Welcome to our Family!

Code.org Professional Development
CS in Science
2015-2016

Project Guts

Growing Up
Thinking
Scientifically

Code.org
1301 Fifth Avenue
Suite 1225
Seattle, WA 98101

http://code.org/pd
pd@code.org

Dear Educator,

Congratulations! You are now part of Code.org's family of teachers working across the United States to bring computer science courses to our public schools. As the founder of a young and relatively small organization, I've been humbled by the passion of educators such as yourself, taking the first step to bring computer science to your students and to open a world of opportunity for them. We look forward to working with you toward successful completion of our professional development program.

Code.org has chosen to partner with Project GUTS (Growing Up Thinking Scientifically) to offer it to schools as our middle school science program. Computer Science in Science (CS in Science) consists of four instructional modules and professional development for the introduction of computer science concepts into science classrooms within the context of modeling and simulation. The goal of the program is to situate computer science practices and concepts within the context of life, physical, and earth sciences, and to prepare students to pursue formal, year-long courses in computer science during high school. CS in Science is based on a crosswalk identifying areas of overlap between the Next Generation Science Standards and Computer Science Teachers Association K-12 Computer Science Standards.

It is important that you read and understand the Code.org Welcome Kit contents as it gives key details about our program and policies that you can reference as you go through the roughly 12 months of professional development.

Please browse our website **code.org/educate** and review details specific to your workshop location at **code.org/pd**. If at any point throughout your professional development experience you have a question, please let us know by emailing **pd@code.org**.

Sincerely,

Hadi Partovi
Co-founder, CEO
Code.org

Code.org is a 501(c)3 non-profit dedicated to expanding participation in computer science education by making it available in more schools, and increasing participation by women and underrepresented students of color. The Code.org vision is that every student in every school should have the opportunity to learn computer programming.

Professional Development overview

CS in Science professional development is a multi-phase program developed by Project GUTS, designed to make it easy to integrate computer modeling and simulation into middle school science classrooms. The professional development provides curriculum, tools, and teaching practices that will help teachers engage their students in the powerful scientific practice of computational thinking!

Program commitments

Phase 1: Online Introduction

- 2-hour online coursework

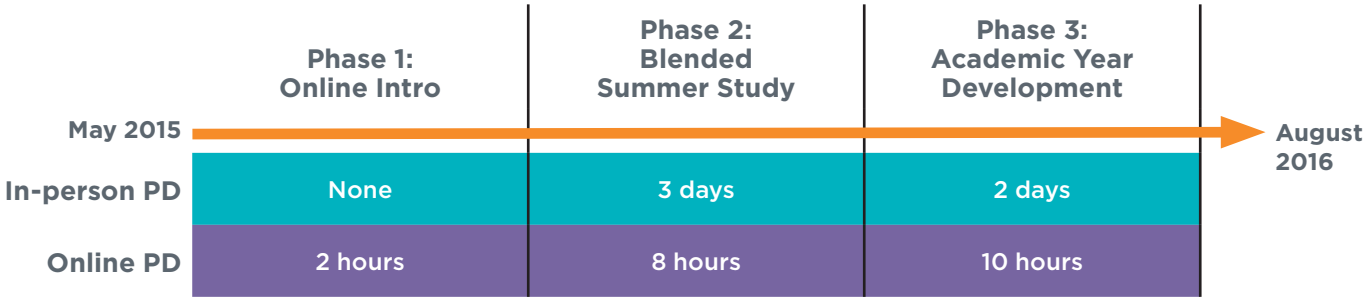
Phase 2: Blended Summer Study

- 3 days (21 hours) in-person
- 8 hours online coursework

Phase 3: Academic Year Development

- 2 days (14 hours) in-person, meeting one day per semester
- 10 hours online coursework

Program commitments: Timeline



Overview of PD phases

The CS in Science professional development is broken into three phases. These phases are designed to support Science teachers throughout their first year of implementing the CS in Science curriculum.

Phase 1: Online introduction

Overview: The first phase of professional development is a two-hour online introduction that focuses on providing a foundational knowledge of the Code.org program and CS in Science course resources. It creates a space for participants to become familiar with the curriculum, the platform, and the tools that will be used in the course.

Takeaways:

- I have created my **teacher account**.
- I know what CS in Science is
- I am familiar with **StarLogo Nova**.
- I am **excited** to go to Phase 2!

Phase 2: Blended summer study

Overview: The second phase of professional development is blended starting with an in-person experience and followed by an online component.

