



CHAT TRANSCRIPT

STEM in K-5

Jolie Pelds, Kelsey Lipsitz, Joy Kiano, Katrina Minck
August 5th, 2021

- 04:31:22 Davy Van den bergh: Whats the age of K5 students? Most countries have a different system
- 04:31:28 Scott Kiessig - ScIC | PocketLab: Learn about our panelists and find all the links mentioned here <https://www.thepocketlab.com/scic6-summit-stem-in-k5>
- 04:31:43 Natalie Granger: K-5 is ages 5-11 (generally speaking)
- 04:31:55 Angela Justman: thank you!
- 04:31:55 Davy Van den bergh: Thanks
- 04:31:56 Irma Briceño: Sp interesting and informative so far.
- 04:32:21 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.
- 04:33:32 Michelle Steinberg: @ Robby email sent, I looked in Promotions, not there
- 04:33:38 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!
- 04:34:08 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.
- 04:34:34 Christine Hirst Bernhardt: Exploratorium is AMAZING!!! If you're in CA-go to their workshops!



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04:34:41 Scott Kiessig - ScIC | PocketLab:
<https://www.youtube.com/c/NgenTVAfrica>

04:35:55 Danielle Romais: Exploratorium is great!

04:36:53 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.

04:37:26 Danielle Romais: Why is it that Science is not necessarily taught in the early/elementary grades.

04:37:54 Janet Castro: Hi from Ecuador

04:38:01 Darla Tillman: Young kids are constantly asking questions-don't have to teach them that part :)

04:38:33 Devalyn Rogers: How do we get K-5 teachers to engage their students in the fundamentals of science through reading, which is the content focused on in the K-5 levels?

04:39:24 Jen Massey: Yep. All I had to do to get my 4th graders really engaged is talk about poo, farts, or burps.

04:39:31 Danielle Romais: I have been told by many of my students that they are not exposed to science. Why is that?

04:39:56 Linda Dixon: Are there any research reasons why K-1 teachers do not teach early learners to investigate?

04:41:14 Linda Dixon: @Jen: True 😊

04:41:21 Devalyn Rogers: If you are still here from earlier, here is that link I suggested. I did not have it on my personal computer.
<https://drive.google.com/file/d/0BzQpimMPXRM8dlQzUm9IMFRMZ0V6ZXc1MkY5bXBIRExFAQXk0/view?usp=sharing&resourcekey=0-DTbHWVo3wOZNPmJIgYrFMg>

04:41:31 Edgar Garrido: @Scott Kiesseg, I have the same problem with that of Michelle, did not receive verification msg due to email error, please help me

04:41:57 Scott Kiessig - ScIC | PocketLab: Edgar- please check spam/promotions... if you still don't find it, send us an email at support@thepocketlab.com

04:42:13 NAILA SUSANA GARZA ARCAUTE: @devalyn it says we need access!

04:42:20 Devalyn Rogers: @Kiano: Story Telling.

04:42:32 Devalyn Rogers: @Naila: one moment please

04:43:04 Lisa Slack: @Devalyn Rogers there are some great picture books that you can use. Rosie Revere, Engineer, by Andrea Beatty, Ada Twist, Scientist for example.

04:43:15 Noreena Falta: Devalyn, Access Denied. thats your personal g drive possibly...



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04:43:19 Darla Tillman: This has just given me the idea to have PK-3 teachers to have their students write down questions and I can have my 4-6th students research and answer.

04:44:07 Scott Kiessig - SciC | PocketLab:
<https://www.amazon.com/Marvels-Science-Fascinating-5-Minute-Reads/dp/1563081598>

04:44:16 Renata Eugenia Guerra Fraustro: Little kids enjoy hands on activities and we can address how plants grow by planting a class garden.

04:44:36 Scott Kiessig - SciC | PocketLab:
<https://www.amazon.com/Marvels-Science-Fascinating-5-Minute-Reads/dp/1563081598>

04:44:52 Carrie Reardon: All schools need to have a STEM Lab where all grades go to it weekly. STEM = Problem Solving We need problem solvers and must teach our kids how to share ideas, evaluate them, and engineer base on their experiences.

04:44:53 Devalyn Rogers:
<https://docs.google.com/document/d/1ZFM3Rr4kGkxRgZxeBonh8o94UZI5d50uSRsxkQ-GB1s/edit?usp=sharing> Let's hope this works

04:45:00 Natalie Granger: Yes-integrate content!

