

**Inventing Tomorrow Teacher Workshop****May 12, 2021****Link to the recording: <https://youtu.be/uLwD1EM0J6E>****eePRO post: <https://naaee.org/eeopro/learning/workshops-training/inventing-tomorrow-teacher-workshop>****Speaker: Chris Skowronski, Inventing Tomorrow Ambassador****Jamboard Link:****<https://jamboard.google.com/d/1OxrU90MFC0UeWEKZLta66UNMOMmRe4feWVIf2EFRGAK/edit?usp=sharing>****Survey Link: [https://berkeley.qualtrics.com/jfe/form/SV\\_a4NC87tm87oPCL4](https://berkeley.qualtrics.com/jfe/form/SV_a4NC87tm87oPCL4)****Highlights of the chat transcript:****Welcome!**

- Sheridan Daniels: Sheri Daniels, Teamates Chadron NE
- Melissa Neuffer: Santa Rosa, California, 10th grade Biology teacher
- Anne Umali, NAAEE: Hi hi! I'm Anne, from NAAEE, joining you all from Arlington, VA. Nice to see you all here!
- Anjana Awadhiya: Anjana Awadhiya Camden city NJ 9-12 Biology teacher
- Jennifer Keller: Jen Keller Southampton NY. HS AP Environmental Science Teacher
- Jenny Frank: Jenny Frank, Phoenix AZ, Maricopa County Air Quality Department
- Sandra Ocon: Chicago IL, 9th grade biology teacher
- Susan Vandenacre: Wayne, Pa, Woodlynde School Middle School
- Polly Burns: Hi all! Polly from ReNEW Schools in New Orleans, informal EE educator
- Jenni Heartway: Jenni Heartway, Blue Mountain School, Forest Kindergarten/ Forest Elementary teacher and administrator, Floyd, Virginia

- Kendra Smith, Happy Hollow Park & Zoo: Hello, Kendra Smith here. I am filling in for Kristy Benner representing Happy Hollow Park and Zoo Education Department, San Jose, CA
- Dori Hess: I am Dori Hess from Canton Ohio, GlenOak High School
- Monica Moore: Westminster, CO. Working on teaching credentials with PEBC to teach 9th grade biology.

**Presenter Question: How can we engage students in the NGSS Science and Engineering Practices during distance learning and social distancing?**

**Which practices are you currently using?**

**Which practices are most challenging to address?**

- 1. Asking questions and defining problems**
- 2. Developing and using models**
- 3. Planning and carrying out investigations**
- 4. Analyzing and interpreting data**
- 5. Using mathematics and computational thinking**
- 6. Constructing explanations and designing solutions**
- 7. Engaging in argument from evidence**
- 8. Obtaining, evaluating and communicating information**

- Makela Elvy: Using 1,4,6,7,8. The other are difficult with my age group.
- Pamela Chin: I'm an ELA middle school teacher but trying to create more opportunities that will engage students across content areas like science... particularly around climate change and sustainability. So I'm here to learn more ideas on how to teach my students to be curious, ask questions, define problems and identify solutions.
- Melissa Neuffer: Using: 4,6,7 Challenging: All but especially 3 & 7 10th grade Biology (low socioeconomic)
- Pamela Chin: I find students don't naturally ask questions/don't allow their curiosity to be nurtured
- Sandra Ocon: Using: 1,2, 4,7
- Dori Hess: I try to use all of them in my IB class, but I need help with 5
- jen keller she,her: Using 1,2,4,6,7 Challenging is 4
- Dori Hess: as I am not confident in my capabilities
- Kendra Smith, Happy Hollow Park & Zoo: In our virtual classroom programs we try to check for prior knowledge and follow-up to see what they have

learned. We incorporate interactive elements such as small investigations or asking questions.

