



Computer Programming Initiative

HOWARDedu is ready to partner with your school district to provide teachers and students with the foundational concepts and skills of computer science through our Fusion Professional Learning initiative. Using micro:bits (www.microbit.org) as the foundation for coding instruction, teachers will receive cross-curricular training using various coding languages, such as Google's CS First, Snap, and Scratch.

Each teacher participant will receive:

- 2 micro:bit programmable computers
- 2 GiggleBot (www.gigglebot.io) robots
- 3 Days of on-site professional development tailored to meet the needs of their cohort
- 1 Day of follow-up with HOWARDedu coach
- Resources, tools, and curriculum materials that cover a broad range of topics, such as coding languages, physical computing, building websites, and programming.

The 3 Day On-Site Professional Learning cycle for each cohort kicks off with a HOWARDedu coach teaching students a model lesson using the micro:bit computers and GiggleBot robots. The model lesson is connected to current classroom curriculum.

After the model lesson, teachers spend the remainder of the day working with the HOWARDedu coach to create an engaging, relevant, and collaborative lesson to be delivered by them on day 2 or 3 of the cohort cycle. This is done with the HOWARDedu coach in the classroom supporting their instruction.

Days 2 and 3 of the Professional Learning cycle for each cohort include co-teaching lessons with teachers. Each co-teaching lesson is designed to validate their knowledge base, hone computer science skills, and foster an environment that allows for creativity, collaboration, communication and, most importantly, making connections to a world outside the classroom—strengthening student problem-solving and critical thinking skills.



Sample Professional Learning Schedule

Week 1

Embedded Fusion Professional Development- *Mixed Grade Level and Content Area Cohort A

3 days of on-site professional development. Professional development for teachers on coding across curricular areas, co-teaching and follow-up sessions with teachers including problem-based learning activities.

Day 1 - Cohort Training—Model Lesson and Planning

Day 2 - Co-teaching with Cohort Members

Day 3 - Co-teaching with Cohort Members

Week 2

Embedded Fusion Professional Development- *Mixed Grade Level and Content Area Cohort B

3 days of on-site professional development. Professional development for teachers on coding across curricular areas, co-teaching and follow-up sessions with teachers, including problem-based learning activities.

Day 1 - Cohort Training—Model Lesson and Planning

Day 2 - Co-Teaching with Cohort Members

Day 3 - Co-Teaching with Cohort Members

Week 3

Embedded Fusion Professional Development- Follow-Up Days with Each Cohort

2 days of on-site professional development. A follow-up day with each cohort will be scheduled several weeks after the initial training with each cohort.

Day 1 - Follow-Up with Cohort A Members

Day 2 - Follow-Up with Cohort B Members

**Teachers and students don't need any prior computer science experience to get started. Our coach will guide teachers and students through the process and will support them in the development of skills necessary to be successful in computer science. This initiative will support up to 20 teachers (10 in each cohort).*