04:45:25 Noreena Falta: it works!!

04:45:28 MaVictoria Vaughn: The link works. Thank you

04:45:32 Noreena Falta: TY

04:45:36 Susan Pritchard: HELLO EXPLORATORIUM!!! TI IS HOW I DID MY PARADIGM SHIFT ON HOW I TAUGHT SCIENCE SINCE 1999!! HI TO ERIC AND THE ENTIRE TEAM AT TI ... ANY TEACHER ON THIS SciC 6 ... SIGN UP FOR THEIR COURSES FOR SUMMER AND DURING SCHOOL YEAR ... THEY ARE AMAZING AND HELP THE ATTENDEES TO MAKE SCIENCE COME ALIVE FOR ALL ... TOTALLY INCLUSIVE ... AND ... INEXPENSIVE ... IE ... CHEAP!!!

04:46:12 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.

04:46:18 DaNel Hogan: Another version of annotation cards.
<https://stemazing.org/annotation-cards/>

04:46:59 Mangala Rodrigo: The link works , Thanks

04:47:05 DaNel Hogan: And an elementary version though I would use these with older students too: <https://stemazing.org/annotation-bookmarks/>

04:47:19 Devalyn Rogers: @DeNel: Thank you

04:47:25 Marisa Calvo Sedano: Yes, it does @Devalyn Rogers. Thanks

04:47:27 Noreena Falta: EXACTLY!!!



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04:47:44 Yadira Lucía Ospina Marín: I am a language teacher and I often end up talking about maths, science, religion and other subjects in my classes. When my kids ask why I'm talking about something that is not of my subject I answer that knowledge doesn't come in separate blocks, we have one brain for all of it

04:48:16 DaNel Hogan: @Devalyn - bookmarks are from one of our 1st grade STEMAzing Teacher Leaders. They are great!

04:49:19 MaVictoria Vaughn: I Love this answer: When my kids ask why I'm talking about something that is not of my subject I answer that knowledge doesn't come in separate blocks, we have one brain for all of it.

04:49:27 Larry Browning: Another approach is Visual Thinking Strategies, which is similar to Notice and Wonder <https://vtshome.org/> There is a well defined/researched procedure <https://emprobstvts.weebly.com/vts-the-three-simple-questions.html> You may want to modify the questions for a demonstration, reading, etc.

04:49:40 Jen Massey: "Picture-Perfect Science Lessons" and "Picture-Perfect STEM Lessons" are fantastic resources!

04:49:44 Carol Brieseman: <https://nzscienceteacher.co.nz/index.php/learning-in-science/literacy-numeracy/integrating-science-with-literacy-and-numeracy/>

04:50:25 Theresa Mcendarfer: Why are we spoon feeding our students the information? Why are we not allowing them to figure it out more for themselves? "Tell me and I forget. Teach me and I remember. Involve me and I learn." – Benjamin Franklin

04:50:44 Jacqueline Shanks: I'm a science teacher (Australia, grade 7-12) and have my first STEM class this year, wish I could start again now, feeling so enthusiastic about it after hearing you all talk!

04:52:10 Godwyn Morris: I created this resource for educators using only paper, tape & scissors - easy supplies everyone has or can get. <https://www.dazzlingdiscoveries.com/engineeringwithpaper>

04:52:45 Gasant Gamiet: Thank you to all presenters and host, bye bye from Cape Town... after 10 at night here :)

04:52:50 Danielle Romais: I have taught college, and that is so true

04:53:08 Sharon Snow: "let's find it out together" works for me, I'm up front that I'm not a walking encyclopedia, but I can research and learn new things & when time allows I do it with my students so I'm modeling research, or I tell them I'll find out and get back to them---they LovE to stump me with questions..

04:53:21 Dave Bakker - SciC | PocketLab: Thank you Gasant!!

04:53:27 Lilian Espinoza: do you know if the stemazing Project is paid?



04:53:55 Diane Hickey- National Science Foundation: For Kindergarten/1st/2nd, here are some videos of 'At Home' Science that were done during the pandemic. <https://www.youtube.com/playlist?list=PL0nCDq3y1L78HjV89JD0YHOjHKL0pK1XK>
NOTE: these are not sponsored by any respectable institution - just my husband who's done 20 yrs of science shows and our two kids doing at home science. Kindergarten kids love the diffusion of M&Ms on Paper Plates to create art - it's 3 min - <https://youtu.be/ilLmwgt3czE>

04:54:15 Imani Malaika-Mehta: Kids LOVE science!

