



January Theme of the Month Webinar Panel

Social Justice in the Science Classroom

January 12th at 6:30PM EDT



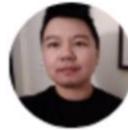
Kirstin
Milks



David
Upegui



Salina
Gray



Sam
Long



Resources Mentioned During Webinar and Webinar Chat

Resources from Panelists:

- Social Justice Standards:
<https://www.learningforjustice.org/sites/default/files/2020-09/TT-Social-Justice-Standards-Anti-bias-framework-2020.pdf>
- Gender Inclusive Biology (This website aims to curate resources and connect science educators, students, learners of all types, parents, guardians, and everyone involved in supporting and learning to grow a more inclusive biology curriculum) <https://www.genderinclusivebiology.com/>
- Beyond the Basics is a resource for educators on sexuality and sexual health <https://www.actioncanadashr.org/beyond-basics-sneak-peek-gender-galaxy>
- See all Panelist Resources posted on STEMTLnet:
<https://stemtlnet.org/theme/January2022#resources>

Resources from Participants:

- $I = (PAT)$ is the mathematical notation of a formula put forward to describe the impact of human activity on the environment
https://en.wikipedia.org/wiki/I_%3D_PAT
- A teaching tool for breaking the big concept of gender down into bite-sized, digestible pieces. <https://www.genderbread.org/resource/genderbread-person-v4-0>
- Elissa Levy - decolonizing Newton's Laws:
<https://drive.google.com/drive/folders/1Xp9pwuaUMIDgdPnQq4609RApYKneHe3D>
- Physics for Decolonizers:
<https://docs.google.com/document/d/1tIGOCB0hwVY8kqxJSyZtrZUoeZpSXHg70S6LIPtQiDc/edit>

- Lesson plans that explore the socio-political construction of race and investigate whether there is biological and scientific basis to the idea of race: <https://www.fredhutch.org/en/about/education-outreach/science-education-partnership/sep-curriculum/race-racism-genetics.html>
- The Underrepresentation Curriculum Project - A flexible curriculum designed to help students critically examine scientific fields and take action for equity, inclusion and justice. <https://underrep.com> and <https://underrep.com/lessonplans/>
- “Fugitive Science: Empiricism and Freedom in Early African American Culture America and the Long 19th Century” by Britt Rusert - Exposes the influential work of a group of black artists to confront and refute scientific racism. This distinct and pioneering book will spark interest from anyone wishing to learn more on race and society. <https://nyupress.org/9781479847662/fugitive-science/>
- “Orphans of Davenport” by Marilyn Brookwood is about science gone astray with eugenics. <https://www.amazon.com/Orphans-Davenport-Depression-Childrens-Intelligence/dp/1631494686>

Webinar Chat

Joni Falk (she, her): Hi Everyone, while you wait for us to begin please introduce yourself in the chat, tell us where you are from and your role.

Erin G: Erin Greenwood, STEM Coordinator, Boulder CO

Bharti R: Hello! My name is Bharti Rambrich. I am a student at York College. I'm from NY, Queens. I'm currently majoring in Interdisciplinary Studies, and minoring in Special Education.

Ibidunni O: Hi this Ibidunni Osundare and lives in Lewisburg, Pennsylvania. Nice to meeting you again,

Melissa C: Melissa Corrigan, Physical Science Teacher, Minneapolis MN

David Upegui (he/his) : Welcome! 😊

Salina Gray she/they/Payomkawichum : Welcome Everyone!

Daisy Y: Daisy Yeung, Science instructional coach, Redwood City, CA

Veronica H: Saw we're recording! Awesome! Will the recording be made available to us later?

Ibidunni O: I am working as American Sign Language professor at the university. Smiling,

Bruce B: Hello Dr. Upegui!

Kim Descoteaux: We will be muting everyone until the breakouts when we will let you turn on your mics and cameras

Lecia S: Lecia from Portland, OR, Masters in Teaching Next Gen Science from PSU.

Johnnelly D: Johnnelly Dublin, I am from Brooklyn, NY. I am a student at York College

Abdelfattah J: greeting dear educators from morocco

Scott B: Scott Barrentine from Franklin HS in Portland, I teach "Patterns" Physics for 9th graders and Biology to 11th graders

Marcia A: I am a student at Cuny York College

Jamie T: Hi Salina!! I'm a physics teacher in Los Angeles

john O: John Olson, science methods instructor, Minnesota.

Karin K: Hello. Karin Klein from the Museum of Science and Industry in Chicago - designing PD for Chicago science teachers

Layla G: I am Layla Grant and I'm a student at York college

Lecia S: I agree, Patterns changed my driving habits LOL

Reanna B: I am Reanna Bridgmohan and I am a student at CUNY-York College

Tara J: Science Teacher at Dana Hall School, Wellesley, MA. Thanks for hosting this!

