



**NGCP Webinar Chat Transcript:
Equitable Approaches to Early Science Education**
March 9th, 2023

Nancy Scales-Coddington: Welcome everyone! Where are you tuning in from?

Megan (Museum of Flight): The Museum of Flight in Seattle!

Liz Coker (she/her), Cade Museum: Hi! Tuning in from the Cade Museum in Gainesville, FL!

Nancy Scales-Coddington: Welcome Megan!

Marisa SLCPL: I'm with the Salt Lake City Public Library :)

Nancy Scales-Coddington: Hi Liz

Eileen Koury-Judkins: Girl Scouts of Eastern Massachusetts

Nicole - Indiana State Museum: Indiana State Museum in Indianapolis

Celeste Kenworthy: Arizona Science Center in Phoenix!

Kristi (she/her): Hello from Woodland Park Zoo in Seattle

Dillyn K: Hi, all! I'm joining from Indianapolis.

Nancy Scales-Coddington: Love seeing so many different locations! Welcome everyone!

Toni Castro | Columbia Memorial Space Center: Downey CA, Columbia Memorial Space Center

Lori Petrelius (she/her): Hi all! I'm joining from The Henry Ford Museum of American Innovation in Dearborn, MI.

Kristen D- MOXI: Greetings from MOXI in Santa Barbara, CA

Adrienne: Hello! As part of yesterday's International Women's Day the UN hosted an event (inperson and online) called DigitALL focused on tech and innovation. It's available online in the UN TV archive and connects well with NGCP's missions and programs!

Nancy Scales-Coddington: Thank you for sharing, Adrienne!

Emily Relkin: Providence, RI Education Development Center! So excited for this webinar!

Nancy Scales-Coddington: Learn more about NGCP: <https://ngcproject.org/>

Nancy Scales-Coddington:

- IF/THEN Collection: <https://www.ifthenshecan.org/>
- Youth Advisory Board: <https://ngcproject.org/about/initiatives/youth-advisory-board>
- FabFems: <https://www.fabfems.org/>

Nancy Scales-Coddington: Check out our upcoming events and webinars:
<https://ngcproject.org/events-announcements>

Nancy Scales-Coddington: Subscribe to NGCP monthly e-newsletter:
<http://ow.ly/Zuds30qwpOK>

Adrienne: The role of visual language seems as essential as text.

Megan (Museum of Flight): Absolutely, especially for multilingual learners

Dillyn K: THIS ^^

Nancy Scales-Coddington: Yes - agree!

Nancy Scales-Coddington: LOVE action-based language like this

Columbia Memorial Space Center: Much better!!

Adrienne: How to balance action language with the need for role models?

Nancy Scales-Coddington: Great question Adrienne - we will ask near the end.

Nancy Scales-Coddington: Learn about EDC: <https://www.edc.org/>

Nancy Scales-Coddington: The Conceptual Development and Social Cognition Lab at NYU:
<http://kidconcepts.org/>

Dillyn K: Thank you Amanda C.!

Liz Coker (she/her),Cade Museum: Thank you so much for sharing all that info!

Megan (Museum of Flight): Amanda your presentation got me so excited (my brain is whirring with millions of ideas)

Nancy Scales-Coddington: Right Megan?!!

Nancy Scales-Coddington: Learn about Amanda Strawhacker: www.amandastrawhacker.com

Rebecca Gordon: Agree! Thought-provoking, energizing research, Amanda C.!

Nicole-Indiana State Museum: This is a great way to validate their observations and keeps them engaged.

Adrienne: "agents of inquiry" - sense of wonder and adventure in that term!

Megan (Museum of Flight): Absolutely. and for them to see each other as collaborators and not competitors

Adrienne: Making a visual map would help with understanding connections too - what is off/on topic?

Columbia Memorial Space Center: I like that

Nancy Scales-Coddington: Great idea Adrienne

Nancy Scales-Coddington: Great point Megan!

Nancy Scales-Coddington: Follow Amanda Strawhacker on Twitter: @ALStrawhacker

Nancy Scales-Coddington: Black Ants and Buddhists: Thinking Critically and Teaching Differently in the Primary Grades https://www.amazon.com/Black-Ants-Buddhists-Critically-Differently/dp/1571104186/ref=sr_1_1?crid=395A1G1KHNZ8I&keywords=black+ants+and+budhists&qid=1678313127&srefix=Black+Ants+and+Budd%2Caps%2C88&sr=8-1

Nancy Scales-Coddington: Breaking the STEM Stereotype: Reaching Girls in Early Childhood https://www.amazon.com/Breaking-STEM-Stereotype-Reaching-Childhood/dp/147584204X/ref=sr_1_1?crid=QV4B5SMTZBME&keywords=breaking+the+stem+stereotype&qid=1678313211&srefix=breaking+the+stem%2Caps%2C548&sr=8-1

Adrienne: Thank you Amandas!!!

Marisa SLCPL: Thank you!

Columbia Memorial Space Center: Excellent discussion

Nancy Scales-Coddington: Learn more from Amanda Cardarelli's research in this new resource on the NGCP website: 3 Ways Early Educators Can Shift the Way They Talk About Science <https://ngcproject.org/resources/3-ways-early-educators-can-shift-way-they-talk-about-science>

Megan (Museum of Flight): Thank you that was VERY informative

Liz Coker (she/her), Cade Museum: Agreed! Very informative and helpful!

