CHAT TRANSCRIPT

Integration with ELA and Math

Ali Stone, Daniel Luevanos, Clifton Roozeboom, and Tammie Schrader

August 5th, 2021

01:13:09 Scott Kiessig - ScIC | PocketLab: Learn about our integration panelists at https://www.thepocketlab.com/scic6-summit-integration
01:13:25 Scott Kiessig - ScIC | PocketLab: Carrie- the whole day is recorded and will be sent out next week
01:13:29 Mona Alhossin: Chris, Thank you.
01:13:30 Umm Kulthum AL-EZZ: you are welcome clifton
01:13:36 Dave Bakker - ScIC | PocketLab: Wow thanks for all the great questions for Chris, I hardly had time to get to all of them - we will invite Chris back!!!!
01:13:40 Peter Rothman: San Jose in the house 😎
01:13:45 Donna Smith: I love Desmos!!!
01:13:47 ANIL KUMAR KODALI: https://www.foldscope.com/ for
01:13:53 Carrie Reardon: Great! I appreciate it!
01:13:56 Imani Malaika-Mehta: I bring electron microscopes to tools that do not have them.
01:13:59 Noreena Falta: Caarrie Reardon, There is a setting in zoom to auto record...
01:13:59 Gigi Shanks: Dan Meyers is at Dsmos
01:14:03 Imani Malaika-Mehta: *schools
01:14:06 Diane Hickey- National Science Foundation: @ali - "Dude, you're on mute" is actually in the credits of the Disney animated movie Raya and the Last Dragon because that movie was created completely remotely. So if a major motion picture team does it, we're in good company...

01:14:12 Vinita Singh: @Donna Me too! Love Desmos!
01:14:17 Scott Kiessig - ScIC | PocketLab: Drop your questions in the chat for the q&a section coming up! Make sure to tell us what school you are from and where in the world you are.
01:14:45 Scott Kiessig - ScIC | PocketLab: Valarie- email us! contact@thepocketlab.com
01:14:49 Devalyn Rogers: Communication is fundamental to science
01:14:52 KT Moran: Tammie - YES!!!! They must be able to communicate!!
01:15:06 Donna Smith: Yes, industry is looking for scientist who can communicate.
01:15:08 Imani Malaika-Mehta: #interdisciplinary STEM
01:15:36 Celri Olley: Love working with Maths as ELA teacher - we used the NatGeo Inquiry Process in an IBL to learn about the Global Methane Problem (our work here https://www.celriolley.com/our-classroom)
01:15:38 Donna Smith: I feel like a silly billy but I do not know what the acronym ELA means.
01:15:39 Devalyn Rogers: @Schrader: Slightly Seasoned: LOL
01:15:48 Scott Kiessig - ScIC | PocketLab: English Language Arts
01:15:49 Taru Popat: I use to show experiments on POCKET LAB to my teachers and students
01:15:50 Katia Monterrey: English language arts?
01:15:52 Celri Olley: English Language Arts
01:15:59 Donna Smith: Thank you Scott and others
01:16:10 Devalyn Rogers: ELA: English Language Arts
01:16:22 Katia Monterrey: Classes that help with literacy skills: reading and writing.
01:16:25 Yeana Kelly-Simmons: Which is why the Creative Arts is integral to this process as it teachers the individual how to express their thoughts, ideas & feelings, as words, movement & images.
01:16:36 Scott Kiessig - ScIC | PocketLab: Want to see real teacher dedication? Tammie just had her appendix out yesterday!
01:16:37 Chris Kesler: Would have loved to be in Tammie's class.
01:16:44 Alisha Flores:Same
01:16:44 Raju Sunar: Sure, I love to way that you have really explained about maths. Are you maths lover? if yes
01:16:46 Celri Olley: Thematic, contextualised teaching in partnership with another subject helps kids make sense of ABSTRACT thinking required to solve problems and yes - it makes the leaning authentic!
01:16:54 Nadya Rivera: Will this session be available to see later on?

01:16:55 Donna Smith: Thank you Tammie for your dedication.
01:16:55 Raju Sunar: Sure, I love to way that you have really explained about maths. Are you maths lover? if yes
01:17:02 Devalyn Rogers: @Schrader: Thank you for being here after your surgery!
01:17:06 Jen Massey: Yes, @Yeana! Also, how to think creatively!
01:17:18 Scott Kiessig - ScIC | PocketLab: Nadya- the recording will be sent out next week
01:17:33 Scott Kiessig - ScIC | PocketLab: Drop your questions in the chat for the q&a section coming up! Make sure to tell us what school you are from and where in the world you are.
01:17:36 Susan Pritchard: Tammie is absolutely correct ... if you check data of college students .. those who take calculus simultaneously with physics .... whoala ... THEY ARE MUCH MORE SUCCESSFUL AS THEY CAN APPLY WHAT THEY ARE LEARNING!!!
01:17:36 Taru Popat: I like PhET website, its wonderful site for SCIENCE stimulations
01:17:54 Devalyn Rogers: You can group students together, some love to talk and there are others who are willing to scribe
01:17:55 Raju Sunar: Sure, I love to way that you have really explained about maths. Are you maths lover? if yes,can you relates anything that is in our lives with mathematics?
01:17:58 JoAnn Scales: Agreed!!
01:18:02 Devalyn Rogers: They help each other
01:18:10 Celri Olley: Storytelling is such an important skill in ALL subjects in different ways. We just need to understand the language of the subject it is told in!
01:18:12 Kristen Bruna: Yes!!
01:18:16 Debby Nelsondr: At our STEM school, we integrate all subjects, including art and music, into our STEM units. Our kids are fabulous collaborators and communicators, and it shows it's an amazing thing to see. It can be done, but it takes focused effort and willingness to consider alternative schedules and other pedagogical changes that districts are generally not willing to consider.
01:18:16 Jen Massey: YES, TAMMY!!!!!!
01:18:18 Ladonna Feldhake: Students ask “when will I ever need this” and in context lets them know that!
01:18:27 Theresa Mcendarfer: STEM is not multiple choice!
01:18:30 Brenda Burke: That was awesome, Chris. As a Special Education Technician, I am at a loss for motivating the students I am mandated to help. I am hired to help them with their behavior however, often their problem is their lack of

