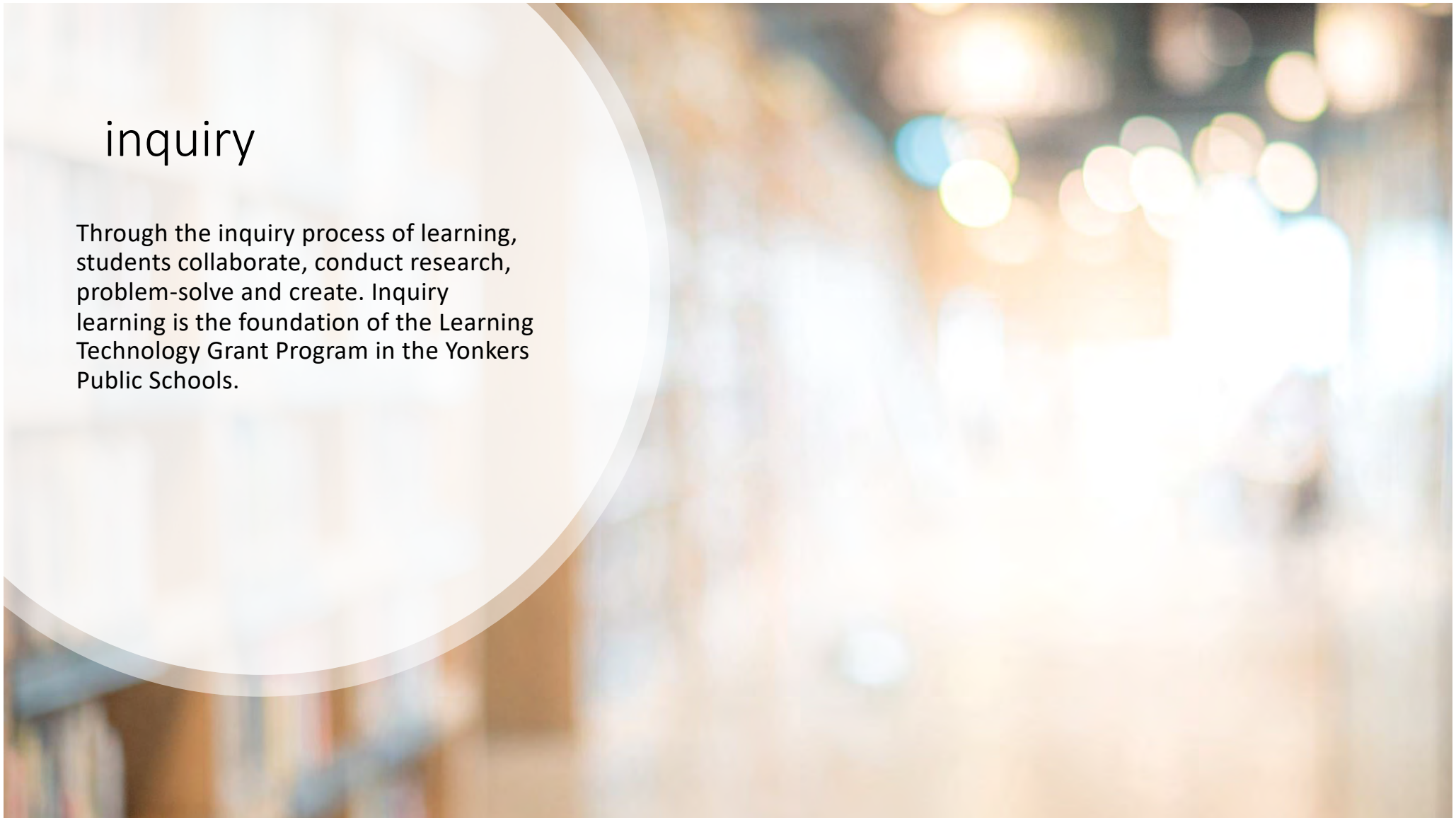
Exploring New Ways of Learning through the Learning Technology Grant program

Year 2 of the LTG allowed for STEM to be integrated into classroom instruction and as enrichment programs after school. During the year, the YPS shifted to full remote learning due to COVID-19. The LTG allowed for the exploration of effective teaching and learning practices in this new environment.

inquiry

Through the inquiry process of learning, students collaborate, conduct research, problem-solve and create. Inquiry learning is the foundation of the Learning Technology Grant Program in the Yonkers Public Schools.

