

Building Computer Science Opportunity in Wisconsin:

Engagement, Equity, & Empowerment



4th Annual CS Summit

May 1, 2019



| | | | |
|-------------|--|---|--|
| 7:30-8:15 | Registration, Breakfast, and Conversation | | |
| 8:15-8:30 | Welcome and Opening Remarks | | |
| 8:30-9:20 | Opening Keynote | Jake Baskin Executive Director, CSTA | You're not alone: building peer networks to improve computer science education |
| 9:30-11:30 | Session I Middle and High School Strand | Jill Westerlund | More than a Marble Notebook: Using Interactive Journals in the CS Classroom |
| 9:30-11:30 | Session I Elementary Strand | Sandy Bader and Kyle Gregerson | Addressing Wisconsin Standards for Computer Science at the Elementary Level |
| 11:30-12:15 | Lunch and Conversation | | |
| | | | |
| 12:30-2:30 | Session 2 Middle and High School Strand | Jill Westerlund | Session 2: All Hands on Deck! Engagement & Assessment Strategies for Comp Sci |
| 12:30-2:30 | Session 2 Elementary Strand | Sandy Bader and Kyle Gregerson | Overview of Code.org CS Fundamentals |
| 2:30-3:15 | CSTA WI Dairyland Update and Meeting | | |
| 3:15-3:30 | Closing Remarks and Feedback | | |

Due to generous grant support, registration fee for full day and lunch \$50 per participant.

Register online at the WMC Green Lake Pre-Conference site

<http://www.wismath.org/event-2782488>

Questions: Contact: **Joe Knoch** joe@jknoch.com

or **Linnea Logan** linnea.logan@wfbsschools.com

The CS Summit is sponsored by the NSF PUMP-CS Project and CSTA-Wisconsin Dairyland.

Building Computer Science Opportunity in Wisconsin: **Engagement, Equity, & Empowerment**

Keynote for all participants: Jake Baskin, CSTA

You're not alone: building peer networks to improve computer science education.

Teaching can be a lonely job, and that aspect is amplified for teachers of computer science, but fear not, your computer science professional learning network is out there! Learn how communities of computer science teachers across the country have organized with their peers to create local professional learning and network building opportunities, from monthly meetups to large scale, state-wide, professional development events. You'll walk away with connections to the Wisconsin CSTA and ideas for kicking off your local region if it does not yet exist.

**Middle and High School Strand
Jill Westerlund**

Session 1: More than a Marble Notebook: Using Interactive Journals in the CS Classroom

Want to promote equal access to instruction and level the playing field while providing practical reinforcement work and purposeful flipped strategies to ALL students in computer science classes? if so, this session is for you! Teachers will learn best practices for incorporating interactive journals in computer science classes including teacher and student hints/tips, resource links and formatting considerations, list of useful classroom supplies, and review of samples from practical application.

**Middle and High School Strand
Jill Westerlund**

Session 2: All Hands on Deck! Engagement & Assessment Strategies for Computer Science

Learn strategies for using unplugged activities to introduce units of instruction in the CS classroom **AND** evaluate ways to incorporate released AP® exam content for unit formative assessment. These form a well-balanced approach where the left hand *talks* to the right for a CS course centered on content knowledge, application of concepts, and layered, purposeful assessment. Evaluation of examples, review of resources and tools, and group discussion will drive this teacher-focused session.

**Elementary School Strand
Sandy Bader and Kyle Gregerson**

Session 1: Wisconsin Standards for Computer Science were adopted in 2017 for grades K-12 with five main content areas and grade-banded performance indicators. The expectation is that the elementary performance indicators (grade bands K-2 and 3-5) "represent knowledge and skills that should be integrated throughout the elementary curriculum." But how do elementary teachers accomplish this when their days are already full to overflowing? In this session, we will take a look at the need for computer science education at the elementary level and will define what computer science includes. We will discuss some work that's already being done to make the standards more accessible, show some examples of cross-curricular connections, and introduce some free curricula that are available to help address the standards. This will be an interactive session, so please be willing to share any ways in which you are already addressing the standards and/or any barriers that are preventing you from doing so.

**Elementary School Strand
Sandy Bader and Kyle Gregerson**

**Session 2:
Overview of Code.org CS Fundamentals**

Code.org CS Fundamentals curriculum consists of courses for grades K-5 to learn the basics of computer science with a focus on coding. The curriculum, student materials, lesson plans and professional development are all free for elementary teachers. We will give you an overview of the curriculum and give you a chance to participate in an unplugged lesson and try out some of the online puzzles.

Code.org's six Computer Science Fundamentals courses are designed to be flexible for your classroom. How you implement is up to you - teach CS Fundamentals for your next science unit, use it to support math concepts, add technology time to your schedule once a week, or go deeper with extension activities and projects.

Building Computer Science Opportunity in Wisconsin: **Engagement, Equity, & Empowerment**

Workshop Presenter Bios

Sandy Bader has worked as an elementary Technology Training Specialist in the De Pere School District for the past 21 years, working with K-4 staff, students and administrators to integrate technology in their classrooms. In recent years, she has focused on bringing computer science concepts and coding into all elementary classrooms. Prior to teaching in De Pere, Sandy obtained a master's degree in Computer Science from UW-Madison, worked at IBM as a systems engineer for nine years, and taught computer science at St. Norbert College for three years. In her free time, she likes being with family, playing piano, reading, and spending time in Door County.

Kyle Gregerson is a 3rd grade teacher who also teaches computer science to students in Kindergarten to 5th grade at his school. He also facilitates Code.org CS Fundamental workshops for K-5 teachers. He has recently expanded into the role of facilitating Code.org CS Discoveries workshops.

Jill Westerlund teaches AP[®] Computer Science Principles, AP[®] Computer Science A, and coordinates cooperative education at Hoover High School in Hoover, Alabama. Since 1990, Jill has taught at the secondary and post-secondary levels in Alabama and Georgia. In 2017, Jill was an Aspirations in Computing Educator Award Recipient by the National Center for Women in Information Technology (NCWIT). Jill is a College Board Consultant for AP[®] Computer Science Principles, is a reader for Principles, and currently serves on College Board's Development Committee for AP[®]CSP. Jill was a contributor on the AP[®] CSP Curriculum & Instruction Team and was a participating pilot teacher in the College Board National Pilot of AP[®] Computer Science Principles Phase II from 2013-2016. Jill loves to knit, sew, and cook. She and her husband have two sons – one in college and one in high school. The Westerlunds love to travel and to attend sporting events visiting stadiums around the country.