basic math and reading skills. My job is like putting my finger in a dam. So many students fall through the cracks They have so much potential, but have given up. by grade 5 or 6. I want to affect greater change but I am not sure how to proceed.
01:18:36 Michael Bilica: True Tammie, we have to teach to the test when there is a high stakes test at the end of the course
01:18:39 Leah Young-Chung: Tammie speak on it!!!!
01:18:44 Imani Malaika-Mehta: Testing is good for playing Jeopardy! But not for real life.
01:18:47 Vinita Singh: YES!!! Standardized testing don't help us create thinkers
01:18:52 Jen Massey: PREACH IT, SIS!
01:18:54 Celri Olley: Testing is only ONE way of measuring ONE kind of learning...
01:19:03 Melissa English: Exactly Tammy! We don't like to teach to the test, but salaries and student progress are tied to that waste of time.
01:19:04 JoAnn Scales: Amen!!!
01:19:04 Umm Kulthum AL-EZZ: Thank you
01:19:17 Patty Laker: Yes!!!
01:19:25 Vinita Singh: And we are testing kids more than we are teaching them
01:19:35 Theresa Mcendarfer: And why are teachers evaluated based on these tests?!
01:19:37 JoAnn Scales: @Melissa! That is a true statement! Education is a business now!
01:19:40 NICOLE WEIL: High stakes testing is so discouraging for my SpEd students.
01:19:40 Tanka Bahadur Karki: I want some good websites and mobile apps for Science teachers and students for fun learning and teaching!! could you please provide me such websites and apps?
01:19:42 Leah Young-Chung: The mindset of this panel is so inspiring.
01:19:54 Sunoj Das Shrestha: Totally agree, knowledge is power only when you know how to use it and only way to learn how to apply the knowledge is through getting into the problem and trying to solve it. learning is an experience and as educators we need to make these experiences situated.
01:19:56 Eileen Resnick: best assessments are labs and projects NOT tests
01:19:57 Noreena Falta: What about teaching STEM to those who have special needs such as ADHD, ASD, etc?? Is there different ways of teaching them as opposed to general kids???
01:20:04 Celri Olley: Giving kids the opportunity and voice to choose how they want to learn and what they want to focus on and measuring their progress through observation, collaboration and by sparking curiosity again!

01:20:07 Cynthia Garay: MANY TIMES, STANDARDIZED TESTS DO NOT REFLECT IN CONTEXT THE STUDENT´S OUTCOMES, AND BECOME A DOWNSIDE. IT HAPPENS IN MANY COUNTRIES. IT HAPPENS IN MY COUNTRY
01:20:09 Chris Kesler: True Celri. It's easy to bash standardized testing, but there is a place for accountability. It's ONE way to assess.
01:20:15 Jen Massey: Again, I say, get the testing/textbook companies out of our districts and let teachers teach!
01:20:21 Susan Pritchard: CHRIS RUSH ... HIRE TAMMIE AS A CONSULTANT TO US DEPT OF ED ... SHE IS HITTING ALL SORTS OF KEY POINTS ... Think back ... how much testing was done in the 70's when we were exploring space so well ... we need authentic everything!!!!
01:20:27 Michael Bilica: Chris Rush is talking about Mastery based education
01:20:30 Donna Smith: They are faculty who are raising their scores at their schools with standardized tests that have been truly helping students to learn.
01:20:32 Sunoj Das Shrestha: here's how I am approaching STEAM in education www.karkhana.asia
01:20:35 Imani Malaika-Mehta: In karate, you must demonstrate that you have mastered a SKILL.
01:20:37 ALEXIS LEWIS: Activity based learning works for Spc Ed and regular students. More learning.
01:20:44 Celri Olley: Testing is exactly - ONE way - other ways must be explored and given equal weighting.
01:20:52 Valorie Vance-Kraus: One thing is that every student in my classroom has a different topic that *sparks* them. If I'm really excited about colors- and I integrate colors into a huge lesson with my cross curricular colleagues, but a kid in my class doesn't care about colors, but instead LOVES cars, then how do I reach each of the kids....
01:20:54 Carey Hancey: Do you have good resources for integrated resources for science literacy
01:20:55 Arjun Dhamala: yes of course
01:21:04 Jeff Couch: Yes! Move in when ready!
01:21:07 Lisa Slack: Standardized testing is funny as teachers are told to differentiate instructions for our different learners but then they have to take a test that doesn't reflect that at all.
01:21:21 Ladonna Feldhake: The state/federal government mandates when we test. How do we change the system?
01:21:24 Rajaneesh Chandra Gupta: good morning,good afternoon and good evening to everyone .Myself Rajaneesh Chandra Gupta a science teacher from

Nepal.A big thanks to the entire team of organizer for such wonderful and fruitful programme .If we can get full package learning of STEM it would be much much better because I don't know abcd of STEM but I am keen interested to implement it in our school.The time of this programme is very late hour here in our country .it's going to be 10:30 p.m. here.thanks
01:21:25 Michelle Steinberg: Question is the chat going to be available to read all the questions and answers?
01:21:26 Jen Massey: Yes, Lisa! Exactly!
01:21:29 ERIC CROMWELL: When will we stop the chronological grouping of students?
01:21:45 Vinita Singh: @Lisa aren't the two things contradictory?
01:21:45 Celri Olley: Yes @Valorie! Amazing that you are doing that!
01:21:51 Kari Espada: Providing student choice and still assessing mastery or being able to grade the assignments across multiple platforms and abilities.
01:21:54 Darla Tillman: Exactly Lisa!
01:21:56 Nagwa Fekri Rashed: at a high school level, if student learn STEM. Is that applied or connected to how they have to prepare for SAT, or ACT?
01:21:58 Susan Pritchard: YES YES YES
01:22:14 Celri Olley: Yes @Kari
01:22:17 Michelle Atkinson: Hi Sue!
01:22:19 Debby Nelsondr: I agree with Alex - ADHD and ASD kids excell with active learning. Phenomenon, asking/answering their own questions...
01:22:21 Imani Malaika-Mehta: 97%
01:22:21 Theresa Mcendarfer: 30%
01:22:22 Denise Zut: Yes!! Hire Tammy!!!
01:22:23 Danielle Romais: A lot
01:22:26 Michelle Steinberg: 75%
01:22:26 Donna Sawyer: 90%
01:22:31 Lisa Chappa: 25
01:22:31 rhonda heatherly: 40%
01:22:32 Brandi Henderson: 30%
01:22:33 Linda Dixon: 100%
01:22:33 Devalyn Rogers: My take: You are always preparing students for assessments!
01:22:34 Carey Hancey: 5%
01:22:34 Kari Espada: 30%
01:22:36 Jen Massey: "The limit does not exist."
01:22:36 Mary Kollman: 20 percent at least
01:22:36 Mrs. S Hunte: 90%