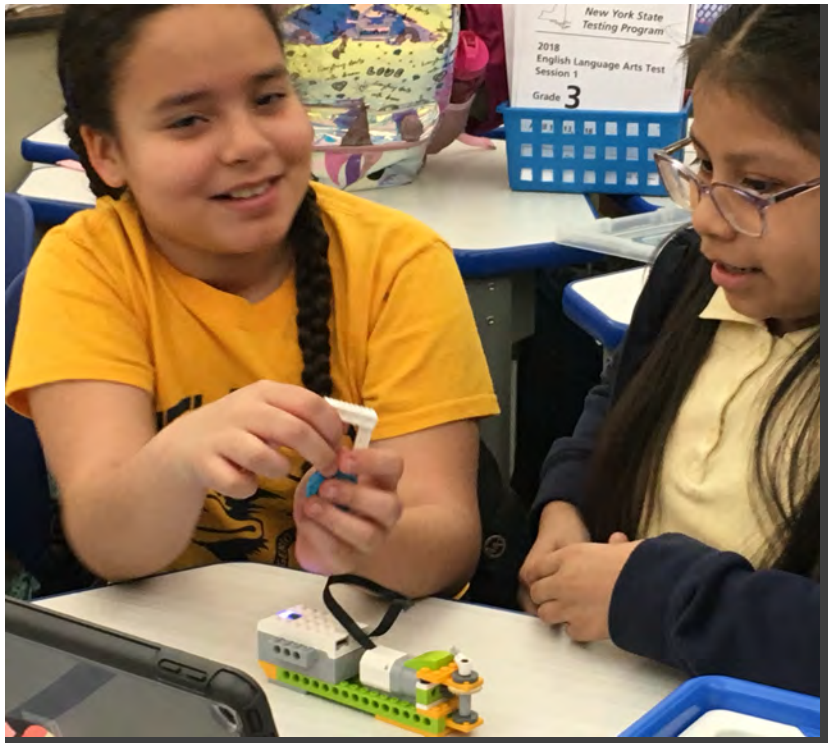


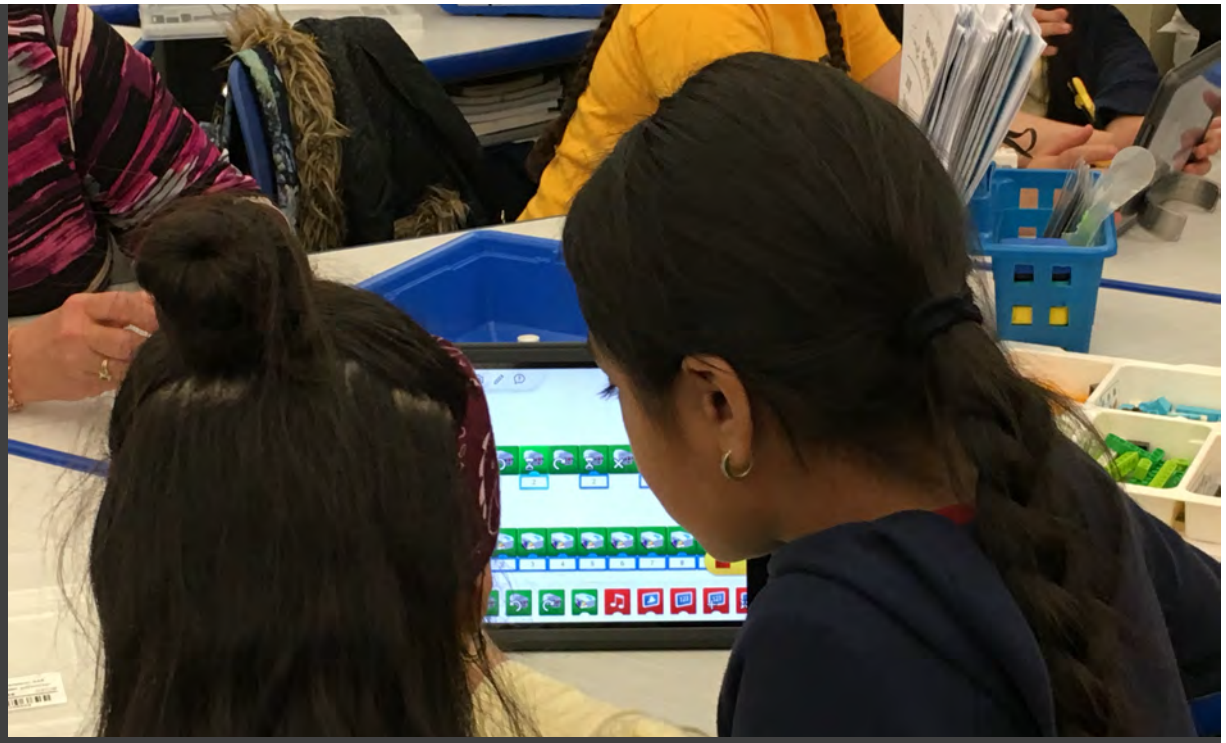
Phases of inquiry-based learning/project-based learning

- The inquiry process begins with a Driving Question or Compelling Problem that is rooted in "Real World" issues and in which there is no one "right" answer or solution.
- Students collaborate, research, question, conduct investigations/experiments to find a "solution"
- They gather, interpret and use evidence/sources
- Construct and test potential solutions/hypotheses
- Create a project to present to the community
- Receive feedback from community (both large and small)
- Student reflection on the process and product
- Inquiry is characterized by students being the *drivers* of their learning and teacher guiding, providing content and skill development. Technology facilitates the process.

