Professional Learning Programs Overview
CS Principles and CS Discoveries

Program Commitments:

The Code.org Professional Learning Program has both in-person and online supports designed to prepare teachers before and during their first year teaching CS Principles or CS Discoveries.

TIMELINE

Summer Blended4 Virtual Learning	Ongoing Remote Support
CS Discoveries: July 27-31 **OR** Aug 3-7, 2020 CS Principles: Aug. 3-7, 2020	School Year (September -April)
• Whole group Zoom meetings • Independent work • Optional 2 credit • Schoarship Avaible ($1300.00)	• Monthly Zoom Sessions • Continued professional development and resources • Optional 2 credits

Applications now open!

Summer Workshop:

The Professional Learning Program kicks off with a 5-day Blended Virtual Learning Workshop hosted by ASDN. Daily schedules will include whole group Zoom meetings in the morning and independent work in the afternoons. Participants explore the curriculum and learning tools, discuss classroom management and teaching strategies, and build a community with other CS educators.

Ongoing Support:

Participants attend follow up Zoom meetings throughout the academic year. These meetings are hosted by ASDN, and they focus on the essential elements of the course, such as teaching new content, keeping the classroom environment equitable and engaging, and continuing to build pedagogical strategies.

In addition, all teachers have access to the Code.org forum, an online professional learning community that offers continued support with tools and content, introduces new and helpful resources for teaching the course, and lets teachers continue to explore the curriculum.

"I do not have a computer science background. I would change nothing about the training. It was an incredible experience, and I felt valued and respected."

"They make it so that you can understand the material and they make it so you want to come back!"

CS Discoveries: July 27-31 OR Aug 3-7
CS Principles: Aug 3-7

Apply here: https://code.org/educate/professional-learning/middle-high

For additional info contact: Cheryl Bobo cbobo@alaskaabsa.org

CS Discoveries Curriculum

Curriculum Features:

- Daily instructional lesson plans that include inquiry- and equity-based pedagogy and background content
- Formative and summative assessments, exemplars and rubrics
- Videos for students and teachers including concept tutorials, instructional guides, and lesson tips
- Code Studio — a learning platform that organizes lesson plans and activities with student and teacher dashboards

Curriculum tools:

- **App Lab:** JavaScript programming environment on Code.org, designed for creating event driven web apps with block-to-text workspace and debugging capabilities
- **Game Lab:** JavaScript programming environment on Code.org, designed for creating object oriented sprite-based games and animations with block-to-text workspace and debugging capabilities

- **Circuit Playground:** Adafruit's Arduino-based microcontroller has a number of components and sensors built right onto the board and is used as the hardware for physical computing lessons. Using the Maker Toolkit, students program Circuit Playground boards right from App Lab with easy-to-understand JavaScript commands and blocks
- **Web Lab:** HTML/CSS programming environment on Code.org used for website development

CS Discoveries unit overview

Semester 1: Exploration and Expression

Unit 1 Problem Solving	Explore the problem-solving process and the different ways humans and computers solve problems.
Unit 2 Web Development	Discover the languages powering the web. Build your own websites in HTML and CSS using Web Lab.
Unit 3 Animations and Games	Learn the powerful constructs underlying programming languages. Build interactive animations and games in JavaScript using Game Lab.

Semester 2: Innovation and Impact

Unit 4 The Design Process	Follow a design process to identify and empathize with problems faced by a target audience. Prototype an app to help solve that problem using App Lab.
Unit 5 Data and Society	Develop binary representations of different kinds of information. Collect, analyze, visualize, and make automated decisions using data.
Unit 6 Physical Computing	Explore the relationship between hardware and software while building interactive projects on Adafruit's Circuit Playground.

Learn more about professional learning! https://code.org/professional-learning
For curriculum, videos, support documents, and more, visit: https://code.org/csd

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.

Dates for CS Discoveries: July 27-31st or August 3-7 2020

Contact Cheryl Bobo cbobo@alaskaacsa.org

CS Principles Curriculum

Curriculum Features:

- Daily instructional lesson plans that include inquiry/equity-based pedagogy and background content
- Formative and summative assessments, project exemplars, and rubrics
- Widgets and simulators for exploring computing concepts like text compression and the Internet
- Concept and tutorial videos for students, and teaching tips-and-tricks videos for teachers
- Code.org -- a learning platform where students interact with lesson materials and tools, and where teachers access a dashboard to see student work and progress
- App Lab -- a JavaScript programming environment in Code Studio, designed for creating event-driven web apps with block-to-text workspace and debugging capabilities

CS Principles unit overview

Unit 1 The Internet	Learn how the multi-layered systems of the Internet function as you collaboratively solve problems and puzzles about encoding and transmitting data, both 'unplugged' and using Code.org's Internet Simulator.
Unit 2 Digital Information	Use a variety of tools to look at, generate, clean, and manipulate data to explore the relationship between information and data. Create and use visualizations to identify patterns and trends.
Unit 3 Algorithms and Programming	Learn the JavaScript language with turtle programming in Code.org's App Lab. Learn general principles of algorithms and program design that are applicable to any programming language.
Unit 4 Big Data and Privacy	Research current events around the complex questions related to public policy, law, ethics, and societal impact. Learn the basics of how and why modern encryption works.
Unit 5 Building Apps	Continue learning how to program in the JavaScript language. Use Code.org's App Lab environment to create a series of applications that live on the web. Each app highlights a core concept of programming.
AP® Performance Tasks	Design a project plan, the work on and complete your AP Performance Task projects for submission to the College Board.

Our team designed the AP Computer Science Principles curriculum to support students and teachers new to the discipline. The curriculum includes daily lesson plans made up of inquiry-based activities, videos, assessments, and computing tools, allowing teachers to guide and learn alongside students as they discover core computing concepts.Code.org's Computer Science Principles is an introductory Advanced Placement ® (AP) course designed to broaden participation in computer science. Code.org is recognized by the College Board as an endorsed provider of AP Computer Science Principles curriculum and professional development. The Course has been reviewed by the College Board and is pre-approved to pass the audit. The professional development is also endorsed by the College Board as meeting (and exceeding) the standards of the AP Summer Institutes.

Dates for CS Principles: August 3-7 2020

Contact Cheryl Bobo cbobo@alaskaacsa.org