01:22:37 Jill Kraynek: 5%
01:22:40 Abigail Perkins: including grading, 60-75%
01:22:43 Deborah Shick: 30%
01:22:46 ERIC CROMWELL: Way2Much%
01:22:46 Janet Littlejohn: 30% Standardized testing is a poor measure of what children have learned. Teaching to the test is poor pedagogy.
01:22:47 Kristen Boyd: 75%
01:22:47 Edith Sampson: 15-20%
01:22:47 Michael Bilica: I spend 40-50% preparing for the end of the year state test for Intro Physics
01:22:48 Faith Howell:A minimum of 30%
01:22:49 Shari Solomon-Klebba: 30-40% Deaf Education tests students TOO MUCH!
01:22:49 Melissa Peterson: 20%
01:22:49 Vinita Singh: @Donna English Language Arts
01:22:50 Valorie Vance-Kraus: I'm at a private school. We don't do much standardized testing- only once a year in middle school
01:22:50 Chris Kesler: 25%
01:22:52 Darla Tillman: Too Much %
01:22:53 Eileen Resnick: Taking standardized tests take up a lot of time
01:22:58 Melissa English: 30% high school not counting just for my content
01:23:09 Lisa Slack: Thank @Jenn and @Vinita, that was my point the two things don't align.
01:23:09 Keshab Paudel: My question is all kids these days are not much curious and attentive towards studies; more over as science has gone distance too, so the experimental activity has became like nightmare so how to cope this kids who whole day indulge in digital games, so it is not so easy in my case much not sure about others.
01:23:16 Niva Chhonkar: 70%
01:23:20 Christine Hirst Bernhardt: What I'm supposed to do: -80-90%. What I do-0. Providing unique experiences in science equip students with skills for life. They are on the new smarter balanced tests too.
01:23:21 Donna Smith: Good point Tammi
01:23:23 Michael Bilica: I have to include standardized test practice in every assignment
01:23:31 Umm Kulthum AL-EZZ: 67
01:23:31 Susan Cabello: For the standardized test? 0% For regular assessments 10%
01:23:32 Rinita Hasa: 45%

01:23:45 Celri Olley: I have a lot of freedom in my space, so I limit testing to a minimum and when I want to assess a specific and/or foundation skill - so my assessments are focused on skills...
01:23:48 Justina Meek: We're very standardized by age too, whereas back in like one room schoolhouses, they'd advance as they learned each level. Wouldn't schools be cool if you could be in a different "grade" for each subject?
01:23:53 Imani Malaika-Mehta: I don't worry about testing. I teach practical skills:coding, CAD, HOW TO FLY AN AIRPLANE, etc.
01:23:54 Mezna Alhossin: 88
01:24:00 Hira Dangol: sure sure
01:24:01 Jill Kraynek: I'm moving to a new school with significant refugee populations that may not speak any English. How can you design experiences that encourage learning Science if they need support asking questions?
01:24:04 Davy Van den bergh: In Belgium we dont have stadardized testing. We have minimum goals from government. We can teach how we want and more or less when we want but our tests, we compile ourselves, need to at least test these minimum goals.
01:24:05 Eileen Resnick: Chris, agree 100%
01:24:07 Valorie Vance-Kraus: Low test scores in our public schools follows low income lines
01:24:17 Devalyn Rogers: The learning curve is to teach for the Critical thinking behind each skill mandated!
01:24:18 Danielle Romais: Are private schools under different rules for testing?
01:24:24 zarha hammoud: please resend the link for first day ofhe summit
01:24:25 Kaia Lindberg: YEAH!!!!
01:24:29 Jane Hurley: @Tammie! YES - Quote Chris!
01:24:32 Melissa English: Add to everyone taking certain standardized tests, but we also give AP tests and other specialized "standardized tests"
01:24:33 Sue Bedard: there is zero time in the school day to incorporate STEM in a meaningful way...everything is tied to testing
01:24:35 Lorraine McKay: Competency Based Education!
01:24:36 Celri Olley: Yet our exams out-weigh the other assessments...
01:24:39 Michael Bilica: standardized testing is inextricably tied to systemic racism
01:24:46 ERIC CROMWELL: I'm with Tony Wagner. Our curriculum should be a series of meaningful problems.
01:24:53 Diana Abasta: I'm in English teacher who thinks that we have to use writing as a tool across all disciplines. Students need to understand that thinking, evaluating, synthesizing, and analysing are what they do across the

disciplines. They think English is one subject and when they leave the class, they don't see how the thinking translates across the disciplines. I agree that students need to learn how to learn; they need to go beyond memorization.
01:24:53 Ladonna Feldhake: Evaluating what we need to prepare students for, evaluating where students are, reteaching, finding new strategies for students to understand, and showing data to administrators and the state takes time, in class, after class, in the summer.....
01:25:04 Margherite Dadiego: I'm at an international school and we don't do standardardized science testing. What changes are made based on test scores at the school level and strict , state ,federal levels?
01:25:06 Katia Monterrey: Speak with instructors of ELA courses!
01:25:11 Abigail Perkins: to elevate in a belt in karate, the assessment is individual with more assessors than the student, sensei and another ranked belt, for example
01:25:12 Celri Olley: I agree @Diana
01:25:13 Katia Monterrey: Integrate with ELA instructors
01:25:14 Imani Malaika-Mehta: My teaching is subverts the current system. I can't wait for it to change.
01:25:33 Devalyn Rogers: R.U.B.I.E.S - AVID Annotation skills: I am certain there are many more skills that integrate ELA and Science
01:25:40 Celri Olley: Teachers must learn to collaborate more effectively across curricula.
01:25:42 Carey Hancey: Close read science articles will teach students how to read technical writing
01:25:47 Melissa English: We would LOVE to have planning time with other content teachers, but we all teach all day and most of us sponsor/coach after school.
01:25:51 Susan Cabello: I teach my students how to write Abstracts, APA research papers, and lab reports using Environmental Science as the medium.
01:25:52 Peter Rothman: standardized testing assumes a standardized level of preparation which isn't true.
01:25:57 Alison Castillo: context in all learning, leads to inquiry driven, curiosity powered educational experiences. Standardized testing has been the death of so many learning journey's for kids.
01:26:01 Fatimah Abdul Rahman: Hi this Fatimah Abdulrahman from Ghana
01:26:15 Celri Olley: And be given opportunity to experiment and grow together - as a team.
01:26:19 Darla Tillman: I'm over here trying to figure out how I'm gonna move to Washington

