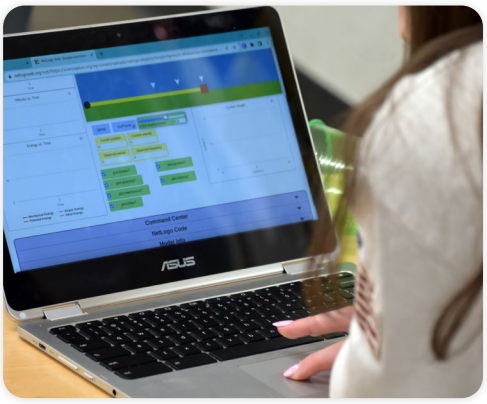
Science + C
ADVANCING SCIENCE THROUGH COMPUTING

Bring the Power of Computer Modeling to Your High School Science Curriculum



Science+C enhances your existing Biology, Chemistry or Physics core courses with units on computational modeling. Developed by teachers to meet Next Generation Science Standards (NGSS), these units build and reinforce student science learning while introducing students to computing—and its importance in science!

Teach your students valuable skills in computational thinking by using, decoding, and modifying computer models. **Science+C materials will be available free to all schools and teachers for the 2023–2024 school year!**

$1,000 STIPEND
for Massachusetts teachers who attend the 2023 Science+C Summer Institute!

July 24–28: Southbridge, MA
August 7–11: Waltham, MA

Teachers—Sign up for our Summer Institute:
go.edc.org/SciencePlusCInterest

Benefits of Science+C:

1. Science+C units embed computing skill development within the core science courses—**Biology**, **Chemistry**, and **Physics**.
2. The units within each course include lessons on **key science topics aligned to the NGSS** while building **foundational computer modeling skills**. Students learn to create, innovate, and solve problems by using, decoding, and modifying computer models.
3. The computer modeling tool used in the units is NetLogo Web, which was specifically designed for online use. Student materials will be provided online and are fully customizable to **fit in-person, remote, and hybrid learning environments.**
4. **No previous computational modeling experience is required!** Step-by-step instructions and student and teacher workbooks, developed by experienced Science+C teachers and co-designers, are available online for free to prepare you to use best practices in integrating models and modeling into STEM classrooms.

For more information, visit our website at https://scienceplusc.org.

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Science+C Units

- ✓ **Students use, decode, and modify computational models.**
- ✓ **Teachers choose how to sequence each subject's units.**
- ✓ **Units align with Code.org and the NGSS.**

Introductory Unit—Applies to all three subjects areas

- Epidemic: Introduction to Modeling and Simulation

Biology+C Units

- Simple Ecosystems: Energy Flow in an Ecosystem
- Experimenting with Photosynthesis
- Enzymes: Food Digestion
- Homeostasis: Food Digestion
- Natural Selection: Natural Selection in Moths
- Genetics: Phenotypes and Genotypes
- Ecosystems Dynamics: Balancing an Ecosystem

Chemistry+C Units

- Matter: Physical Change of Salt in Water
- Atomic Structure: Periodic Trends
- Chemical Reactions: Photosynthesis and Cellular Respiration
- Kinetics: Rate of Reactions
- Titration: Acid-Base Neutralization
- Redox: Electrolysis within a Battery

Physics+C Units

- Kinematics I: Car on a Ramp
- Kinematics II: Motion of a Ball
- Simple Harmonic Motion: Mass on a Spring
- Mechanical Waves: Sound through Different Media
- Electricity: Series Circuits
- Nuclear Physics: Rutherford's Gold Foil Experiment

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