"Inquiry acts as a magnet for content," John Dewey

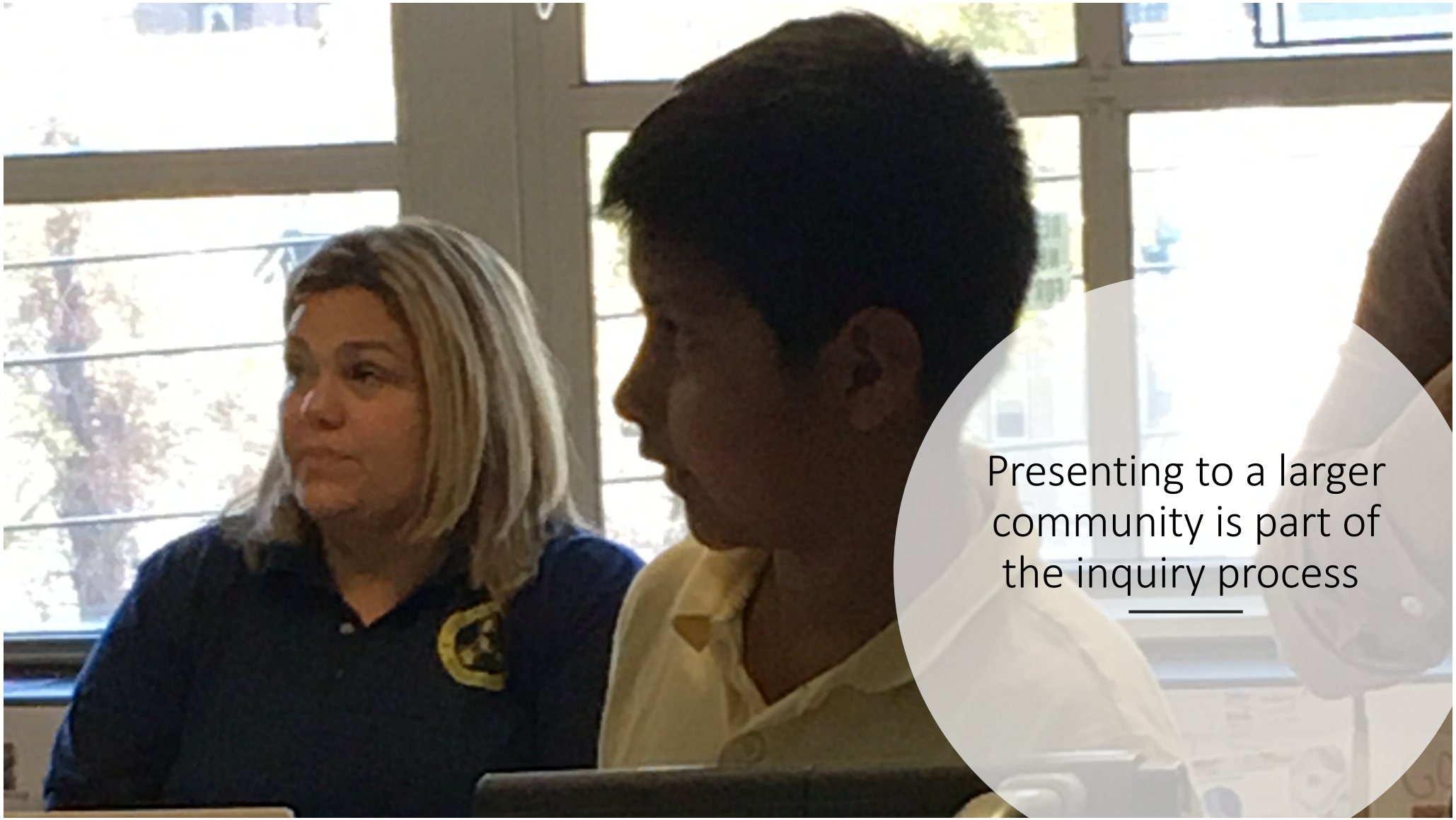

Number
Measure of Angle
Segment
Ray

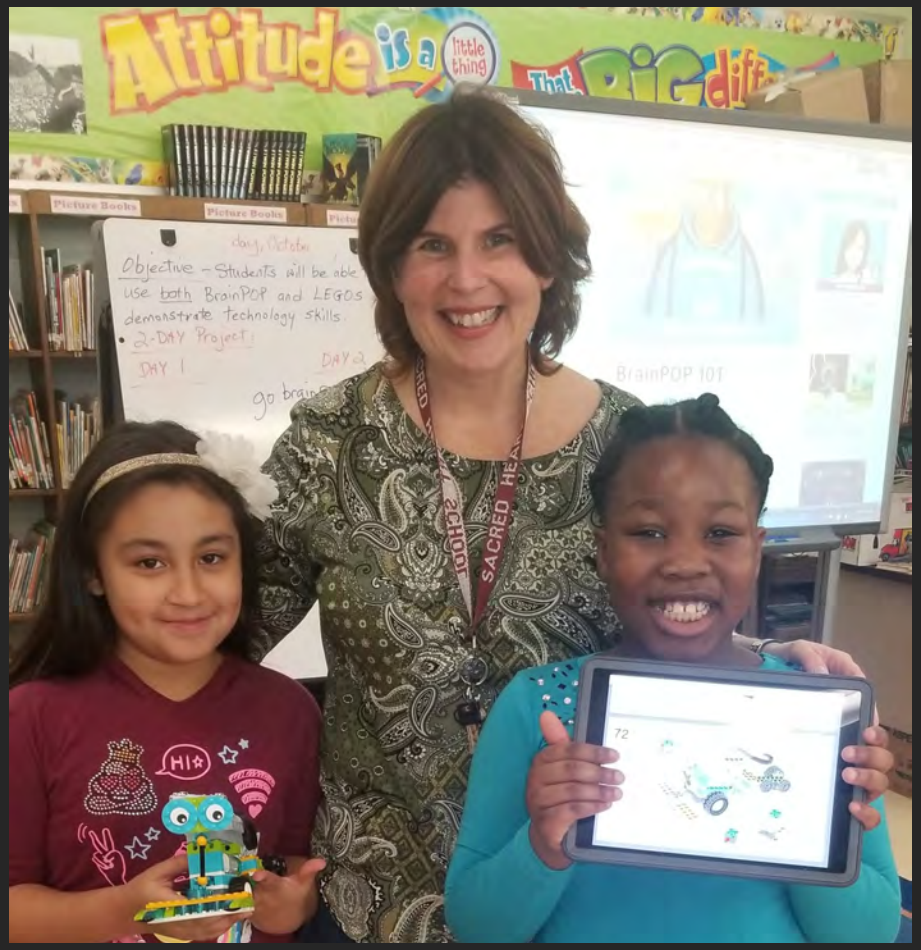




STEM comes to life in an environment that combines technology, varied instructional resources, and student collaboration.