01:26:35 Valorie Vance-Kraus: Lab notebooks help me to integrate both writing and math
01:26:36 Peter Rothman: I teach in a university...my class is project based not testing based
01:26:36 Donna Smith: I use Top Hat and it allows me to ask a variety of question types and one asks explain the reasoning for your choice rather than just getting the right answers. Or just showing a solution.
01:26:40 Alicia Byrd: College prof so not applicable, but I see the result in students coming from the HS standardized testing machine
01:26:53 Abigail Perkins: GRE is college
01:27:01 Theresa Mcendarfer: Support and praise your teachers for trying new things
01:27:06 Carey Hancey: Teacher teams with English and Science
01:27:17 Donna Smith: I am a community college professor so I don't have the demands of standardized testing.
01:27:18 Jan Leslie: Provide common prep time and support the STEM initiatives
01:27:34 Abigail Perkins: Community of Practice AND Community of Learners at the local levels
01:27:34 Theresa Mcendarfer: Mix your PLCs
01:27:34 Beth Hall: That is exactly what my physical science INQUIRY class for PST K-5 teachers @Tammie
01:27:46 Lori Davis: General Ed standardized testing prep is low but AP test prep is over 50%
01:27:51 Timothy Niiler: decrease workload so that we have time to grade or else provide grading support
01:28:06 Gigi Shanks: Subversion is fun, especially when it deals with social/ equity issues. All of these have a math component
01:28:07 Danielle Romais: how much freedom do teachers in public schools have to adapt their curriculum?
01:28:10 Katia Monterrey: My masters was in English Composition. My PhD is in education but with an emphasis in language, literature, and culture. The discipline is trying and there are organizations speaking to this concern: Writing Across the Curricula (WAC), Writing in the Disciplines (WID)
01:28:25 Imani Malaika-Mehta: Neil DeGrasse Tyson says that ALL kids are scientists!
01:28:28 Katia Monterrey: We need more conversations like this! Love it
01:28:31 Chris Kesler: My job is not to teach to the standardized test, but to to get students interested in learning STEM through exploration and student-led

activities. If I can do my job well, the standardized piece kind of falls into place. As mentioned before, it's one way to assess students. It's not the only way.
01:28:37 Brenda Breil: An ex-administrator gave all teachers and, I Blew It pass so we could try new things.
01:28:39 Kaia Lindberg: Its hard to say how much time I spend on test prep because we are always teaching content, I don't spend much on test taking which is a separate skill, but I am always teaching content I hope they can reflect that learning on the tests!
01:28:43 ERIC CROMWELL: Having written standards based, integrated curriculum with ELA, Science, and Social Studies. It is a wicked Sudoku puzzle.
01:28:45 Nilar paw: Now in our country very bad situation.
01:28:46 Slavica Bernatović: @Romains .. up to 20%
01:29:14 Imani Malaika-Mehta: Sports statistics = maths
01:29:15 Peter Rothman: Because teachers make math boring don't talk about the beauty or utility of mathematics
01:29:18 Molly Hamill: Yes, we get to choose the format we use as a private school. Still run into difficulties with administration as private schools are a business and must keep our "market share" of the students.
01:29:20 Anita Bero: As instructional coaches working together to integrate the math, science and ELA. Use the authentic science experiences to engage the math and ELA students.
01:29:28 Valorie Vance-Kraus: grrrrr.... worst words in the world! "I'm not a math/ science person."
01:29:38 Imani Malaika-Mehta: Maths is in everything you do!
01:29:40 Chris Kesler: I kind of wish we said "maths" in the US. :)
01:29:41 Lisa Slack: I also note that the standardized test examples also don't reflect the global majorities experiences (e.g,, how can a kid reflect on an article about camping if they have never been camping before for whatever reasons).
01:29:48 Peter Rothman: it means someone told them that in the past
01:29:58 Melissa English: What job operates in a vacuum of only one skill?
01:29:58 Leah Young-Chung: Can I say I'm not a multi variable calculus person?
01:30:04 Gigi Shanks: balance your finances, adjust a recipe- all math
01:30:07 NICOLE WEIL: Jo Boaler / YouCubed has good encouragement, materials, and videos on how EVERYONE is a math person
01:30:08 Peter Rothman: don't say this to your students
01:30:11 Lorraine McKay: Integrating math into real life context like STEM goes far to eliminate math anxiety
01:30:21 Slavica Bernatović: @ Romains .... up to 10-20 % in Croatia

