

Joni Falk : Welcome All

Melissa Rasberry : Glad to have you join us today!

Joni Falk : We will begin this webinar at a few minutes after the hour to allow people to log in.

Indira: Good afternoon from Cary, NC.

Joni Falk : Good afternoon from TERC in Cambridge MA

Melissa Rasberry : Hi Indira! I'm not far from you in Durham NC!

Naveen: Greetings from College Station, Texas

Lesa: Hi from Orland, Maine

Indira: I was a teacher at DPSNC before I moved to Wake.

Melissa Rasberry : I also taught for DPS before joining AIR.

Kimberly: Hello from UMassDartmouth

Rhonda: Hello from Maine

Jennifer: Greetings from Charleston, SC!

Erika: Hello from WV!

Karen: Hello from Cary, NC!

Laura: Hello from MIT

Dianne: Hello from muggy Maryland!

Laura: Hello form Ellsworth, Maine

Carol: Western North Carolina

Lautaro: Hi everyone, this is LC from the University of Maryland, College Park

Line: Hello from QC, NY

Wren : Hello from Iowa

Jill : Hello from Colorado

Anissa: Hello from Oklahoma!

Jean: Hello from Memphis

Christie: Hello from Virginia

Patty: Hello from Oregon!

Joan : Hello from San Diego

Denise: Hello from NJ

Jodi: Hey from Southern Maine!

Angie: Hello from Minnesota!

Debra: Hello from California.

Vicky: Hello from Los Angeles.

Kelly: Hello from Maryland!

Seungki: Hello from Arizona

Whitney: Hello from Fresno, California

Nicole: Hello from Austin, TX

Elizabeth: In thinking about racial inequality, I actually think integrating computational thinking into STEM classes in K-8 is incredibly important! We need to give all kids this experience at a young age. I'm glad you are hosting the event.

Shirma: Hello, from Daytona Beach, FL

Barbara : Hello from Cary, NC

Rick : Hello from Amherst MA

marcos : hello!! Marcos from Nj. Latino educator, entrepreneur, and maker
www.handsoncoding.org

Line: I second that Elizabeth

Sumreen : Hi from Indiana University Southeast! I appreciate you bringing this webinar. I hope to connect with other teacher educators in this forum.

Dedric: Shelby County Schools, Memphis, TN

Joni Falk : The recording will also be available on stemtlnet.org

marcos : will slides be shared?

Kerri: and her new book is Raceing To Class

Joni Falk : Yes, happy to share slide

STEMTLnet and STEM for All Multiplex : yes, the slides will be available along with the recording and the chat

Alan Peterfreund : Ethical Algorithm - Aaron Roth & Michael Kerns

marcos: great!!

marcos: I will be launching latinosincoding.org soon!! any collaboration would be appreciated!!

Mike: No "balanced" option for that poll?

Vicky: I agree with using both but couldn't say that.

Geoff : Agreed, I use both

Anne Leftwich : I would say most teachers I encounter tend to start by using the plugged versions first, but I think that the unplugged activities help students understand the abstract concepts first.

Denise: Both as well

Holly : I use more plugged, but do use both.

Jodi : plugged doesn't have to mean coding, can be games and other learning interactives to build foundational knowledge

Carol: We have created a matrix to align plugged and unplugged activities across all areas of our NC curriculum for K-6

Jennifer: What was that last resource she mentioned?

Jodi: can you share your matrix Carol Moore?

Kathy: Nancy - is there a particular blog you mentioned?

Heather : Jennifer Kidd I think it was Common Sense Media

Jennifer Kidd : thank you

Naveen : Commonsense.org

Geoff : commonsense.org was one

Geoff : code.org was another

Geoff : One mentioned earlier was csunplugged.org

marcos : love Hands on Coding blocks to learn coding unplugged and through kinesthetic movement!!!

marcos: [Www.handsoncoding.org](http://www.handsoncoding.org)

Kay: unplugged definitely help kids understanding

Anne Leftwich : A great video about unpacking equity:
https://www.youtube.com/watch?v=Pti9hkvU_dw&feature=youtu.be

Geoff : I also like physical coding through robotics

Jennifer : Geoff, what robots/kits etc do you use?

STEMTLnet and STEM for All Multiplex : A transcript of this chat will be available along with the slides and recording at <https://multiplex.videohall.com/> and STEMTLnet.org

Denise : Dash and Dot from wonder workshop are great for many levels of elem.

Geoff : I use Robot Mice in kindergarten, Dash robots grades 1-2, LEGO WeDo 2.0 in grade 3, and hoping to get either LEGO EV3 or Spike Prime for grade 5 (I don't currently teach grade 4)

Nancy McGowan : CS/CT Resources:

Holly : I have been using LEGO EV3 for grades 3-5 and it is going well.

