

Science + C

FAQs

Science+C augments core high school Biology, Chemistry, and Physics courses with integrated computer modeling and simulation units. These units promote deeper learning of the science concepts and provide all students with the opportunity to build computational skills. The units and professional development (PD) program will be available for free for Massachusetts high school science teachers through a grant from the National Science Foundation.

Here are some common questions about participating in Science+C:

I. Application Process

Should individual teachers sign up?

YES! High school chemistry, biology, and physics teachers are welcome to participate individually or with colleagues. Each educator needs to fill an [Application Form](#). Teachers need to be from **Massachusetts public or charter schools**.

What is the deadline for application?

April 15, 2022 is the deadline. Space is limited so we recommend applying early. Use this [Application Form](#) to express your interest.

II. Teachers and Students

What high school science courses qualify for Science+C?

Courses eligible for the Science+C Program are the core biology, chemistry, and physics classes (e.g., CP/Honors courses taken in preparation for the respective MCAS exams). Teachers who participate in the program must teach at least one of the qualifying courses in the 2022–2023 school year. At this time, the Science+C Program cannot be used as a supplement for other high school science courses (e.g., AP level courses).

Do science teachers need prior Computer Science experience to teach Science+C?

NO. Teachers do *not* need to have any prior computer science experience. The units are designed to be easy-to-use by teachers who are new to computer science, and you will receive free PD from experienced Science+C teachers and facilitators.

Do students need prior Computer Science experience?

NO. Students do *not* need to have any prior CS experience to be successful with Science+C.

Science + C

FAQs

Is Science+C appropriate for students who have prior Computer Science experience (including AP CS)?

YES. The units will also be beneficial for students with prior CS experience. Using, decoding, and modifying models that embody scientific phenomena will be new. Students with prior CS experience will have the opportunity to make more advanced modifications to the models.

Does the curriculum support students with disabilities, English Learners, and other students with diverse learning needs?

YES, we have designed the units to be accessible to students with diverse learning needs. The units have built-in options to provide scaffolding and differentiation.

Is this curriculum appropriate for middle schoolers?

NO, we do not advise that it be used with middle school students. There are other curricula for that age group.

III. Units and Professional Development

What are the expectations for how many units teachers will teach?

Teachers are expected to implement 7 units during the school year. Each unit has 3 lessons (~55 minutes each). **The units embed key computational thinking skills to address** Massachusetts core science topics covered in Biology, Chemistry, and Physics.

How many PDPs will I earn?

Teachers who are randomly selected to teach the units in 2022–2023 will have the opportunity to earn a Certificate of Completion for **68** PD hours. Teachers in the control cohort will receive the units and participate in a summer institute in 2023.

Is Graduate Credit available?

Teachers participating in the PD in 2022–2023 will have the option to enroll for 4 graduate credits through a partnership between Worcester State University and EDC. The cost is \$500 (\$125 per credit). Teachers implementing Science+C in 2023–2024 will be eligible to apply for 2 credits (\$250).

Science + C

FAQs

What is the schedule for the PD activities in 2022–2023?

For teachers in the 2022–23 intervention cohort, the summer PD institute will take place July 25–29, 2022, in Burlington, MA. In addition, during the school year there will be monthly virtual PD on the units (4 hours/month). Dates and times will be determined for these collaborative, after-school sessions.

What technology is needed?

The computer modeling tool we use, NetLogo Web, is web-based. We recommend laptops (MacOS or Windows) or Chromebooks.

Will all teachers implement the units in the 2022–2023 school year?

NO. Teachers will be randomly assigned into two cohorts to implement the curriculum in either the 2022–2023 or 2023–2024 school year. Teachers assigned to 2023–2024 will complete research activities in the 2022–2023 school year. All enrolled teachers will receive the Science+C program over the two school years.

IV. RESEARCH FAQs

What are the research activities?

The curriculum will be studied through targeted research activities that will measure the impact of the new curriculum, and not teacher or student achievement. Research activities will include:

- PD evaluation surveys
- Teacher interviews
- Teacher focus groups
- Student surveys (<45m, in-class, once in the fall and once in the spring)

If I'm selected to implement Science+C in the 2022–2023 school year, when will I complete the research activities?

All research activities will take place in the 2022–2023 school year. If you are selected to implement Science+C in 2022–2023, you and your students will still complete the research activities in 2022. There will be no research activities for you or your students in 2023–2024, but you will have access to all the units and a shorter version of the PD.

Science + C

FAQs

Do teachers select the year they want to implement Science+C?

NO, the research team will use a random selection process to determine the groups.

- *If you are selected to implement Science+C in the 2022–2023 school year, you will receive the units and a full PD program for the 2022–2023 school year.*
- *If you are selected to implement in the 2023–2024 school year, you will receive the units and a shorter PD program for the 2023–2024 school year.*
- *All teachers will be asked to participate in research activities and will be compensated for their participation in the research activities during the 2022–2023 school year.*

What stipends are available?

- *2022–2023 Cohort:* Stipends up to \$600 in research incentives and \$1,700 for full-year PD.
- *2023–2024 Cohort:* Stipends up to \$600 in research incentives (in 2022–2023) and an additional stipend for PD participation in 2023-2024.

When will I receive the research incentives?

You will receive the research incentives in December and May. The incentive amount will be based on the number of completed research activities.

If you have additional questions, please email

SciencePlusC@edc.org

Find out more about the program, by visiting our website at

<https://scienceplusc.org>.