04:54:33 Gustavo Requena Santos: I think that teachers shouldn't pressure themselves or being seen as the gatekeepers of knowledge. We can easily google and search for information/content. Educators, in my perspective, they should facilitate the discovery process with their students. And sometimes it means learning with them and from them. I can't count how many times my young students would bring an amazing fact from nature that I had no idea it was true. And it empowers students and a functional "teacher", providing some new information to an adult.

04:54:49 Amy Baskin: Can Science Fair be changed... PLEASE!? :-D Parents dread it.

04:54:52 Scott Kiessig - ScIC | PocketLab: Learn about our panelists and find all the links mentioned here <https://www.thepocketlab.com/scic6-summit-stem-in-k5>

04:55:20 Yadira Lucía Ospina Marín: right Sharon, we don't have to know it all, I think it's more important to teach them how to get the information and transform it by themselves into something useful for them

04:56:19 Debby Nelsondr: Loved the bees presentation!

04:56:50 Scott Kiessig - ScIC | PocketLab: The 'bees' presentation from Xochitl at Science Friday <https://www.thepocketlab.com/scic5-science-friday>

04:57:21 Krista Wilson: In our District it often seems that Science ends up being the subject that is pushed aside and only done if time allows in K-5

04:57:28 Darla Tillman: But what if I, the Science teacher, am NOT good with technology?

04:57:39 Tiffany Deschler: I agree with giving time for exploration and finding the answer. I am wondering how to allow time for this when we are handed a curriculum with the exact number of days that must be used for each topic?

04:59:00 Godwyn Morris: Using microscope projection to a big screen helps because young kids can't always see through the microscope lens

04:59:05 Denise Zut: Tiffany I agree wholeheartedly, time constraints are big hurdle for elementary teachers.

04:59:29 Davy Van den bergh: I have booked a lot of succes with having the kids making there own village. Including electricity, sewer, farms, a political system,



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recreation and even religion. As they are building they found the need for STEM by themselves.

05:00:03 Janice Levitan: @Tiffany - I decided that I needed to let them explore and did not "cover" as many topics...and when I let them choose student projects, I lost another week! But they were amazing each time and I shared them with Admin. They saw the engagement and did not complain about "lost" topics...

05:00:57 Denise Zut: Janice - that is awesome you had that support from admin.

05:01:07 Renata Eugenia Guerra Fraustro: So true, kids need to recognize that science is all around them.

05:01:14 T Chapman: You can work with your local ISEA for ideas on field work lessons

05:01:19 Cece Padon: Thank you for all of these wonderful ideas!

05:01:22 Scott Kiessig - SciC | PocketLab: Next session coming up- Using games in STEM to engage your students!

05:01:49 Larry Browning: Here is a microscope plan for about \$2
https://openprairie.sdstate.edu/physics_edu-resources/1/

05:02:06 Slavica Bernatović: But, you can't always see the rainbow .. whether in or out of the classroom.

05:02:15 Slavica Bernatović: But, you can't always see the rainbow .. whether in or out of the classroom.

05:02:45 Susan Cabello: Story telling or local history, especially their school history. Why to be proud of attending this school.

05:02:48 Godwyn Morris: You can see the rainbow on the shiny side of a CD

05:02:59 Scott Kiessig - SciC | PocketLab: Learn about our panelists and find all the links mentioned here <https://www.thepocketlab.com/scic6-summit-stem-in-k5>

05:03:05 Tiffany Deschler: @Janice. that's great! I included social justice articles with data and the kids were very engaged and had great discussions. This was a must for me for the rest of the year but we took away content days.

05:03:29 Slavica Bernatović: @ Morris Yes, of course.

05:03:44 Sylvie Kacmarcik: I like the series Picture-Perfect Science and STEM by Ansberry & Morgan, NSTA

05:04:27 Jen Massey: Me, too, Sylvie!

05:04:28 Sharon Homer-Drummond, PhD: Foldscope kits are really great for kids to work with/play with: <https://www.foldscope.com/>

05:04:29 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District: Here is a resource I made for admin, teachers and parents - <https://docs.google.com/presentation/d/1NlLXt4KdiZhIErWrxgwVQI9no0PIYUbmS0sD1z1VhM/copy>



05:04:47 Scott Kiessig - SciC | PocketLab: <https://www.inaturalist.org/>

05:05:18 Scott Kiessig - SciC | PocketLab:
<https://www.youtube.com/c/NgenTVAfrica>

05:05:39 Slavica Bernatović: @Kiessig .. Thanks a lot.