Nancy McGowan : <https://www.csforallteachers.org/>

Nancy McGowan : <https://csunplugged.org/en/>

Anne Leftwich : Fall Block-Based:
<https://docs.google.com/document/d/1WgMPEQyHTaSBtfP7eyPHd0WyuswdLy-OJ6Xq59F9N0k/edit?usp=sharing>

Spring PBL App Development:
<https://docs.google.com/document/d/1GTqXdvayJXNSFpMDlxff0-f8uXevshfIGVCGZRqdVts/edit?usp=sharing>

Carol : Holly, do all 3-5 students have access to robotics?

Derrall : I think beginning in 5th you can begin using more open ended systems such as Micro:Bits with servos and sensors.

Nancy McGowan : Commonsense.org -Digital Citizenship

Denise: I liked Micro:Bits for 3rd grade - focus on input and output and what is a "computer"

Laura : Bee-Bots are a great option for PreK-3.

Denise: I agree with Laura Larke, Bee Bots for Kindergarten

Jennifer: Makeblock is coming out with a new elementary robot that I hear is AMAZING!

Jennifer : Are there standards for AI for k-12?

dianne: ai4k12.org

dianne: developing guidelines

Kerri: Edisons are the best and most affordable :o)

dianne: not "standards"

Geoff : Bee-Bots are great. I use Robot Mice as a cheaper alternative. They basically have the same buttons on top for programming

Jennifer: ai

Anne Leftwich : I like programming the kids live instead of robots :)

Derrall: @Denise I also like using MakeyMakey at 3rd. Did the DollE 1.0 activity <https://www.instructables.com/id/Making-and-Literacy-With-Doll-E-10/>

Geoff : Code.org has some good lessons where you program a partner to create cup stack designs.

Geoff : I like a yes-and approach to teaching CS - plugged, unplugged, robotics, I'm trying to figure out how to provide enough time for all in my classes

Denise: @Derrall, EiE is creating a CS curriculum that aligns with the engineering challenges they have. I had the opportunity to do one with Micro:Bits

Jennifer : Whose research was that?

Derrall : @Denise will definitely have to look for the release, thanks!

Bobby Oommen : Swapna Cheryan - university of washington

Denise: @Derrall, hopefully they will come out soon. Unfortunately, they had to stop production with the quarantine. :(

Bobby Oommen : AI4K12 guidelines: <https://github.com/touretzkyds/ai4k12/wiki>

Jennifer : Is Anne willing to share her curriculum for her Tech course @ Indiana? I am currently working on adding this to ours.

KT : Free app from The New York Hall of Science - <https://nysci.org/school/resources/the-pack/>

Evelyn : Horizon's report on HS computer science nationwide: <http://horizon-research.com/NSSME/wp-content/uploads/2019/05/2018-NSSME-Status-of-High-School-Computer-Science.pdf>

Lautaro: We also integrate CT into preservice courses, and have an afterschool program where pre-service and in-service teachers learn together. However, we're missing an understanding of how this learning is enacted in their classroom

Anne Leftwich : Sure @JenniferKidd - email me aleftwic@indiana.edu

Jennifer : Neat idea Lautaro Cabrera - it would be neat to see how you are doing this

Heather : @Darrell and @Denise: EiE will be launching CS units in late July, early August. Check eie.org around that time.

Denise : @Heather Thank you. I was a pilot tester for several of the units and think they are very valuable!

Derrall : @Heather glad they'll be out before school starts

Anne Leftwich : Just curious for the teachers - what was the best CS/CT PD that you participated in?

Delia : So how do you incorporate equity into CS/ CT??

Rishabh: Hi I'm software engineer from India, want to bring CS to K-12 .But I faced some questions like cs will not compulsory because early expertise in a particular field, stop the possibility of being genius in other fields. Any suggestions on it?

Brett : Our initial efforts have been focusing on programs that are designed around equity (e.g. AP CSP, Girls Who Code, AccessComputing, etc.)

Kristie : For our CS for All project, we are explicitly integrating UDL strategies into our inservice teacher PD model to meet the needs of students with high incidence disabilities.

Melissa Rasberry : We are going to move to an open Q&A time. If you'd like to ask a question, please find the participant box and use the Raise Hand option to get in queue to un-mute and ask your question directly. Thank you! :)

Jennifer: @Delia One way is to discuss how technologies have biases and how we can address those issues

Bobby Oommen : @Delia - so many angles to look at equity. Understanding where there have been historical inequities (gender, race) - our school has had many discussions with parents, students and other stakeholders re: CS.