- **In-person workshop:** This 3-day workshop is the primary capacity building experience for teachers prior to their first year of instruction. Focusing on quality computer science pedagogy, teachers will gain practical experience teaching content through inquiry and equity. Participants will role-play lessons using the Teacher/Learner/Observer Model allowing teachers to experience modules as learners in a group setting. The Code.org PD workshop cultivates a professional learning community that will extend throughout the Code.org partnership.
- **Online follow-up:** This 8-hour online experience provides space for teachers to dive deeper into the curriculum and experience tools that students will use in the class. It also includes the implementation plan and any customization necessary.

Takeaways:

- I know where to find **resources and supports** I need to teach this class.
- I am part of a **professional learning community** of teachers.
- I know how to use the **tools** in order to figure out what I don't already know how to do.
- I am **learning** how to teach CS in a way that **broadens participation**.
- I have thought about and discussed the **things to look out for** in the CS classroom (equity issues, etc).
- I have thought about and discussed **how the CS in Science materials will work in the classroom** and am ready for the first week.

Phase 3: Academic year development

Overview: The third phase of professional development is composed of blended in-person meetings and online activities.

- **In-person workshops:** These one-day workshops will continue to build pedagogical strategies and help teachers prepare for the implementation of the modules. Teachers will review best practices for integrating modeling and simulation into Science classes.
- **Online monthly activities:** These online activities provide continued support with tools, content, and helpful resources as well as further build the online professional learning community. It will also include reporting out on implementation, student engagement and learning, and/or barriers encountered.

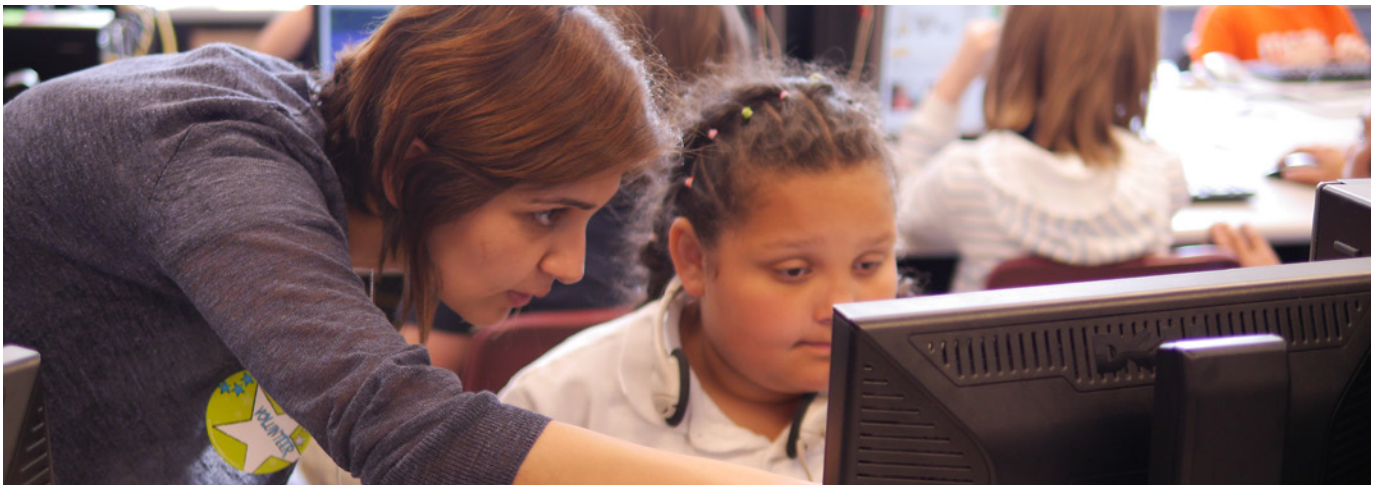
Takeaways:

- My **professional learning community** is a good place for me to turn for support, both in and out of PD.
- I have a better idea of the curriculum, because I've had a chance to **explore it more deeply** with my professional learning community.
- I have even more ideas about leading an **engaging and equitable** classroom.

CS in Science curriculum

The Middle School CS in Science curriculum consists of interdisciplinary modules that combine computer science concepts with science. These lesson sets are meant to be interwoven into pre-existing science courses and will not add substantial instructional time. Each lesson is designed to be implemented in a standard 45-50 minute class period. These lessons are topical and should be used within the natural context of the class. All lessons are aligned with common state standards in science, including the NGSS.