05:05:44 Kelsey Lipsitz- Exploratorium (she/her): Please check out our resources!
<https://www.exploratorium.edu/education>

05:06:04 Tiffany Deschler: You can create a range around your campus to collect data on iNaturalist

05:06:39 Diane Hickey- National Science Foundation: The Exploratorium taught me that not every experience needs to be "learning". The emotional connection to amazement will stay with a person (child) for a lot longer than what Kelsey just described (event, question, go to book, get answer) - just allowing that sense-making, and NOT answering the question, sticks. Nothing will annoy a small child more than asking them, "Why do you think that happens?" and then not tell them any answer. ever. never. no answer. just the question. it's quite an evil thing to do to a child, actually - you should try it - (insert evil scientist laugh here).

05:06:42 Slavica Bernatović: @Minck ... Thanks a lot for PPP.

05:06:57 Alisha Flores: As long as they don't eat them

05:06:58 Larry Browning: Using your phone as a physics lab is cool. There are others but I like: <https://phyphox.org/>

05:07:05 Sharon Homer-Drummond, PhD: iTREE is also really useful:
<https://www.itreetools.org/>

05:07:11 Tiffany Deschler: Some spiders collaborate for hunting

05:07:16 Perla Serrato: Yes! Of course they do! :)

05:07:19 Diane Hickey- National Science Foundation: I'm writing that down - "Do spiders have friends?"

05:07:39 Godwyn Morris: I would respond by saying "what do you think?"

05:07:43 Carey Hancey: They do have to mate correct?

05:07:51 Sharon Snow: Yes, spiders have friends-- those of us who understand how amazing they are and relocate them to safe spaces!! ;)

05:07:54 Carey Hancey: Other spiders?

05:07:55 Jason Kirchmer: Yes .. thinking that same thing about C's Web.

05:08:11 Linda Waldman: Anansi the spider is an African folktale character

05:08:13 Danielle Romais: Female spiders eat their mates, so...

05:08:21 Darla Tillman: Yes Sharon, I am a friend to arachnids

05:08:23 Jacqueline Shanks: I have spiders as friends, at least until someone else sees them!

05:08:30 Janice Levitan: Inordinate focus on ELA and MATH. Others are expendable...



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05:08:39 Lisa Slack: No as they are solitary in order to have a better chance for food. I wish though

05:08:40 Diane Hickey- National Science Foundation: Hagrid is a friend to spiders.

05:08:43 Katrina Roseos: Students are having a hard time communicating their thoughts especially those whose first language is not English

05:08:46 Keneil Honeyghan: yes they do, because everybody likes charlottes web

05:08:55 Lisa Slack: Good question to ask kids though too

05:09:05 Sharon Snow: haha @Diane Yep, Hagrid too!

05:09:11 Carey Hancey: I never kill spiders, so I guess I am a friend lol

05:09:16 ARTURO MENDEZ: I am a friend of spiders and promote friendliness and care for them with my students, kids, and everyone I can!!

05:09:35 Susan Pritchard: It is lack of funding directed at science, it is the push for TESTING RESULTS ... for Math and ELA ... did you notice when testing actually happened in grade 5 in CA that more money was spent for science grades 4 and 5 ... it is sad that testing sometimes pushes the funding ... THAT SHOULD NOT BE ... but alas ... it is part of the reason.

05:09:54 NAILA SUSANA GARZA ARCAUTE: WE NEED TO LEARN

05:09:56 T Chapman: ooh that's a goo one

05:10:01 Slavica Bernatović: Vauuu music on
<https://www.youtube.com/c/NgenTVAfrica> motivation for learning.

05:10:08 Susan Pritchard: ask your students for help .. students know more than I and they are great teachers!!

05:10:09 Scott Kiessig - SciC | PocketLab: Hi

05:10:10 Mariam Nouri: You can learn and get better! I believe in you!

05:10:13 ARTURO MENDEZ: You're a Science Teacher... You can deal with that... no sweat!

05:10:16 T Chapman: Pogue's basics!

05:10:17 ARTURO MENDEZ: Give it a try!