Students work together and with mentors

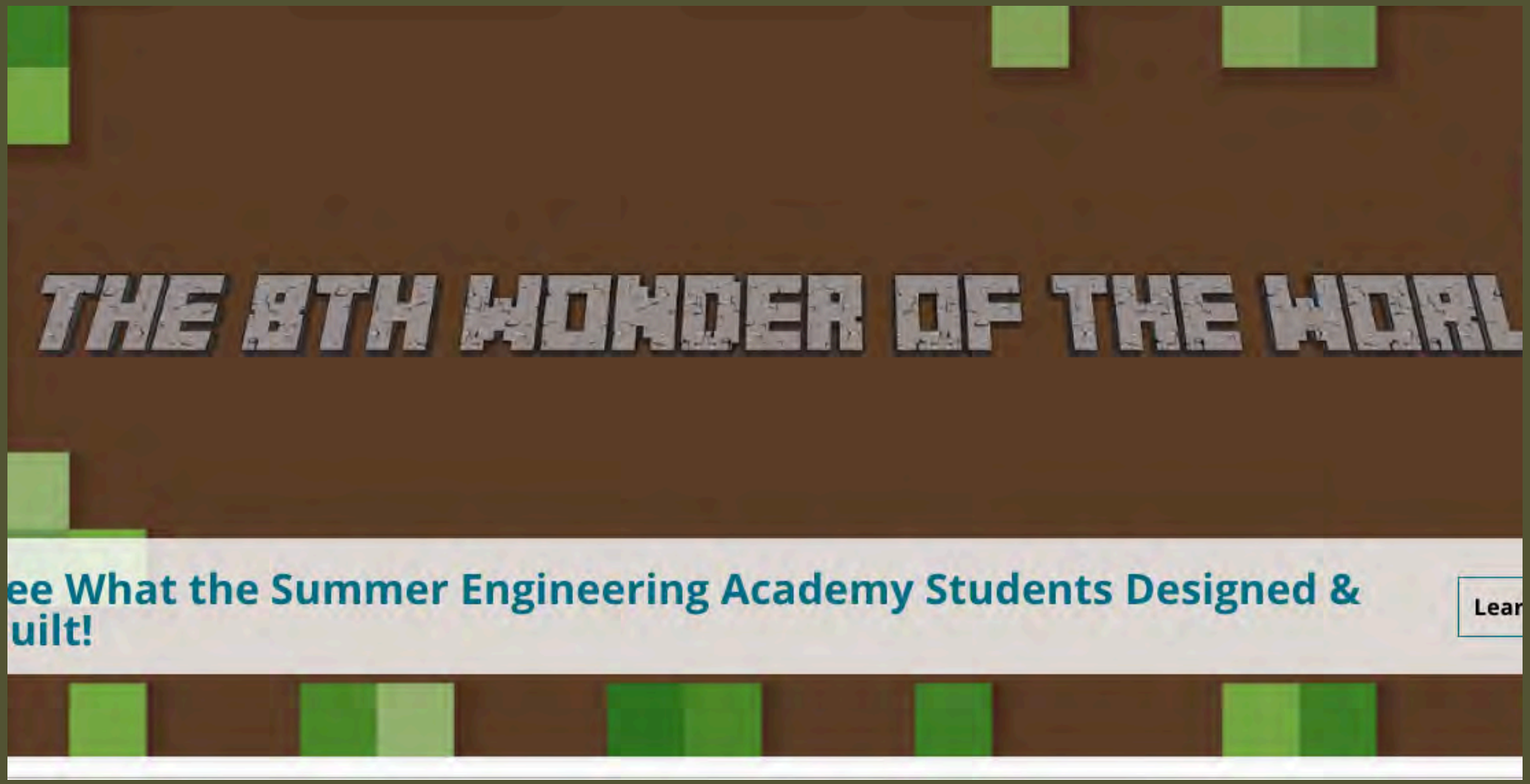

Presenting to a larger community is part of the inquiry process


Attitude is a little thing
That BIG diff
Picture Books
Objective – Students will be able
use both BrainPOP and LEGOS
demonstrate technology skills
2-DAY Project:
DAY 1
BrainPOP 101
SACRED HEART SCHOOL
HI