01:30:27 Carey Hancey: How does Kesler science and Desmos support science literature? Do you have resources to assist teachers with this goal?
01:30:28 Valorie Vance-Kraus: Can I say "I'm not a communicating person"
01:30:29 Donna Smith: Never say that you are not a math person.
01:30:33 Michael Bilica: Well most teachers here spend 25% or more teaching to the test
01:30:52 Imani Malaika-Mehta: I show students how they are being cheated when they don't know math.
01:31:00 Michelle Steinberg: My daughter was in a Higher math program and had projects that had to work across the curriculum using Math, science and ELA scenarios or putting it all together.
01:31:02 NICOLE WEIL: https://www.youcubed.org/ Inspire ALL Students with Open, Creative Mindset Mathematics
01:31:22 Devalyn Rogers: When teaching, I go into the situation as if none of my "scholars" know any information. If you start from ground up and allow students to add to the conversation, they incorporate their background knowledge and are able to learn and ask questions from all involved in the conversation.
01:31:45 Carey Hancey: YES, Cliff!
01:31:47 Imani Malaika-Mehta: Use math is what students care about.
01:31:55 Imani Malaika-Mehta: *in
01:31:58 Vanessa Kelly: New teacher here. My credential program had an entire class where we learned about how to integrate reading and writing into our content area classrooms.
01:32:03 Natalie Granger: Inquiry approach
01:32:13 Dave Bakker - ScIC | PocketLab: Great question Ali :) !!!
01:32:15 Imani Malaika-Mehta: I already do it!
01:32:18 Devalyn Rogers: https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.redlandsusd.net%2Fdomain%2F5491&psig=AOvVaw22uDvrYLuu2soK5d7DZDK9&ust=1628268602469000&source=images&cd=vfe&ved=0CAsQjRxqFwoTCPjIzrWrmvICFQAAAAAdAAAAABAJ
01:32:21 Rohit Paikara: 20 to 40%only standardized tests because syllabus is very vast and we are taking 5to6period every day
01:32:21 Tiffany Wendland: @devalyn - how do you have time to start from the ground up? what grade do you teach?
01:32:21 Donna Smith: @Vanessa that is excellent!
01:32:43 Gloria Mejia: Background knowledge is the key
01:32:47 Lisa Chappa: We start school next week. STEM activities are great teambuilding.

01:33:01 Tyler Letendre: I always start with getting to know student interests and building from that much like what Tammie is describing!
01:33:03 Melissa English: We use clubs often to do hands on collaboration with the community. Now building a trail with the county and students see the integration of skills.
01:33:10 Debby Nelsondr: Meeting with ELA and math teachers gave me vocabulary to begin to use in science class, and I began to make more clear connections. Conversely, the ELA teacher began asking questions that connected to science. Ex. "In science, you are learning about how losing one species throws off the ecosystem. How might this story be different if one of the characters was removed?"
01:33:14 Justina Meek: As a librarian, talk to your local library and advertise their stem programs to your students so they'll be excited to go to library programs
01:33:16 Nagwa Fekri Rashed: I teach Chemistry in Japan at College of technology ,or KOSEN, where students learn a great deal of STEM subjects. Engineering and technology is used in project based learning style. Which is really awesome. However, if any of y students are willing to study at any international university, they will face the real challenge of WASTING their time to be trained on how to prepare for Standardized Tests. Are there any other options for them?
01:33:21 Alison Castillo: We are a "nature-based" stem outreach nonprofit. All our activities are linked to outdoor problem solving and critical thinking. It has to be individualized and inquiry driven
01:33:21 Valorie Vance-Kraus: Question for Clifton: Are there resources that have banks of data? I don't have lots of time for data collection and not lots of $$ for data collection (I teach chemistry- grade 10 and AP)
01:33:22 Rohit Paikara: so we Nepalese mathematics teacher has no time for standardized tests
01:33:46 Maureen Bourke: WE have always had red ones!
01:33:52 Linda Dixon: Yes! Mrs. Tammie.
01:33:54 Theresa Mcendarfer: I teach Middle school, so I use video games like fortnite and percentage rates of which v-bucks is the better buy and why
01:33:56 Devalyn Rogers: @Schrader: Or the "How many licks to get to the center of a Tootsie PoP"
01:34:10 Alisha Flores:Reeses pieces was created because of the copyright on m ms for the movie E.T.
01:34:12 Susan Pritchard: WOW ... TAMMIE ... PLUS CHOCOLATE ... AND STEM ... WHAT A GREAT RECIPE FOR SUCCESS ... YUM YUM YUM!!!
01:34:16 Chris Kesler: Candy wins the day in middle school classrooms.
01:34:22 Scott Kiessig - ScIC | PocketLab: Augusto- Yes the recordings will be sent out next week

01:34:24 Noreena Falta: I find most kids learn better with Hands On projects.
01:34:24 Danielle Romais: Whenever I do a lab that involves candy/oreos, kids are all in.
01:34:25 Imani Malaika-Mehta: @Alison - My STEM nonprofit is all about sustainability.
01:34:26 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District: Why Pi? - a book about the Why of Math and Science topics https://www.dk.com/us/book/9781465443878-why-pi/
01:34:37 Devalyn Rogers: They have to ask, why does someone else's pop get smaller faster?
01:34:46 Devalyn Rogers: And delve from there
01:34:47 Vanessa Kelly: Kit Kats would be a great option for that lesson also. There are tons of flavors!
01:34:56 Susan Cabello: I use the recipe for "Tamales" to teach the students how to write a lab report.
01:35:05 Faith Howell:.
01:35:05 Susan Pritchard: YES YES ... I ALWAYS SAID ... CAN TEACH ANYTHING WITH MONEY, PIZZA AND CHOCOLATE!!!
01:35:12 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District: Bedtime Math - daily Science and Math problems to do at home. https://bedtimemath.org/
01:35:17 Imani Malaika-Mehta: Yasss! @Susan
01:35:32 Danielle Romais: Teaching Stoichiometry with S'Mores! :)
01:35:32 Noreena Falta: @devalyn, HMMMM good question... :)
01:35:40 Imani Malaika-Mehta: Use Family Math by the Algebra Project
01:35:41 Lisa Slack: I love the use of cooking to teach, writing, math, and science.
01:35:53 Katrina Roseos: notice and wonder stuff, love it
01:35:55 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District: 3 Act Math - Science and Math problems for grades 3 through 12 https://whenmathhappens.com/3-act-math/
01:36:08 Angela Justman: the assembly of a PB&J demo is always funny and engaging for thr importance of details and sequence
01:36:14 Alisha Flores:https://wonderopolis.org/
01:36:38 Devalyn Rogers: Communication: I have students write up how to wrap a present, then give their directions with a box and wrapping paper to someone else. That next "scholar" has to follow the directions explicitly and show the results, many do not write the directions correctly the first or sometimes second time. They love it!

