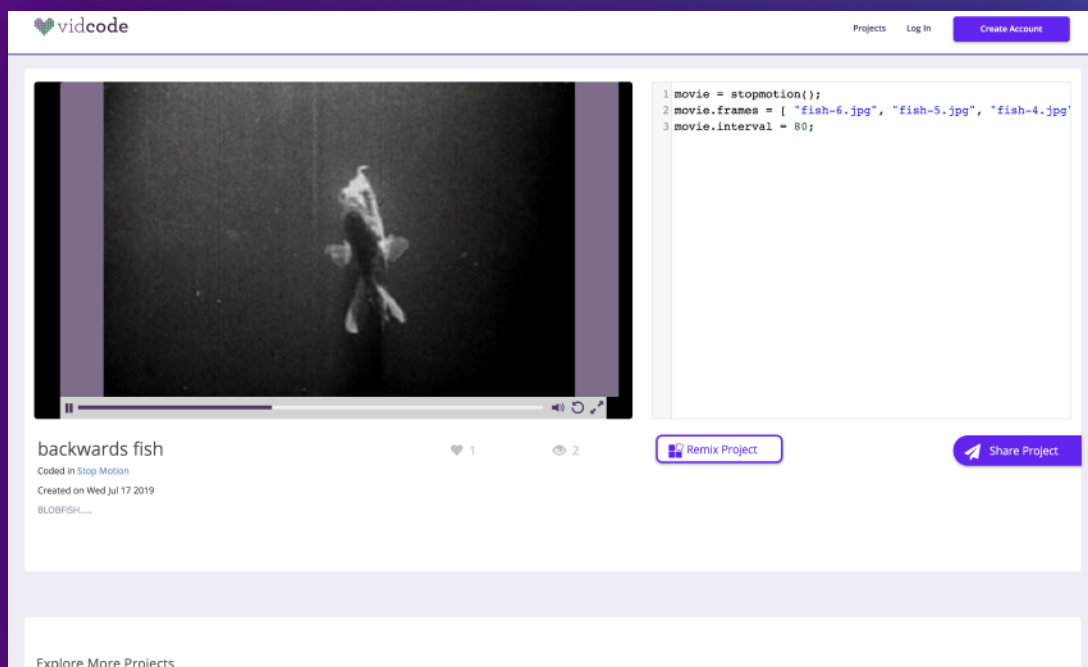
Once school started in September, the seven library sites started after-school clubs, run by site librarians. Students who attend code clubs can complete any tutorials from the current level of Vidcode they've reached - they're able to create their own pathway and only do the projects that are interesting to them. The drop-in nature of the club, and the ability for individual libraries to market to their communities, help expand the scope and impact of the Coding Clubs.

Pre-and post assessments and in-person visits measured outcomes in students' coding skills, computational thinking, and STEM and coding identities. In-person visits and conversations with participants and facilitators showed that students were able to focus on the tutorials and projects that were most interesting for them. Students worked independently, with facilitators introducing concepts and helping with debugging, and brought their own media into their projects. Students across sites were able to explain their projects and code using advanced JavaScript vocabulary. One student said that she was excited that she was able to learn about coding in a way that she could see applying to and helping the robotics team she was a part of at her school.



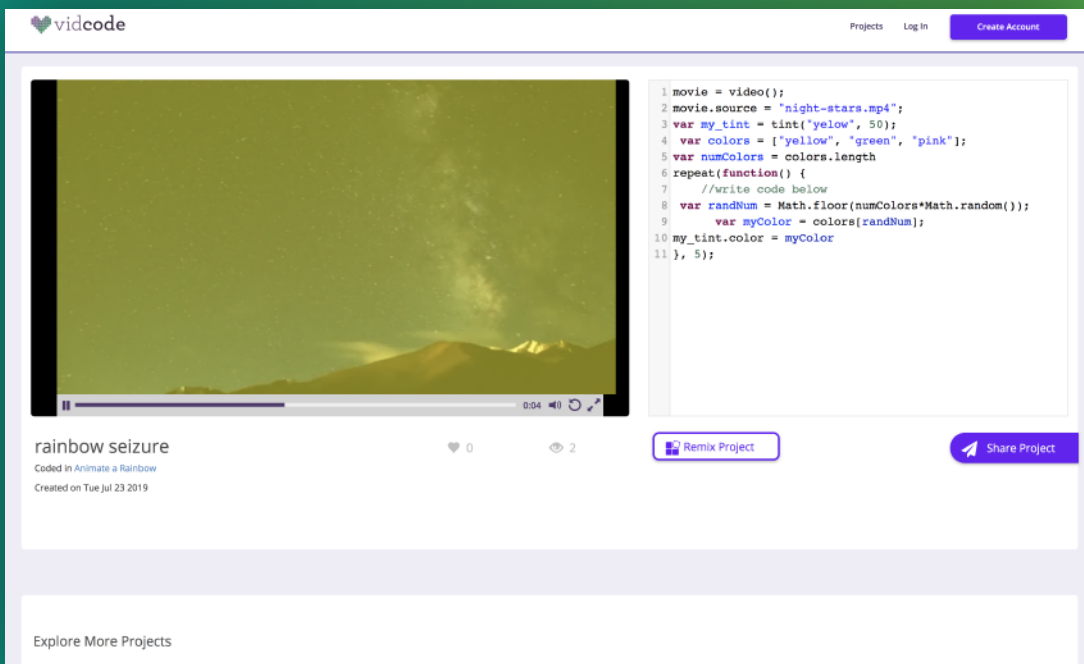
Unit O1 Project: Using variables and properties, Ridgewood Library

Project link: <https://www.vidcode.com/share/3qJOPxgkbb>



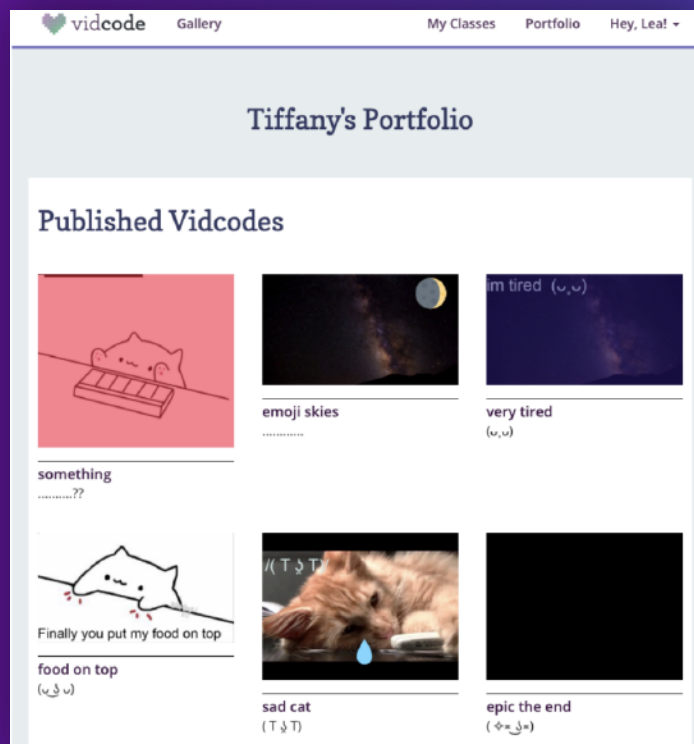
Unit 2 Project: Using arrays, Bayside Library

Project link: <https://www.vidcode.com/share/97IPfqRObM>



Unit 3 Project: Using loops to animate through a rainbow filter, Ridgewood

Project link: <https://www.vidcode.com/share/OTLF5QJEvo>



Sample Student Portfolio