Visit **code.org/curriculum/mss** for curriculum documents, videos and other resources about CS in Science.



Code.org attendance policy

Districts are required to select teachers who will be teaching the course in the Fall, that are able to attend all days of professional development (12 months), and teachers must commit to attending all days of professional development (PD) when joining a Code.org cohort.

1. Teachers will only receive stipends for the hours that they attend the professional development.
2. Arriving/leaving over 30 minutes late/early will count as a full day absence if not approved by Code.org prior to the workshop.
3. Teacher must complete phase 1 PD prior to the start of phase 2 PD to continue to be part of the program and will not receive his/her phase 2 PD stipend until phase 1 PD is completed.
4. Teacher must attend the full 5 days of phase 2 PD to continue to be part of the program.
5. Teacher must be teaching computer science to a minimum of 1 section of students when the school year begins to continue to receive their stipend.
6. Teacher must attend all 4 days of Saturday in-person workshops (these happen during the school year).

If you have a schedule conflict email pd@code.org and notify your district contact as soon as possible.

Exceptions to this policy include districts where Saturday workshop participation is voluntary per union regulations.

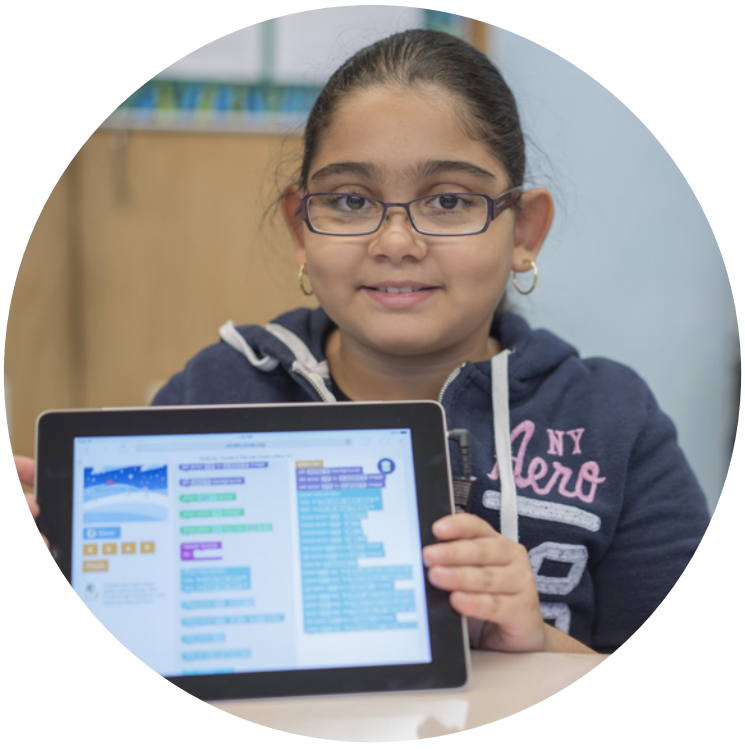
Communications

Who will PD e-mails come from?

You can expect emails from **pd@code.org** providing workshop and online activity information, surveys to help us improve PD as well as monthly newsletters.

Who do I contact with questions?

For any questions please contact **pd@code.org**. You can expect a response within 48 hours during our business hours (Monday- Friday 9am - 5pm PST).