Kate M: Kate Miller & Megan O'Donovan, Ph.D. students at Michigan State University

Kim Descoteaux: STEMTLnet is funded by NSF ##1932761 Opinions expressed on this site are those of the contributors and not necessarily those of the National Science Foundation.

Steve S: Steve Soth, single subject new credential

Julie C: Hi everyone! Julie Christianson, Supervisor of Science for CREC Magnet Schools in Hartford, CT! Students, if you are interested in teaching in a district that is intentionally integrated and working hard to be anti-racists. Please message me!

Patricia S: Hello everyone! Patricia Shiebler, MAT science student at Brown University

Jaclyn R: Hi all. I'm Jacki Reeves-Pepin (she/her) from NABT and really looking forward to this discussion!

Sam Long he/him : Hi Jacki!

Cameron S: Hello everyone, Cameron (he/him) nonprofit program coordinator/curriculum writer, occupied Duwamish lands (Seattle, WA)

Sue M: Hello Friends, Sue here from Southern Maine.

Abdelfattah J: thanks David for this clarification

Kirstin Milks (she/they) : Everyone - we'll be posting resources from this conversation — including Salina's and Sam's recent papers — in the discussion on STEMTLnet.org in the next few days to come.

Joni Falk (she, her): These papers will also be accessible from the Theme of the Month/ Resources on stemtlnet.org.

Susan M Kelly : Great to hear!

Kim Descoteaux: Standards that Kirstin is referencing:
<https://www.learningforjustice.org/sites/default/files/2020-09/TT-Social-Justice-Standards-Anti-bias-framework-2020.pdf>

Ritchele S Louis : WOW!

Joni Falk (she, her): Yes that was amazing!

Scott B: Is there an activity or exploration that you assign students that's shareable?

Ritchele S Louis : That was so informative. Thank you David!!!!!!

Phillip E: A honest presentation of the racism that needs to be untaught.

Layla G: I agree 100%^ really great!

David Upegui (he/his) : Yes, I will be happy to share the student-facing document where I list the assignment requirement and resources.

Ibidunni O: Thanks for excellent resources about your PhD historical projects. I was teaching with many elementary school students regarding focus on Deaf historical timelines in the past 17th century.

Scott B: do you touch on the IPAT formula for that, Kirstin?
https://en.wikipedia.org/wiki/I_%3D_PAT

Sam Long he/him : <https://www.genderinclusivebiology.com/>

Kirstin Milks (she/they) : @Scott — this year I didn't, but we've talked about it as a framework for next year's redesign! I hope you'll share in the breakouts about how you might use it!!

Tara J: Along the same lines as David's "lesser known scientists" project, I have my 12th grade students follow a scientist on social media. They are encouraged to follow someone from an underrepresented group or identity. I have them check in several times with updates on their scientist to let us know about any research/science they are working on, but also to see what other passions they might be talking about on social media. This might not work for all schools/classes, but it has been a successful way to sneak some learning into their social media use, and I've found some great follows, too!

Kirstin Milks (she/they) : @Tara I love that!

David Upegui (he/his) : Tara, what a great idea!

Susan M Kelly : ^^

Scott B: Love these practical steps for the pedigrees! I am always looking for opportunities to show the genderbread person to students.

<https://www.genderbread.org/resource/genderbread-person-v4-0>

Sam Long he/him: <https://www.actioncanadashr.org/beyond-basics-sneak-peek-gender-galaxy>

Karin K: Connecting symbols with meaning is a critical practice for scientists and a critical issue for student engagement. Using Sam's resources makes this practice much more cognitively obvious to students - at the same time it raises awareness of inclusivity

Scott B: I love how many things that you can study that end up looking like trees - capillaries, phylogeny, lightning, electricity through wood

-- Breakouts --

David Upegui (he/his) : Introduce yourself and tell us about what brought you to the webinar. (Let us know about any work you are exploring, ideas, or questions you have?)

Maggie R: I'm Maggie Radack, physical science & chemistry teacher in Durham, NC. Here as a semi-early career teacher looking to enhance my curriculum and shift in the direction of justice! Similar to Mauricio

Reanna B: My name is Reanna , I am a student at York college and I am currently trying to complete student leadership as well. I am majoring in English Education.

Kirstin Milks (she/they) : I love space so much

Steve S: 😊

Katey S: Some Physics before newton resources from Elissa Levy:

<https://drive.google.com/drive/folders/1Xp9pwuaUMIDgdPnQq4609RApYKneHe3D>

Johnnelly D: I am Johnnelly Dublin. I am a student at York College and I am here because it is a student leadership requirement but I really wanted to get the information that's being shared.

Mauricio R: So much of physics examples are cars and sports and I want to move away from that

Katey S: Here's a hypothetical physics for decolonizes syllabus from the Underrepresentation curriculum
<https://docs.google.com/document/d/1tIGOCB0hwVY8kqxJSyZtrZUoeZpSXHg70S6LIptQiDc/edit>

Ibidunni O: bidunni Osundare and working American Sign Language professor at Bucknell University. I am passionately loving teaching undergraduate students. Focus on the Deaf cultures, centers, gains, communal awarenesses.

