Gwynedd Mercy Academy High School

Gwynedd Mercy Academy High School hosted a virtual camp for middle school girls. The theme was Pecha-Kucha (“chit-chat” in Japanese), inviting the girls to casually engage with each other during their creative exploration of robotics. Most students were familiar with block-based coding, but all were new to the Hummingbird Robotics Kit, and were successful in the virtual format.

ADAPTATIONS

• 10 Students : 1 Teacher + 1 Assistant
• Shipped kits to the teacher’s home and she distributed to students at the school
• Planned flexible end time for virtual sessions; build time was not rushed and students continued conversations

RECOMMENDATIONS FOR DISTANCE LEARNING

1. Use Micro:bit Classroom to introduce students to MakeCode. You can share code with your students, explore the blocks together, and foster confidence with coding prior to building.

2. Send a pre-assessment survey to students not only to gauge experience level, but also to prepare for the various operating systems/devices students will use.

3. Prevent distractions by introducing expectations for virtual behavior early. Lay ground rules such as “raise your hand before speaking,” “ask permission before sharing a screen,” and “mute if there’s background noise.”

CHALLENGES

• Initially students attended the virtual session with their camera off and sound muted, which made it quite difficult to establish a relationship
• Students used various devices for programming which required on-the-fly adjustments
• The kits’ battery packs were giving students trouble, and they designed a clever fix

SUCCESSES

• Students caught on quickly with the transition from MakeCode’s simulator to building 3D robots with the Hummingbird Kit
• Despite differences in age and academic background, students were supportive, patient, and applauded one another’s successes
• One student used tutorials on the BirdBrain website to learn independently and add new features to her robot

TEACHING SEQUENCE

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2. The virtual camp ran for five 1.5 hour sessions across 1 week. On Day 4, the teacher introduced examples of more complex robots to offer inspiration (examples sourced from teachers on social media @birdbraintech)

3. The final session wrapped up with questions and time for each student to share their robot with the class

“There’s a wide range of possibilities available when the Hummingbird Kit and Snap! are combined”