Lesa: What is ECEP ?

Anne Leftwich : ECEP: https://ecepalliance.org/sites/default/files/ECEP_Flyer_0.pdf

Melissa Rasberry : ECEP = Expanding Computing Education Pathways

Minji : <https://ecepalliance.org/>

Daniela Torre Gibney : Also, can you spell the CAPE/CAEP/?? framework?

Anne Leftwich : <https://ecepalliance.org/>

Debra : ECEP is one of NSF's BPC Alliances

Jennifer : @Rishabh many people are integrated CS concepts with concepts from other topics. For example, we have had students create google doodles to teach others about a social studies topic

Anne Leftwich : CAPE = Capacity, Access, Equity, and Participation

Laura : How do we promote equity and give teachers the necessary freedom to integrate CS/CT into content areas?

Laura: CAPE has been a great tool. We're starting to integrate it into all our CS education research at MIT TSL.

Sarah: Article about ECEP's broadening participation in computing work and the C.A.P.E. Framework Anne spoke about: <https://ecepalliance.org/news/three-models-driving-ecep-ecep-state-efforts>

marcos : take a look at Hands on Coding blocks to learn coding unplugged and w no device needed! www.handsoncoding.org

Rishabh : I want to bring CT/CS to K-12 school in India so is there any path to which I will follow or any org which could help me. I want to expand it at large no. of schools. In India, when I asked with school principals then they're not much interested.

Bobby Oommen :

https://www.tolerance.org/sites/default/files/general/TT%20anti%20bias%20framework%20pamphlet_final.pdf

Bobby Oommen : poetofcode.com

Bobby Oommen : Algorithmic justice league: ajlunited.org

Irina: https://www.ted.com/speakers/joy_buolamwini - TED talk mentioned

Bobby Oommen : @irina - thanks!

STEMTLnet and STEM for All Multiplex : <https://multiplex.videohall.com/>

Anne Leftwich : @Laura is co-lead on another amazing project that lets teachers think about issues of equity around CS teaching in a case simulation format.

Irina : Can we get all these resources in one document for everyone to share?

STEMTLnet and STEM for All Multiplex : This chat will be available with the slides on <https://multiplex.videohall.com/>

Laura: Our current project at MIT TSL, helping teacher educators use digital simulations to practice engaging with difficult equity-related scenarios: <https://tsl.mit.edu/fellowships/inspire-cs-ai/>

Anne Leftwich : Thank you Laura - this is an AMAZING resource!

Anne Leftwich : I highly recommend checking it out.

Laura : We have been using the Teacher Moments platform to develop these scenarios: <http://teachermoments.mit.edu/> Anne Leftwich is one of our wonderful fellows!

Sumreen : <https://wakelet.com/>

Susan : Thanks for sharing the resources

marcos : is there contacts at both org that I may contact??

Bobby Oommen : Would be great to see what diff't states are doing to organize stakeholders re: promoting CS. Here's IL - <https://www.cs4il.org/>


Olgun : There is long time research on technology integration in education that focused on tools. I have seen examples of tools in the chat. I encourage all my teacher friends to think about meaningful learning goals for their classroom(s). That would contribute a lot to access and equity issues

Rick : We also have used teacher moments and have project members in the fellowship program

Line: Thank you - great resources

marcos: who can I connect and contact to discuss collaboration

Bobby Oommen : @olgun - great point

Jodi: thank you 

Melissa Rasberry : Marcos, I'd like to chat. Email me at mrasberry@air.org.

Anne Leftwich : Thank you all for your comments and your work in this space!!

Denise: Thank you!

Jill: Thank you!

Indira: Thank you

Lisa: thank you

Susan : thank you for such an informative session

Susan: Stay healthy

Derrall : Thank you!

Laura: Thank you, everyone

Elissa : Thank you!

Christine : Thank you!

marcos : thank you Melissa will reach out

Elizabeth : thank you!

Shirma: Thank you

marcos : thank you

Dodie : Thank you!

Holly : Thank you

Anne Leftwich : #STEMTLDiscuss

STEMTLnet and STEM for All Multiplex : Join the Twitter chat on June 17th - follow the hashtag#STEMTLdiscuss

Stephanie: Thank you for sharing!

Jodi : will there be a follow-up email following this with the resources so we can dig deeper 🙏

STEMTLnet and STEM for All Multiplex : Yes, wither tomorrow or Friday

Theresa: Thanks so much

Olgun : Thanks

Ryan Montgomery : Thank you!

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