The summer provided time to try new approaches to remote learning

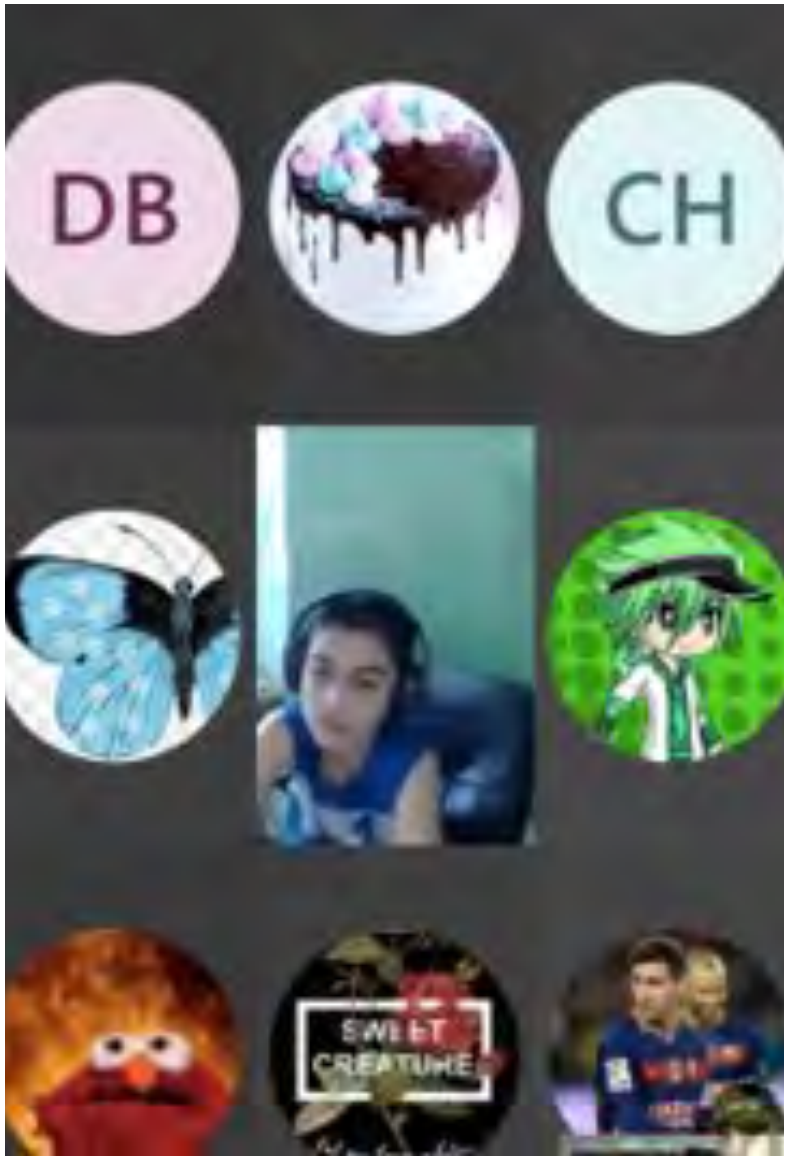
- The 2020 Summer Engineering Academy was developed, in part, to experiment with new learning approaches in a completely remote-learning environment.
- Teachers received professional development on how to use Minecraft Education, Webex, and Microsoft Teams and how to combine them into this innovative program.
- They taught their students how to use these programs and met in virtual classrooms over the course of three and a half weeks.
- Microsoft Teams and Webex technologies allowed the students and teachers to communicate, face-to-face, each day; to provide breakout rooms for students to collaborate; and as spaces to deliver lessons and provide resources.
- Minecraft Education was integral to the program. Students were provided with their own "lands" and taught engineering principles. They worked together to address the driving question.
- Students collaborated in small groups using Minecraft Education to answer the driving question "What do you think should be the 8th Wonder of the World?" through virtual hands-on learning.

The LTG program transitioned from in-school learning to remote learning using different digital programs however staying within the goals of the program – promoting inquiry-based learning and increasing STEM education.


THE 8TH WONDER OF THE WORL
ee What the Summer Engineering Academy Students Designed &
uilt!
Lear