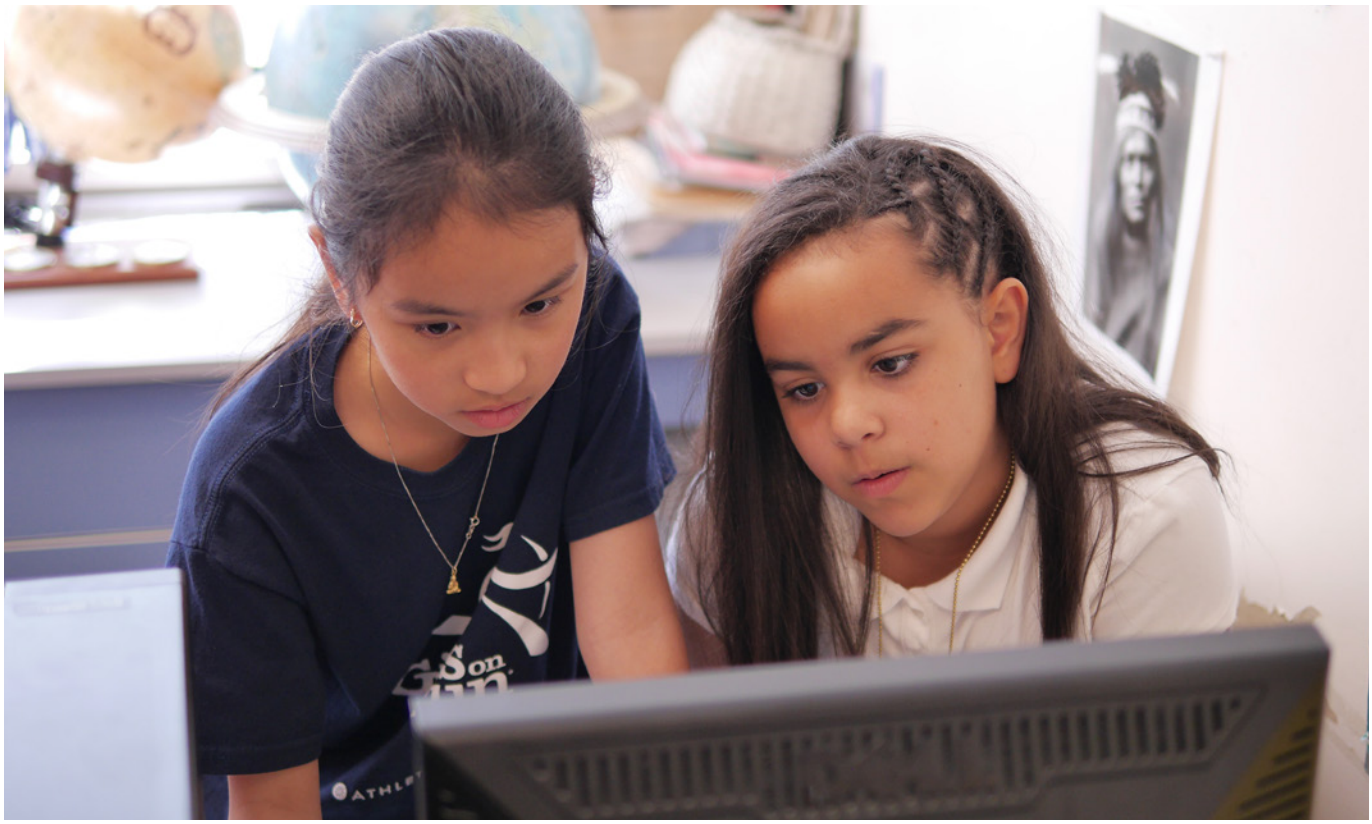


Frequently asked questions

What are the minimum tech requirements necessary to teach the course?	Computer lab with 1:1 computers with the following: **PC** • Dual Core-series processor (Dell 745 or higher) running Windows XP or newer • Modern browser (Google Chrome preferred) IE 11 or greater, Firefox, Safari (must enable Flash) • Adobe Flash version 11.2 or better installed (14 is latest) **Mac** • Intel® Core™ Duo (1.6 GHz or higher) running OSx 10.6.8 • Modern browser (Google Chrome preferred) IE 11 or greater, Firefox, Safari (must enable Flash) • Adobe Flash version 11.2 or better installed (14 is latest) **Chromebook** • Chrome OS • Acer or HP preferred **The following domains white-listed for access:** • slnova.org • Code.org • youtube.com/education • web.mit.edu Internet connection with bandwidth capable of supporting downloads of 5 megabits per student using the software during a period.
Will Code.org reimburse me for parking fees?	No, Code.org does not cover parking expenses and encourages participants to use public transit options in their city.
What if I am no longer implementing the course in the Fall, can I still attend PD?	Our general rule is you will not go through PD with a stipend unless you are teaching, but please contact your district to discuss further.

Helpful links

- Code.org's CS in Science Homepage: **code.org/curriculum/mss**
- Project GUTS Website: **projectguts.org/CurriculumbyTopic**
- CS in Science Two-Pager: **code.org/mss-brief**
- CS in Science Full Description: **code.org/mss-details**



Do you know a K-5 teacher?

Invite them to attend Code.org's free Professional Development for elementary school teachers!

For details, visit **Code.org/k5** or send them this **one-pager.**

Thousands of teachers have participated. They rate our workshops 4.8 on a 5 point scale. The majority say, "It's the best professional development I've ever attended."

"I can't think of anything that would improve this workshop. The workshop facilitator was very professional. This is by far the BEST workshop I've ever attended!"

"This will totally change my curriculum. I love how the lessons are prepared and aligned to the Common Core and Next Generation Science Standards."