01:36:54 Imani Malaika-Mehta: That is a flow chart.
01:37:13 Liora Bialer: we have to take into consideration security
01:37:13 Beth Hall: II recommend using books and have a lesson on linking non-traditional scientist and K-6 literature.
01:37:14 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District: Yes! I put those in the chat! :)
01:37:17 Noreena Falta: Thanx everyone for the links posted!!
01:37:21 Imani Malaika-Mehta: Flow charts lead to algorithms.
01:37:24 Lori Davis: I love the science behind making a cake and experimenting the brown sugar/white sugar ratio in chocolate chip cookies.
01:37:37 Davy Van den bergh: I use Netfilx or games a lot to get kids interested.
01:37:47 Carey Hancey: Loving the resources the audience are providing and the ideas of the panelists!
01:37:49 Christopher Mick: Permission to Fail is a huge concept to get across to my students. Experiments
01:38:15 Imani Malaika-Mehta: Pi
01:38:15 Peter Baker: Ha Ha! Interesting. As a member of MENSA, having toured the advanced Physics Dept. of Oxford University, allowed into France because of who I am and bowed down to in China for the same reason and got the cube root of 328,509 in my head in 10 seconds, and one of my favourite statements "the hiker sees the mountains clearest from the distance" this makes STEAM as important or more than STEM. Open up!
01:38:21 Danielle Romais: How many drops of water fit into a penny
01:38:28 Maureen Bourke: Juggling and math
01:38:41 rhonda heatherly: What was that site?
01:38:43 Beth Hall: I also have similar lesson with paper towels to the M&Ms. For food issues
01:38:43 Scott Kiessig - ScIC | PocketLab: https://www.desmos.com/
01:38:51 Devalyn Rogers: @Christoper: Indeed! "Scholars" should KNOW it is OK to not get everything perfect the first or second time! Look at so many inventions, they were accidents!
01:38:52 KT Moran: we use MnMs or pennies to consider radioactive decay and half lives!!
01:38:58 Donna Smith: https://teacher.desmos.com/
01:39:01 Nilar paw: But we. all teachers need to improve our education system.Thanks for all your guidelines. and experiences.That 's why I love science conference.
01:39:15 Scott Kiessig - ScIC | PocketLab: http://www.thepocketlab.com/lessons

01:39:16 Robby Douthitt | PocketLab: You can check out the lessons that Clif is referring to here: https://app.thepocketlab.com/resources
01:39:17 Gyan Prakash: depends upon the size of droplets
01:39:23 Sunoj Das Shrestha: we are experimenting with the concept of Novel engineering at www.karkhana.asia
01:39:32 Robby Douthitt | PocketLab: http://www.thepocketlab.com/lessons
01:39:38 Donna Smith: Thanks Robby!
01:39:40 Robby Douthitt | PocketLab: Scroll down to the Ask A Scientist section
01:39:46 Carrie Reardon: I always try to find projects that are of high interest to the kids. At the beginning of the year, I try to get buy in from the kids. I am, currently, trying to create a unit for my third graders to build boats that will hold one team member for a given amount of time. I will integrate math and science throughout this unit. I will captivate the kids with this project based learning! (I teach K-5 STEM Lab and I LOVE it!)
01:39:47 Robby Douthitt | PocketLab: They are pretty fun!
01:39:49 Susan Pritchard: THIS IS SUCH A GREAT DAY ... FIRST PANEL IS AMAZING ... LOVE THEIR IDEAS ... STAY TUNED ... I THINK AT LAST WEEK'S GREAT DAY WE WERE TOLD THAT THE EXPLORATORIUM WAS MENTIONED AS PART OF TODAY'S SCHEDULE ... THEY ROCK ... I STARTED THERE IN 1999 AND WAS ABLE TO ATTEND THE TEACHER INSTITUTE ... TI ... AND THAT IS HOW I DID A PARADIGM SHIFT IN HOW I TEACH SCIENCE ...
01:40:06 Alison Montemurro: I work in an inner city school and find it hard to argue to “play” with candy when they are hungry
01:40:09 Danielle Romais: One way I also love to engage kids with science is by signing up to Skype a Scientist
01:40:21 Scott Kiessig - ScIC | PocketLab: We will make the chat transcript available to everyone
01:40:30 Andrew Kirk: https://www.scienceintheclassroom.org/
01:40:30 Peter Baker: Well said Devalyn!
01:40:31 Donna Smith: I like the Skype a scientist.
01:40:32 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District: Yes! TUVA
01:40:36 Sandeep Poudel: 👀
01:40:36 KT Moran: Regarding the 'why do I care' question. I teach my students to consider what I call the 'primary questions' in all endeavors. the PRIMARY QUESTIONS are 'So what?" and 'Who cares?'.

01:40:36 Leah Young-Chung: I'm an informal college educator. I stress to my students that the point of their experiment is to learn. Use the discussion section. You don't need high yields. You need to be able to discuss your lab reports.
01:40:53 Lisa Slack: estimation18.com/days/ - great resource for daily math estimation activities for students. Uses real world examples.
01:40:53 Sunoj Das Shrestha: we use story for providing context for STEAM activities through problem solving
01:40:59 Scott Kiessig - ScIC | PocketLab: That chat will be distributed with the video recordings next week
01:41:03 Peter Rothman: even adults trained in science don't ask scientists
01:41:05 Mark DeLoura: Skype a Scientist is fantastic! Skype an engineer, Zoom a game developer, Hangout with a Farmer. Makes everything seem so much more relevant to students when they hear from an expert. love it :)
01:41:10 Alison Montemurro: Love the concord consortium!
01:41:13 Margherite Dadiego: Our world in data. https://ourworldindata.org/
01:41:14 Donna Smith: CODAP is great
01:41:19 Carey Hancey: datanuggets
01:41:28 Chris Kesler: Want to learn more about Kesler Science? Here's $50 in free lessons and activities.
https://www.keslerscience.com/free-kesler-science-welcome-bundle/
01:41:28 Robby Douthitt | PocketLab: Here is the lesson in PocketLab Notebook that Dave was referring to:
https://app.thepocketlab.com/lab-report/33dGzuDY0001h08o?ro=1&ref=%2Fresources
01:41:36 Scott Kiessig - ScIC | PocketLab: https://codap.concord.org/
01:41:36 Debby Nelsondr: https://datanuggets.org/
01:41:51 Ash Bystrom: data classroom
(they were a presenter in sicc3)
01:41:58 Scott Kiessig - ScIC | PocketLab: https://www.desmos.com/
01:41:58 KT Moran: to what level of education are most of these resources aimed please?
01:42:00 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District: https://tuvalabs.com/
01:42:00 Carrie Reardon: We STEM using recyclables. Save all toilet paper rolls, small/unique boxes, soda kids, containers, etc.
01:42:04 Sajid Ali: Hi
01:42:06 Amy Baskin:
https://docs.google.com/forms/d/e/1FAIpQLSfB8CqSyhhBwz2Msd00-IgfRgzfurHy3i1SuJGEDMjCkrdKmg/viewform
01:42:09 Scott Kiessig - ScIC | PocketLab: https://www.keslerscience.com/