- Steve Coppens: most challenging for me is number 7
- Anjana Awadhya: Constructing explanation independent work
- Margaret Cooper: Challenging 3
- Susan Vandenaere: Challenging is 5 as I teach students with multiple learning disabilities
- Julia Beck: I am a trainer and provider so it is a little different but we provide resources for 1,2,4,5,7. I think we can improve 3 and 8.
- Anne Umali, NAAEE:  
<https://jamboard.google.com/d/1OxrU90MFC0UeWEKZLta66UNMOMmRe4feWVIf2EFRGak/viewer?f=0>
- Anne Umali, NAAEE: Link to the jam board for folks that just joined us:  
<https://jamboard.google.com/d/1OxrU90MFC0UeWEKZLta66UNMOMmRe4feWVIf2EFRGak/viewer?f=0>
- Polly Burns: I am so thrilled to have a PD with very specific activities, tools and steps that - as he said - you could use tomorrow - that I could cry! Thank you!
- Jen Keller she,her: We could do water quality tests and compare the results to water quality standards then decide if the water is safe to drink or swim in or ok for the organisms that live there
- James Halpin: Science can help us identify variables in and out of our control in regards to water quality and then allow us to take corrective actions for the variables that help to create better quality for humans and the surrounding nature
- Jenni Heartway: Science can help us understanding underlying causes/issues with our water. Observe, question, investigate, share
- Kendra Smith, Happy Hollow Park & Zoo: using science to analyze current water conditions and surrounding factors such as what human land use is affecting the water and climate trends in the area.
- Melissa Neuffer: we can run tests on the water
- Julia Beck: knowledge=power. Science shows the story of our reality from data collection to communication.
- Pamela Chin: Instead of just assuming possible answers, we could use the inquiry process to investigate
- Kendra Smith, Happy Hollow Park & Zoo: inquiry, investigate, analyze

- Shawna Hampton-Riddle: Making observations, generating research questions, posing and testing solutions
- Anjana Awadhya: scientific method approach, with control variables
- Melissa Neuffer: Science can figure out why it is polluted
- Melissa Neuffer: or if it is
- Jenny waisner: Fantastic for sure thanks!
- Susan Vandenacre: Use the NASA satellites to collect data and show changes over time
- Sheridan Daniels: observe changes, propose reasonable solutions that are in line with science standards for water quality measurements
- Dori Hess: Science can examine changes in the pH and effect on macroinverts
- Dori Hess: amaznig
- jen keller she,her: Wow
- Pamela Chin: She's incredible
- Jenny waisner: Eloquent in her presentation
- Melissa Neuffer: Do you let them see each others work like we can?
- Melissa Neuffer: or do you make each group their own jamboard link?
- Dori Hess: will we have access to the recorded session for the links?
- Anne Umali, NAAEE: Yes, you'll all get the recording and a PDF of the slides, so you'll have all the links!
- Dori Hess: Thank you!!!!!!!!!!!!!!
- Pamela Chin: @Melissa - when I use jamboard with middle school, it's about setting expectations but sometimes it depends on the class. If it's a class that needs to be set up for success, I'll create different jam boards and have them share their screen at the end to share out. But if it's a class that can handle it, then I just use one :P I also like to hope that they're so engrossed in their own group's activity and meeting standards/getting ready to share out that they won't worry about anyone else's :)
- Judy Braus (she, her): It's such a great film! :-)
- Jenny waisner: They appeared to be concerned about the seriousness of the issues.
- Anne Umali, NAAEE:  
<https://jamboard.google.com/d/1OxrU90MFC0UeWEKZLta66UNMOMmRe4feWVIf2EFRGak/viewer?f=9>
- Dori Hess: I enjoyed learning about JamBoard.
- Susan Vandenacre: All great! Thank you so much!
- Anne Umali, NAAEE: I enjoyed the JamBoard interactives!

- Kendra Smith, Happy Hollow Park & Zoo: We plan to utilize Jam Board for one of our programs coming up, great to get some experience with it
- Sandra Ocon: The interactive component
- Dori Hess: I am going to try and use it with my students
- Melissa Neuffer: Jamboard, this movie
- Jenny Frank: Loved all the resources you shared! Thank you!
- Anjana Awadhiya: very good interactive activities and technology.
- Kendra Smith, Happy Hollow Park & Zoo: Looking forward to seeing the full movie
- Pamela Chin: Thanks so much! I use jamboard but you shared some new ways to use it beyond what I've done so thanks! And I never heard of this movie before this workshop so I'm really excited to integrate into our curriculum.
- jen keller she,her: Thank you for the interactive! This workshop was so helpful and I will use it all
- Jenni Heartway: It was my first time working with JamBoard, and I'm looking forward to seeing the movie. Thanks!
- Monica Moore: Thank you!! Jamboard and the movie were all really great!
- James Halpin: I had never heard of the movie until now, looking forward to watching and sharing it!
- Dori Hess: Thank you again
- Sandra Ocon: Thank you!!
- James Halpin: Thanks for the wonderful presentation!
- Anjana Awadhiya: thank you
- Kendra Smith, Happy Hollow Park & Zoo: Thank you for an engaging workshop