05:10:17 Larry Browning: Ikntomi is the Native America version
<https://en.wikipedia.org/wiki/Ikntomi>

05:10:27 Susan Pritchard: yes ... students are the teachers

05:10:31 Diane Hickey- National Science Foundation: nice... spider web of pathways to STEM careers. (yes, good point, the "STEM Pipeline" may not be the right mental model. My imagination goes more towards swimming in and out of stem all through your life....)

05:10:34 Darla Tillman: Aw thanks, I'm trying! It just doesn't come naturally

05:10:34 Sheryl Murphy: Susan - yes! Science is pushed aside in Elem grades in favor of ELA and Math expectations



05:10:37 T Chapman:
<https://www.barnesandnoble.com/w/pogues-basics-david-pogue/1119702443#:~:text=Luckily%2C%20award%2Dwinning%20tech%20expert,and%20less%20of%20a%20has sle.>

05:10:44 Susan Pritchard: I always ask students to be the experts ... they ROCK!!!

05:10:44 ARTURO MENDEZ: The times where actually pressing the wrong button wrecked tech easily have been left behind!! LoL

05:10:55 ARTURO MENDEZ: Yeah! There's always community hekp

05:11:06 ARTURO MENDEZ: And engaging students to help out is a good strategy hahaha

05:11:08 Danielle Romais: vinegar and baking soda

05:11:19 Darla Tillman: Thank you!

05:11:32 Faith Howell: I am the teacher who is good at tech and I still learn all the time but I'm happy to help and sometimes helping someone else helps me learn something I hadn't considered yet. I have befriended on of the more experienced teachers at my school and we ROCK together!

05:11:52 ARTURO MENDEZ: I agree with Faith's

05:11:54 Janice Levitan: Sadly, there have been studies showing that engaging the students and having them as active learners increases test scores much more than "teaching to the test".

05:11:57 Debby Nelsondr: Integrate science into reading and math. Lots of picture books, fiction and nonfiction, are available. Start with one!

05:12:02 ARTURO MENDEZ: As it is with other disciplines

05:12:04 NAILA SUSANA GARZA ARCAUTE: I use making lemonade for several lab practices, from homogeneous solution, to saturated solutions, solubility, temperature effect on solubility, concentration calculations

05:12:16 Jane Hurley: "Eat the Pringles first!" :D

05:12:28 Sharon Homer-Drummond, PhD: It's not a hardship to eat the Pringles

05:12:33 NAILA SUSANA GARZA ARCAUTE: They get so excited to taste their lemonades and their hypothesis about that they will taste the same or not just changing the order of making it

05:12:35 Katrina Minck- Science Teacher Extraordinaire Fremont Unified School District:
<https://docs.google.com/presentation/d/1NILXt4KdiZhIIErWrxgwVQI9no0PIYUbmS0sD1z1VhM/copy>

05:12:37 Danielle Romais: oreos too

05:12:39 Michelle Ruigrok: Thanks for the great ideas!



05:12:43 Lisa Slack: No Thank you.

05:12:44 Larry Browning: Do you line the Pringles can with black paper?

05:12:45 Cheryl Caine: Thank you so much!

05:12:52 Jen Massey: Thank y'all so much!

05:12:55 Renata Eugenia Guerra Fraustro: Thank you

05:12:55 Cynthia Garay: I loved this session!

05:13:07 Devalyn Rogers: Thank you panelists!

05:13:12 Susan Cabello: My kids made their own butter. Some kids had never eaten real butter just margarine.

05:13:16 Scott Kiessig - ScIC | PocketLab: Next session coming up- Using games in STEM to engage your students!

05:13:19 Marisa Calvo Sedano: It's great all you're sharing. Thanks a lot.

05:13:29 Scott Kiessig - ScIC | PocketLab: Access these PhET lessons and more at <https://app.thepocketlab.com/resources>

05:13:36 Gabriela Salazar: thank you panelists

05:13:47 Robby Douthitt | PocketLab: Here's a cool PhET - PocketLab lesson that uses a sensor with a simulation:
<https://app.thepocketlab.com/lab-report/rrKSn8tL0001ooVZ?ro=1&ref=%2Fhome>

05:13:58 Jacqueline Shanks: Thank you all

05:14:20 Scott Kiessig - ScIC | PocketLab: Access these PhET lessons and more at <https://thepocketlab.com/lessons>

05:14:50 Robby Douthitt | PocketLab: Here's the lesson:
https://app.thepocketlab.com/lab-report/A_l-zh-E0001bf7D?ro=1&ref=%2Fresources



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