01:42:09 Donna Sawyer: Data Nuggets is excellent for real-world interests!
01:42:14 Abigail Perkins: Cups and Circles! Inquiry-based group learning using a plastic party cup rolling on a large chunk of poster paper to develop a method to estimate how to figure out the diameter of a circle and the factors.
01:42:15 Chris Kesler: Kesler Science - grade 5-8
01:42:15 Maureen Bourke: Check out Kyne on TikTok. Math in drag. Incredible and so engaging!
01:42:19 Peter Baker: And as I learned STEM includes 15 of students everyone else can go away. STEAM includes 85%! Duh? Which is better?
01:42:26 Lori Davis: Using Desmos allows parents to learn the math alongside their children if they need homework help.
01:42:40 Debby Nelsondr: Not enough!
01:42:43 Arham: hi
01:42:53 NICOLE WEIL: Is someone compiling the links on a google doc for everyone?
01:43:03 JoAnn Scales: I love Desmos, especially for students who can't afford a graphing calculator
01:43:15 Christine Hansen: Will a transcript of the chat be released with the video recording?
01:43:21 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District: Google trends and analytics are also great to show students data
01:43:24 JoAnn Scales: @Nicole... I was just thinking thst
01:43:26 JoAnn Scales: that
01:43:39 Linda Dixon: Great Leadership is the KEY. Love you Tammie.
01:43:41 Devalyn Rogers: I have been blessed to have a level of autonomy and support to work with all teachers encouraging cross-curriculum learning:
01:43:43 Scott Kiessig - ScIC | PocketLab: The recording and chat will be sent out next week
01:43:51 Donna Smith: I have the links I can email to someone.
01:43:58 Michelle Varnau: Think of Middle School teachers as a team, that begin collaborating in July and keep meeting each week to start finding those connections and share lingo.
01:43:58 Devalyn Rogers: Admin has to be on board
01:43:59 Christine Hansen: thank you
01:44:02 Noreena Falta: Christine, there is a setting in zoom to auto record...
01:44:19 Sandeep Poudel: Am I the only one joined from Nepal? 👀
01:44:37 Mark DeLoura: I love seeing all these tools but it reminds me of just how difficult it can be for educators to find them, to feel permission to integrate them, to feel confidence that they will relevantly apply to the standards they're

targeting. The idea of teachers as "learning engineers" is interesting... they are essentially using engineering thinking to find ways to increasingly teach more effectively.
01:45:10 Davy Van den bergh: what is ELA?
01:45:17 Scott Kiessig - ScIC | PocketLab: English Language Arts
01:45:23 Davy Van den bergh: Thanks!
01:45:27 Rohit Paikara: in my opinion mathematics will be easier if and only if
@every syllabus must have practical based chapter
students must get clear objective about chapters
we must change every chapter in the form of story
we must change every chapter in the form of musical song
it must include project work
every school must have mathematics Lab
01:45:30 Maureen Bourke: cross curricular connections are so mportant
01:45:30 Donna Smith: @Mark, start small. Just add one topic/idea. When you see the student engagement it will motivate you to do more.
01:45:34 Chris Kesler: @Mark, totally. It's overwhel
01:45:36 Melissa Peterson: one of the things I do in my 5th grade class is I work my curriculum around the idea of space exploration and inhabiting other planets. We use all of the subjects and it engages students.
01:46:12 Marlena Zimmerman: Just discovered this gem for elementary. Science and social studies lessons tied to Hank the Cowdog books and real world ranching: https://ranchingheritage.org/learn/ranch-life-learning/
01:46:26 Christine Hirst Bernhardt: I found, as an astronomy teacher, finding ELA and Math teachers to collaborate with at the high school level was really tough because they all had so much content to get through. in 15 years, the only collab I did was with theater, in which we planned a student space symposium.
01:46:35 Donna Smith: Have students teach other students - that is when they learn
01:46:38 Gail Corbman: Wondering what your opinions are on Virtual Reality & AR
01:46:40 Ashfaque Ahmed: @Scott Keising, Yes, ELA is very helpful and easy to use...
01:46:54 Debby Nelsondr: CER is writing. Meet and agree with ELA teachers on a format for consistency.
01:46:59 Larry Browning: A in STEAM could be Agriculture, Architecture, as well as Art.
01:47:03 Umm Kulthum AL-EZZ: Thanks

01:47:04 Scott Kiessig - ScIC | PocketLab: Recordings plus the chat transcript from the whole day will be available next week.

A professional development certificate will be provided to everyone who attends live!
01:47:19 Imani Malaika-Mehta: Use Family Math by the Algebra Project!
01:47:19 Rinita Hasa: Thanks 😌
01:47:25 Javeria Rana:Awesome
01:47:44 Letitia van Rensburg: I worked at a non-traditional school. The school didn't have much of a Science program. I was brought in to build the program and start giving the students a Science education. I tried to encourage STEM education and bring these four fields together but the owner of the school wasn't interested. She only viewed Physics as a Science subject. I couldn't even imagine bringing ELA into the Science course at that school. The kids loved the lessons (especially the ones they voted for) but my colleagues and boss did not like the lessons.
01:47:52 Scott Kiessig - ScIC | PocketLab: At the end of the day we will survey all attendees. In the survey will be a question where you get to vote on which sessions you want to see a 60-90 minute version of in the near future!
01:48:08 Danielle Romais: This year teaching virtually (and having my own child at home for school) has taught me how important the parent engagement is to the success of the student.
01:48:10 Michelle Steinberg: @Scott Kissing will that be sent t or email of record?
01:48:20 Scott Kiessig - ScIC | PocketLab: Michelle- Yes
01:48:32 Anita Bero: I have also included music for M as well as math
01:48:34 Chris Kesler: Teachers and parents have the same goals for their kids. I always started off every parent meeting with that.
01:48:48 Sunoj Das Shrestha: we are sending a learning kit like a lab in a bag to students home with workbook and support in Google classroom. using this kit teachers can teach their science lessons virtual and students can have hands on experience
01:49:07 Melissa Molema: Hi all I am watching from Johannesburg South Africa. I teach grade 4 Natural Science and Technology. I teach in an English government school. Love this! it is so interesting and resourceful.
01:49:08 Imani Malaika-Mehta: #PBL=IBL
01:49:14 Susan Cabello: I may see 3 parents a year if I'm lucky, but I do call parents almost every week.
01:49:25 Susan Pritchard: A self-contained classroom has great flexibility with supportive admins to integrate STEM/STEAM ... scheduling makes a larger challenge for Middle Schools where students have multiple teachers in a tight schedule ... I