Adrienne: The dialogue approach reminds me of visual thinking strategies like see/think/wonder

Dillyn K: Do you have any suggestions for how to address and counteract white cis-male 'scientist' representation and messaging without playing into identity-focused language?

Adrienne: Any suggestions for resources to help empower parents/guardians to cultivate these dialogues?

Megan (Museum of Flight): Amanda C. have you tried in informal learning environments (like museums, science centers, etc.)?

Columbia Memorial Space Center: ^^

Marisa SLCPL: Amanda C. have you, or are you familiar with, any research about how educators/caregivers may or may not be using gendered language? And for both presenting Amandas, what recommendations do you have to shift gendered language?

Jean Oviatt-Rothman (she/her): About the identify-focused language, I know many teachers often use it in other contexts with students "Good Morning, Writers/Readers/Poets/Mathematicians" etc. to encourage kids to see themselves as professionals/practitioners in these areas. Should all identify-focused language be avoided in early childhood settings?

Adrienne: Thank you!

Nancy Scales-Coddington: Learn more from Amanda Cardarelli's research in this new resource on the NGCP website: 3 Ways Early Educators Can Shift the Way They Talk About Science <https://ngcproject.org/resources/3-ways-early-educators-can-shift-way-they-talk-about-science>

Liz Coker (she/her), Cade Museum: Love that idea! We're working on developing a new maker space at the Cade Museum and I want to incorporate that!

Ernanda White: So cool!

Ernanda White: Thanks for sharing 👍 😊

Amanda Strawhacker: Liz, you can find more about our science-themed maker activities (and a photo gallery of the tools we used!) here at this website: <https://sites.bc.edu/devtech/research/past-projects/bioengineering/>

Megan (Museum of Flight): I do the same thing for robots but I have started to use "they" to incorporate non-binary genders

Liz Coker (she/her), Cade Museum: Thank you so much!

Megan (Museum of Flight): We use 'friends', 'learners', 'folks' instead of 'boys and girls', etc. in the museum setting

Adrienne: Earthlings!

Emily Relkin: I wonder what would happen if prior to calling children "scientists" we first teach them about diverse role model scientists that they can relate to?

Adrienne: NASA rovers/robots often have names that are character traits...Spirit, Opportunity, Curiosity, Perseverance...

Katie Price (she/her): Is there something to pointing out the actions and then label the identity?—you just did x,y,z [things that a scientist does], you are a scientist!

Emily Green: I would think it could be helpful to point to specific examples of women, for example, doing science and referencing those examples without using the term scientist. "Look at this person. This person is doing science."

Megan (Museum of Flight): Terms like 'friends' work better in informal settings because you only see them once for a 2 hour span at most so learning names is a high bar. And because it's informal the role of the museum educator can be a blend of 'friend' and 'teacher'

Liz Coker (she/her), Cade Museum: We feature inventors in our programming as a museum of creativity and invention. I include more diverse inventors in my programs and recently, I showcased a woman from the If/Then collection. One little girl looked at her and said, "She has hair braids just like me!"

Nancy Scales-Coddington: Thank you for sharing all the great ways you are engaging learners in your spaces!

Adrienne: Have students use movement/dance for each section of the scientific method!

Amanda Sullivan: Fun idea!

Celeste Kenworthy: I've also heard the phrase "thinking like a scientist" quite a bit

Marisa SLCPL: "I love how you used your eyes to discover something new!"

Liz Coker (she/her), Cade Museum: "I really like the question you are asking in your hypothesis!"

Jean Oviatt-Rothman (she/her): Focus on the NGSS Science Practices, which are all actions that scientists do: ask questions, plan & conduct investigations, interpret data

Nicole-Indiana State Museum: I like pointing out that they are applying what they learned to something else....that they are answering their own questions!

Nancy Scales-Coddington:

- NGCP Twitter: <https://twitter.com/ngcproject>
- NGCP Facebook: <https://www.facebook.com/ngcproject>
- NGCP Instagram: <https://www.instagram.com/ngcproject>

Nancy Scales-Coddington: Register for our upcoming webinar Exploring Paleontology to Spark Science Engagement from a Young Age!

<https://ngcproject.app.neoncrm.com/np/clients/ngcproject/event.jsp?event=718>

Nancy Scales-Coddington: If you enjoyed this webinar, support the work of the National Girls Collaborative: <https://ngcproject.app.neoncrm.com/forms/donation>

Amanda Cardarelli: Thanks so much everyone for your engagement today!

Adrienne: Thanks everyone, including the chat ideas and questions!

Nancy Scales-Coddington: Completed the post-webinar survey: <https://forms.office.com/r/mzhHrRRq8L>

Brenda Britsch: Such great information and engagement - thank you all!

Emily Relkin: What a great webinar! I learned so much. Thank you Amandas!

Liz Coker (she/her), Cade Museum: So many wonderful ideas!! I'm going to be putting them into practice next week as I teach Spring Break camp.

Amanda Strawhacker: Thank you for the wonderful chat conversation, what a joy of webinar!

Marisa SLCPL: Thank you! Such valuable research and information!

Megan (Museum of Flight): Use an example that maybe isn't super 'sciencey' like "Why do my socks smell?"

Nancy Scales-Coddington: A recording will be found here: https://www.youtube.com/playlist?list=PLiQ4o5aGUmU3z5sxNkrI5iWZ_G5AGep-h

Jean Oviatt-Rothman (she/her): Thanks so much! This was great!

Nancy Scales-Coddington: Thank you!!!