Katey S: AIP also has a Physics before Newton page (but I prefer the PDF in Elissa Levy's folder) <https://www.aip.org/history-programs/niels-bohr-library/ex-libris-universum/newton>

Ibidunni O: Ibidunni Osundare and working American Sign Language professor at Bucknell University. I am passionately loving teaching undergraduate students. Focus on the Deaf cultures, centers, gains, communal awarenesses.

Kirstin Milks (she/they) : @Ibidunni, I am so glad you are here!

Ibidunni O: Thanks, Kristin M.

Kirstin Milks (she/they) : @Ibidunni, How do you find ways to incorporate justice into your work?

Ibidunni O: STEMletters sent me about announcement through previous Marymount University. Thanks for asking the question.

André D (he, him): Hello, I am André DeLeón, the Education Programs Professional (EPP) for K-12 Science and Instructional Materials (how's that for a job title? 😊 I also work for the Nevada Department of Education (NDE) in the office of Standards and Instructional Support (SIS). I jumped in late but I am here because of the webinar title and I am looking to learn how to center justice in science education and instructional materials adoption.

Scott B: the Fred Hutch "Race and Genetics" unit:
<https://www.fredhutch.org/en/about/education-outreach/science-education-partnership/sep-curriculum/race-racism-genetics.html>

William H: Hey everyone! My kids are VERY loud at the moment. I teach Chem and Physics in central Indiana. I've been working to bring justice into physical science. The

highlight of my month each month is reading my student's reflections on our version of the Field Experiences that she discussed earlier. They've been a huge step for me.

Kirstin Milks (she/they) : @André, what a great job title 😊 I am so glad you are here; the recording will be on STEMTLnet.org soon

Kirstin Milks (she/they) : @William hullo, friend - I am so glad you've found those field experiences useful and happy to see your face 😊

André D (he, him): @Kristin That's awesome. Thanks!

Katey S: Underrepresentation Curriculum: <https://underrep.com>

Maggie R: i'm also a Knowles fellow! 2019

Katey S: Hi Maggie!! Knowles represent!

Scott B: I tried to click through to the lesson plans there, Katey, and I'm getting "403 denied"

Scott B: the fred hutch curriculum is GREAT at explaining how science was used as a weapon to treat people horribly

Sam Long he/him : Yes, agency!

Katey S: @Scott: <https://underrep.com/lessonplans/>

Ibidunni O: We had several workshops at the University about Racial American Education in the system in October 2021. I learned a lot of this topic. Thanks for sharing this.

Kim Descoteaux: I also wanted to let everyone know that even though I'm recording, the breakouts will not be included in the webinar recording

Katey S: FYI, you can save this chat by clicking the three dots above your typing box and pressing "save chat"

Scott B: Anybody else have shareable resources that they like? I'd love to see em!

Steve S: Editing on-the-fly

Kim Descoteaux: I will also be cleaning up the chat and posting it tomorrow with the recording

Yvonne T: Here is the book by Dr. Brit Rusert:
<https://nyupress.org/9781479847662/fugitive-science/>

Erin G: This is Erin - I was able to share 😊 Just no video 😞

Salina Gray she/they/Payomkawichum : Yes! Erin! I appreciate you sharing!

Martina P: Hi, this is Martina. I was driving and could not unmute.

Salina Gray she/they/Payomkawichum : No problem! We are glad you are here!

Polly D: Janice has her hand up

Arthur E: A recent book "Orphans of Davenport" is about science gone astray with eugenics.

David Upegui (he/his) : Arthur, Thank you for the suggestion for this book.

Layla G: Hello, this is Layla 😊. I am studying at York college to become a teacher. I heard about this event through my schools email. I've learned a lot of information so far!

Janice W: No worries. The crux of the question was presented. Thanks.

Elizabeth B: one of the foci of my dissertation was on the chilly climate. thank you for sharing that

Janice W: @Salina TY so much for your response.

David Upegui (he/his) : YES!

Scott B: I hear "Social emotional learning" all the time and almost never see practical lesson plans for it

Ibidunni O: SEL (Social Emotional Language) Community teacher in high schools. Those are great! 😊

Salina Gray she/they/Payomkawichum : Thank you all!

Wanda B: Thanks so much! Fabulous presentations!!

David Upegui (he/his) : YES! Together we will make the world better by empowering our students—the future stewards of the world!

Erin G: Thank you!

Bruce B: Thank you everybody! Great conversations!

Janice W: Time well spent. Thank you for the knowledge exchange and dialogue.

Abdelfattah J: sharing our awareness is a key

Ritchele S Louis : Thank you for such a great presentation!

Kate M: Thank you!

Ibidunni O: Thanks for all of you! 😊

Salina Gray she/they/Payomkawichum : take care everyone!

Abdelfattah J: thanks

Mauricio R: Thank you!