The Taj Mahal by Avery, Matthew, Patrick, Joshua T. and Lukas

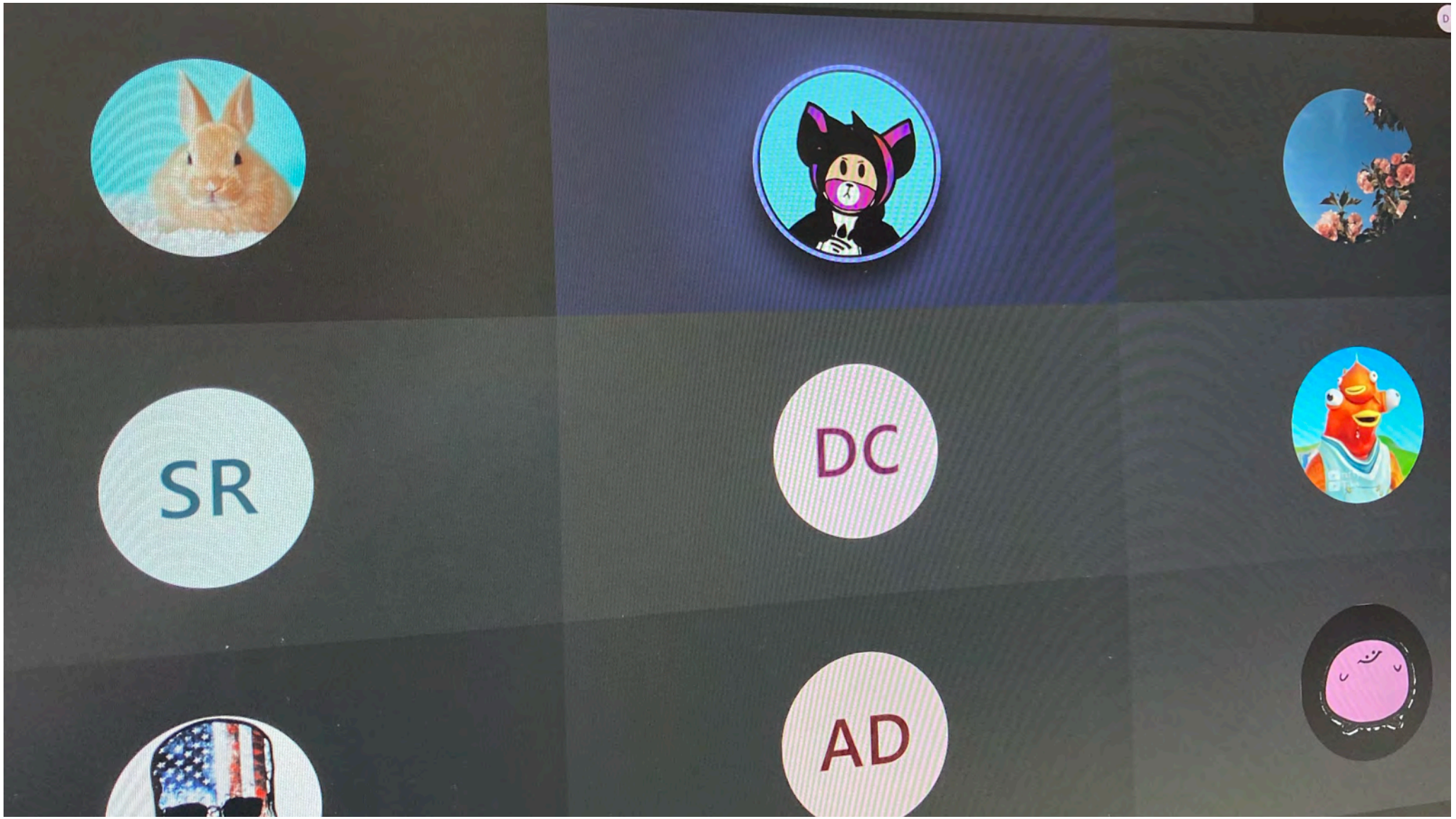
Izabella's World

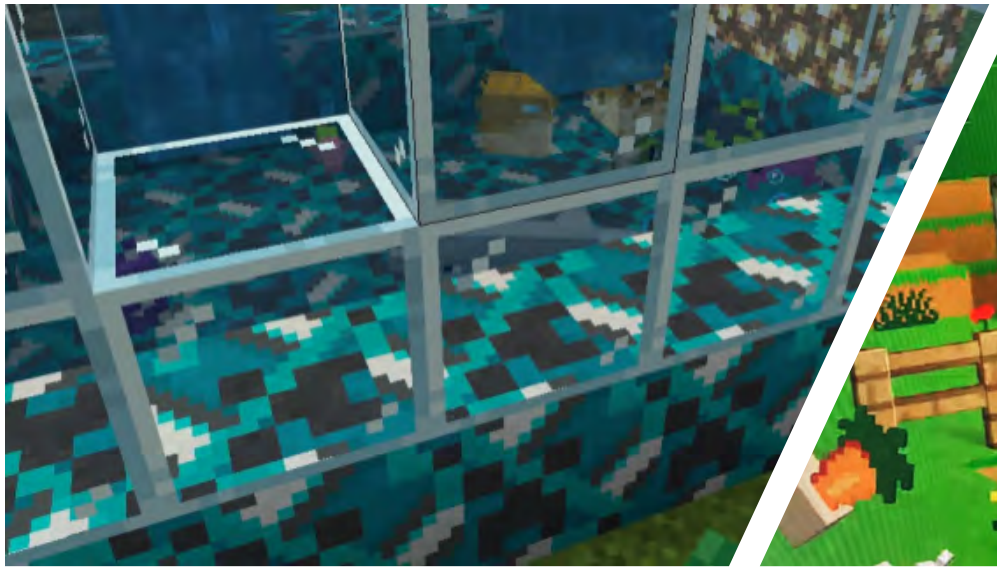


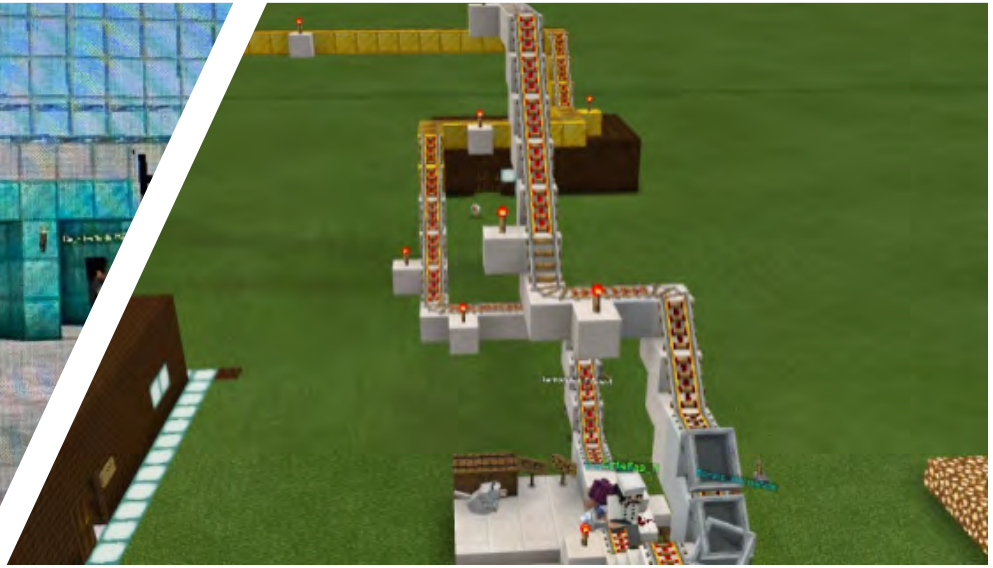
Students mastered different technology programs

Students, who were entering 3rd-5th grades, met each day in July through Microsoft Teams for morning check in and the day's STEM lessons before exploring Minecraft Education.

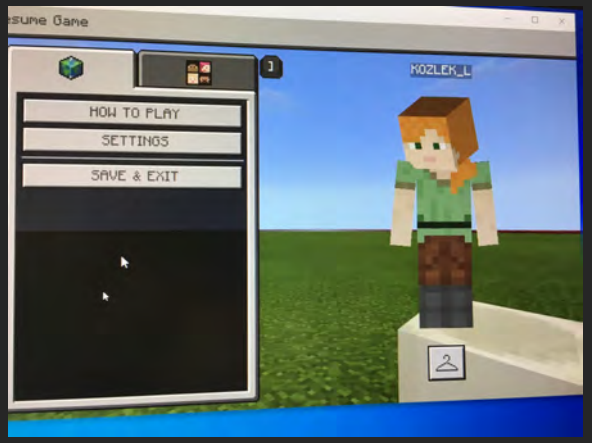
This fully remote program was developed and facilitated within the Yonkers Public Schools to enrich STEM education, to provide a place for students to meet with each other, and to stem learning loss due to the pandemic. Neither the students nor the teachers knew each other before the classes began, however they quickly developed close communities within these 9 learning labs.

