Title	Description	Grade Levels	Subjects	Instructor(s)
Cracking the Code: How to teach Computer Science to K-2	This strand will prepare educators to teach computer science to lower elementary students (K-2), with a special emphasis on teaching coding. The world of technology is advancing so rapidly that by the time our students graduate college, the world will be dominated with computer science and coding jobs. However, many educators are not teaching these subjects in lower elementary because they don't understand coding and computer science themselves, so they don't even know where to begin to teach their students. In this strand, educators will first put themselves in the shoes of their students and learn all about computer science, parts of a computer, how those parts work together, basic troubleshooting, and of course coding. Then, educators will turn around and collaboratively figure out ways to use the activities they did, or other activities they find, to teach their own students when they get back to their classrooms. *This strand is appropriate for informal educators.	K-2	Technology, Computer Science	Ashely Schaffner and Chad Harris

Supporting STEM Teaching and Learning with Artificial Intelligence, Augmented Reality, and Virtual Reality	This strand emphasizes the use of technology to support STEM teaching and learning by focusing on three of the fastest-growing areas in technology: artificial intelligence, augmented reality, and virtual reality. By focusing on these three fast-growing areas, teachers will be exposed to current trends in educational technology and learn hands-on how to utilize engaging devices to better support teaching and learning of STEM concepts. The "T" in STEM often gets lost in the shuffle because finding the right technologies to implement can take both time and money which teachers typically do not have. We'll explore practical ways to incorporate the three technologies in a very cost-effective manner to support STEM teaching and learning. We'll also build upon an already established collection of ideas, materials, and apps to support successful integration of these technologies. This strand supports all subject areas and grade levels because these technologies can be easily implemented across the content areas with various grade levels. Strand participants will be grouped by grade levels and subject areas to maximize the knowledge base by sharing findings, ideas, and strategies for implementation.	K-12	Science, Technology, Engineering, Math, Computer Science, Other	Cassidy Hall and Yudi Zhu

Make STEM Work For You	This strand is for those teachers who have found themselves struggling to incorporate STEM (especially technology) concepts into their classrooms. While none of the concepts are new in terms of technology, this strand will help non-STEM teachers gain familiarity and experience with certain aspects of technology that will open doors for both them and their students. Art, Music, Language Arts, Social Studies/History, and other traditionally non-STEM subjects are perfect candidates for this strand. Uses of the Google Suite (and Google Apps for Education) and video making and sharing will be the focus of this strand. We will also explore other easily accessible technologies that will help non-STEM teachers incorporate technology into their standard teaching practices. *This strand is appropriate for informal educators.	3-12	Technology, Other	Jayna Johnson
Genes, GMOS, and the Future	This strand will talk about the history of the science of heredity, the changing landscape of genetic research, GMO's and the future of medical and social genetic testing.	4-9	Science, Math	Erin Johnson andAnn Mennear
Teaching Computer Science with TI-Nspire	The strand we are offering, is designed to equip teachers to help students experience CS topics using equipment that is pervasive throughout most schools. This workshop will focus on developing computational thinking practices and fundamental CS topics / structures using the TI-Nspire CX technology. During this training teachers will learn critical Computer Science content and processes as they explore ready-made activities for teaching Computer Science concepts in math, science, technology, or computer science classes, programs, or clubs. Teachers will also learn to apply Computer Science to physical computing & introductory robotics through coding instructions for robots, collection of sensor data, and through performing simple Robotic tasks using the TI-Innovator Hub and TI-Innovator Rover. *This strand is appropriate for informal educators.	8-12	Science, Technology, Engineering, Math, Computer Science	Kim Zeydel and Hjallmar Zeydel