applaud the school teams (students plus teachers plus parents plus admins) that create a workable atmosphere that allows for integration ... that in itself CAN MAKE FOR GREAT AUTHENTICITY!!
01:49:54 Jan Leslie: Many of my parents do not speak English and are not able to support their students.
01:50:02 Gyan Prakash: Since covid had a huge impact on overall traditional mode of education, how and what will be its impact on child? Also, how ed-tech will fill that gap?
01:50:19 Sunoj Das Shrestha: https://www.facebook.com/karkhana.asia/
01:50:21 Susan Cabello: You have a budget?
01:50:32 Carrie Reardon: YES, Ms. Tammy! kids are excited to do STEM activities!
01:50:34 Melissa Molema: in
01:50:39 viviana maría suarez rigonat: hi! can you resume the links you've mentionned please?
01:50:45 Imani Malaika-Mehta: Science experiments makes for great bonding between parents & students
01:50:46 Michelle Steinberg: Too funny! and great job for those kids!
01:50:53 Sunoj Das Shrestha: I think blended learning is.the future
01:51:01 Angela Justman: Our district has low parental education level and involvment. Counteracting apathy from home is a challenge.
01:51:08 Imani Malaika-Mehta: Parent-driven change! Love it!
01:51:14 Yolanda Aquino: Social Media is great to get ideas and collaborate with other teachers anywhere! Facebook, Twitter, etc.
01:51:21 Noreena Falta: hahahaha
01:51:27 Rebecca Paynter: lo;
01:51:30 Chris Kesler: I've been guilty of underestimating how engaged parents want to be. Don't assume they don't want to be part of the learning process. They do!
01:51:30 Donna Smith: I am cracking up!!!!1
01:51:31 Scott Kiessig - ScIC | PocketLab: Tammie is a gem
01:51:32 Imani Malaika-Mehta: #trouble-maker
01:51:34 Godwyn Morris: Take a look at this Engineering with Paper STEM option https://www.dazzlingdiscoveries.com/engineeringwithpaper
01:51:35 NICOLE WEIL: lolz
01:51:37 Devalyn Rogers: @Schrader: LOVE IT
01:51:45 Melissa English: I also reached out to the local Rotary for funds. They like to help with student projects.

01:51:49 Melissa Molema: Covid has affected our teaching in a very negative way and many of the students O teach Englush is their 2nd or even 3rd language.
01:51:57 Kaia Lindberg: Thank you all soo much!!
01:52:05 Danielle Romais: Amazing
01:52:08 Susan Cabello: Thank you guys
01:52:10 Peter Baker: And if you observe some of the past inventors they were tech guys but also artists. Like I said look outside the box to incorporate other things!!
01:52:14 Devalyn Rogers: @Rush: THANK YOU THANK YOU THANK YOU!
01:52:14 Danielle Romais: Thank you very much for answering my question
01:52:14 Letitia van Rensburg: Thank you
01:52:17 Lisa Slack: This is awesome. Thanks so much
01:52:17 Boboeva Nigora: Thamk you all
01:52:19 Barbara Davis: Wow! Outstanding conversation.
01:52:21 Eugenio Devece: thank you
01:52:21 Maria Harrington: Thank you
01:52:22 Steve Frankel: Last summer, I thought it unlikely that we would meet in the classroom during pandemic school year 2020-21, so I created a tub of simple materials for physics students to use, along with Phyphox (app) to do some hands-on work. Tub: string, fishing line, springs, soda straws, simple rolling cart & etc.
01:52:23 Imani Malaika-Mehta: Chris is a Rush!
01:52:23 Marisa Calvo Sedano: Thank you very much
01:52:27 Janet Littlejohn: BRAVI!
01:52:28 Noreena Falta: THANX!!!
01:52:29 Umm Kulthum AL-EZZ: Thank you
01:52:32 Devalyn Rogers: Amazing panel!!!!!!!!!!1
01:52:33 Cece Padon: Awesome!
01:52:33 Arlette Neira:Thank you!!
01:52:33 Kate Mulligan: I once had a parent (who was mad at me for other mysterious reasons) come and COMPLAIN that "all her child ever talks about is photosynthesis".
01:52:38 Tanka Bahadur Karki: Thank you all 🙏
01:52:39 Denise Zut: Thank you all!! Awesome!
01:52:41 Rebecca Paynter: Thank you
01:52:41 Scott Kiessig - ScIC | PocketLab: Follow along and drop a pin on your location by accessing the lesson with the map here https://app.thepocketlab.com/lab-report/y0kPFS4p0001yLem?ro=1&ref=%2Fhome

01:52:43 Scott Kiessig - ScIC | PocketLab: Follow along and drop a pin on your location by accessing the lesson with the map here https://app.thepocketlab.com/lab-report/y0kPFS4p0001yLem?ro=1&ref=%2Fhome
01:52:46 Scott Kiessig - ScIC | PocketLab: Follow along and drop a pin on your location by accessing the lesson with the map here https://app.thepocketlab.com/lab-report/y0kPFS4p0001yLem?ro=1&ref=%2Fhome
01:52:46 Alison Castillo: ohhh I love your dino
01:52:47 Luis Carlos SOLORZANO MENDOZA: THANK YOU ALL
01:52:48 Marijean Rak: Amazing job by all of the panelists!