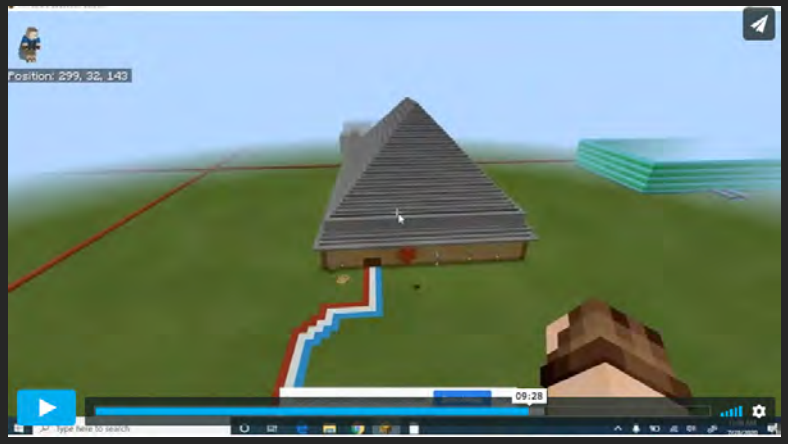

SR
DC
AD



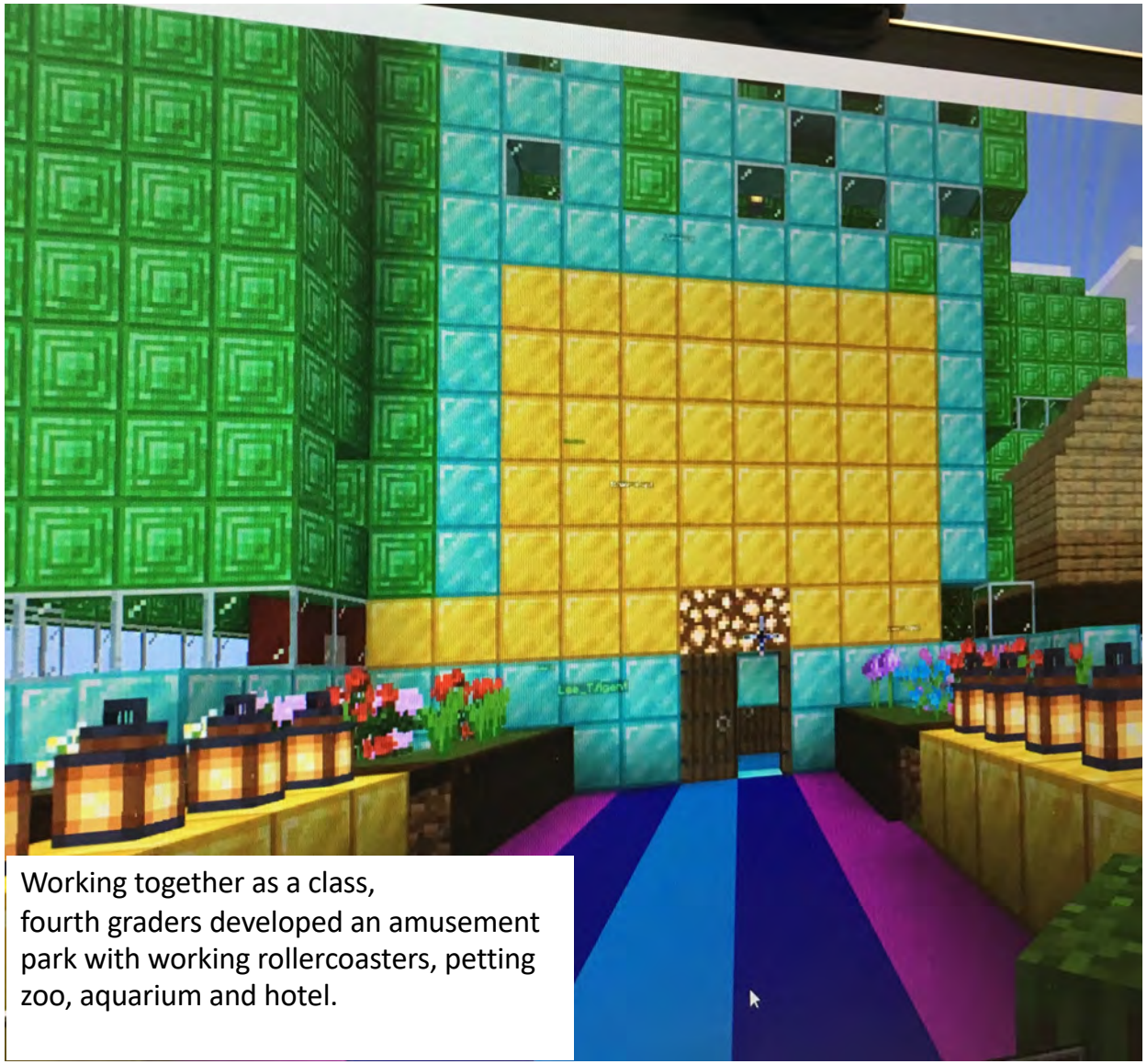



Noah's World

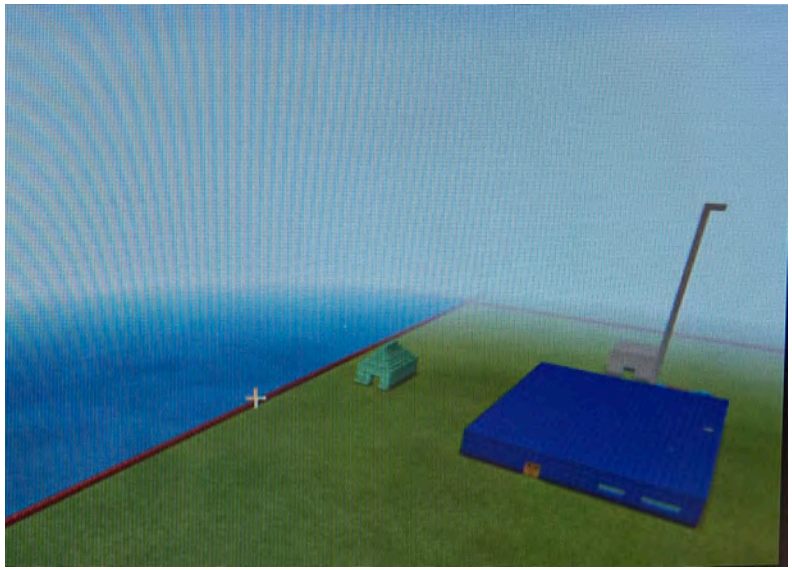

HOW TO PLAY
SETTINGS
SAVE & EXIT


09:28


orward
ack
eft
ight
Fly Up
Ex2 Stop Flying
nventory
01:11



Working together as a class, fourth graders developed an amusement park with working rollercoasters, petting zoo, aquarium and hotel.




Up
Stop Flying
Minecart

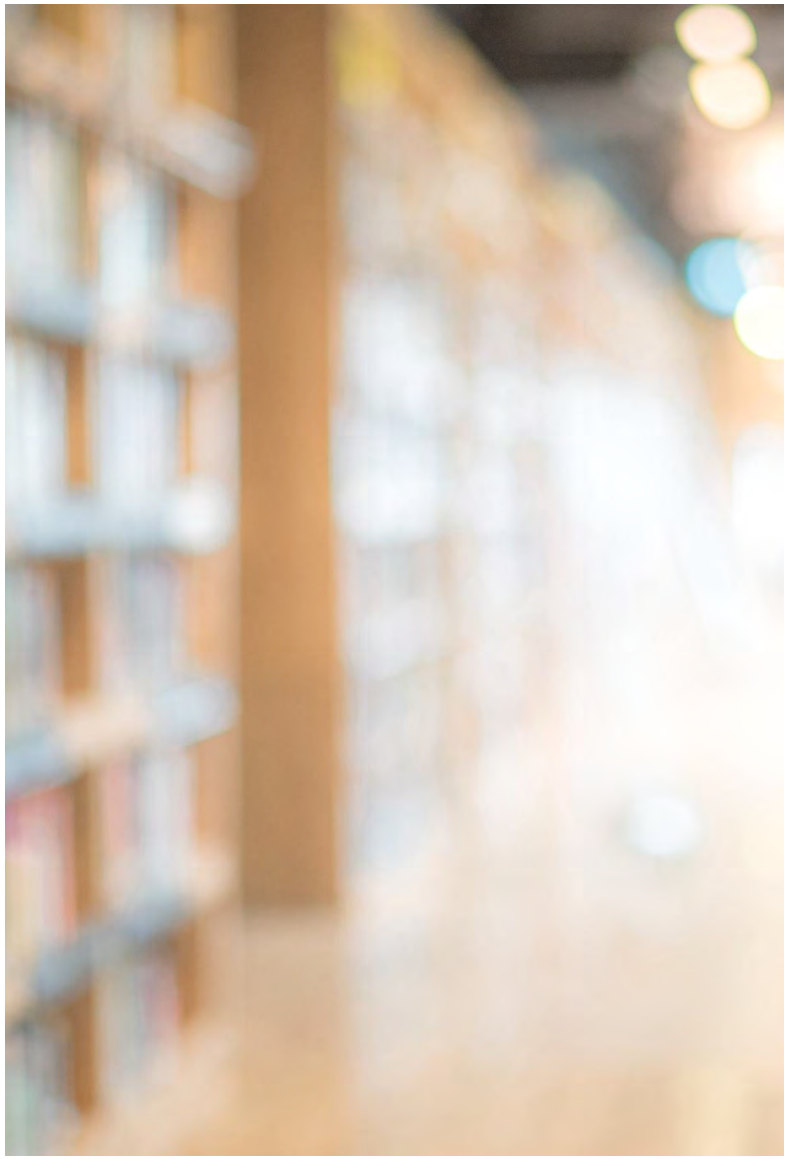

Position: 699, 13, 296
Students developed their projects both individually and collaboratively using Minecraft Education where they could communicate and work with each other and where the teachers could visit each of their lands while they worked. The teachers were able to use Webex to record student work and voices as they explained both the process and product.

Culminating Projects

During the last days of the program, student projects were showcased on the Yonkers Public Schools Distance Learning website. The projects included videos of student work, narrated by students.

The larger City of Yonkers community was invited to attend this virtual event.

The Summer Engineering Academy provided guidance on how to use technology to engage students and drive instruction.



The Yonkers Public Schools Learning Technology Grant Program

Presented by Dawn Bartz, Executive Director of Social Studies, Science, Instructional Technology and Distance Learning for the Yonkers Public Schools. Dbartz@yonkerspublicschools.org