Links shared in the Chat at Town Hall (Jan. 7)

- https://www.delranstem.org/post/families-light-up-the-winter-solstice-in-the-delran-innovation-fabrication-lab Erica@DelranSTEM
- http://www.abccreate.org/nextovation.html Heather Mallak@PGH l Remake Learning
- https://www.txstate-epdc.net/ LaTina Taylor@STEM Texas State University
- http://www.stepconference.org/ Henry Shimoiyo Ogos Education Systems, Lake
 Elsinore CA
- <u>www.chiefscienceofficers.org</u> Jake Lounsbury
- https://www.calacademy.org/science-action-club-sac Olivia VanDamme
- https://www.nupaths.org/ Geoffrey M. Roche, Harrisburg University
- www.bjcschooloutreach.org Jennifer Irvin@STEMSTL
- https://crystalcove.org/education/ Sara Ludovise @ OC STEM, CA
- https://www.whatssocool.org Scott Dietz@Catalyst Connection, Pittsburg,PA
- https://www.clevelandmetroschools.org/Page/7802 Karyn Torigoe@NEOSTEM :
- https://www.delranstem.org/post/stem-home-kits-sponsored-through-grant-funding Erica@DelranSTEM
- www.mketech.org L. Schmidt @ GM-STEM
- <u>Www.abccreate.org</u> Heather Mallak@PGH l Remake Learning
- https://www.ExploreNewMfg.org Scott Dietz@Catalyst Connection, Pittsburg,PA
- https://www.clevelandmetroschools.org/Page/7802 Karyn Torigoe@NEOSTEM
- https://crystalcove.org/education/ Sara Ludovise @ OC STEM, CA
- https://washingtonstem.org/focus_area/career-pathways/ Soleil Boyd
- www.aidb.org/nrsc Harry Wood

- https://multiplex.videohall.com/presentations/1876 Janelle Johnson Denver, CO
- <u>www.girlday.utexas.edu</u> Tricia Berry
- https://www.stemupnetwork.org/ Geoffrey M. Roche, Harrisburg University
- https://www.kauffman.org/real-world-learning/" Anna Hennes
- https://stemnext.org Michael Lemon, KC STEM Alliance
- https://milliongirlsmoonshot.org Michael Lemon, KC STEM Alliance
- https://kidsparkeducation.org Paul Eichen
- https://stem.utah.gov/educators/stem-in-motion/ Tamara Goetz
- http://iei.nd.edu/aptipin Karen Morris@ Notre Dame, IN AP-TIP IN
- https://crystalcove.org/education/overview/coastal-dynamics/ Sara Ludovise @ OC
 STEM, CA
- https://www.lorainccc.edu/stories/sparking-innovation/ Kelly Zelesnik, Lorain County
 Community College
- https://greatercincystem.org/3d-printers-club/ Mary Adams- Gr. Cincinnati STEM
 Collaborative
- https://greatercincystem.org/girls-in-stem/ Mary Adams- Gr. Cincinnati STEM
 Collaborative
- https://greatercincystem.org/stem-bicycle-club/ Mary Adams Gr. Cincinnati STEM
 Collaborative
- https://osit.nv.gov/STEM/Regional_STEM_Networks/ Craig Rosen@ Nevada STEM
 Network
- www.MWSO.org Randy Mccain
- https://vpm.org/articles/15145/nasa-eclipstm-at-home Joan Harper Neely

- https://www.csats.psu.edu/overview-of-csats-programs/csats-summer-research-experience-for-stem-teachers-information-application-portal Amanda Smith
- https://join.igniteducation.org/ Kevin Anderson, Wisconsin DPI Science/STEM
- https://thinkabitlab.com/ Natlie Dusi
- https://www.dayoneproject.org/post/a-focus-on-teacher-effectiveness-shortages-andcultural-pro - Erik Martin@Day One Project
- https://www.nap.edu/catalog/18612/stem-integration-in-k-12-education-status-prospectsand-an - Kevin Anderson, Wisconsin DPI Science/STEM
- https://successfulstemeducation.org/about/nrc-report Kevin Anderson, Wisconsin DPI Science/STEM
- https://www.invent.org/programs/camp-invention Christine Girtain @CCGirt Toms
 River Regional Schools NJ
- https://www.dayoneproject.org/post/strengthening-the-u-s-stem-talent-pipeline-througha-national-youth-innovation-showcase
 Erik Martin@Day One Project
- https://www.californiasol.org/ Jennifer Imm @San Diego STEM Ecosystem:
- https://www.nepris.com/home/v4 Karen Whitson
- real-world learning: https://www.nyas.org/landing/stem-education-framework-materials/
 Hank Nourse @ NYC STEM Ecosystem
- https://www.engr.ncsu.edu/theengineeringplace/ Dr. Lean Bug
- https://terraed.org Mary Eileen Wood, Tearra Science and Education
- https://www.browardschools.com/browardcodes Lisa Milenkovic @BrowardSTEM

Town Hall Chat Notes

- Yamileth Shimojyo, Riverside, CA: "STEPCon a STEM conference for students, the partners include business, colleges and schools".
- Mary Adams Gr. Cincinnati STEM Collaborative: "STEM Bicycle Clubs and 3d Printers Clubs".
 - o https://greatercincystem.org/girls-in-stem/
 - o https://greatercincystem.org/3d-printers-club/
 - o https://greatercincystem.org/stem-bicycle-club/
- Susan- Manassas Virginia, near DC: "Micron Technology sponsored staff to work with students in STEM".
- Sandy @ Lancaster County STEM Alliance: "We have an initiative called "Inspire Lancaster" that connects business and education through a virtual platform we have created".
- Xan Black Tulsa Regional STEM: "Math Mentors".
- Ann Wright-Mockler@PNNL: "We engaged a public private partnership to start a STEM high school".
- Mia Joe, PhD @ ODU: "Brooks Crossing Innovation Lab, ODU, Newport News Shipbuilding, and City of Newport News partnership".
- Michael Lawson The Boeing Company: "STEM Signing Day! recognizing students who are choosing to pursue a STEM career".
- Karen Whitson@Cosbay, Oregon: "Girls Rock STEM".
- NSBE Natl Prof Chair, Kameelah S. Majied: "NSBE = National Society of Black Engineers".

- Scott Dietz@Catalyst Connection, Pittsburg,PA: "We have been doing STEM education with manufacturers across 12 counties of southwestern Pennsylvania for the past 20 years. all of them involve students, teachers and industry. experiential learning, student video contest, pre-apprenticeships, mobile games, virtual resources, etc.,".
 - o https://www.whatssocool.org
- Sara Ludovise @ OC STEM, CA: "We're a state park nonprofit -- we've partnered with California State Parks, UC Irvine, and our local school districts to develop community science programs where K-12 students partner with scientists on real ecological research".
 - o https://crystalcove.org/education/
 - o https://crystalcove.org/education/overview/coastal-dynamics/
- Tina Rolewicz@OC STEM: "Working with a group of 25 STEM providers teaching virtual STEM activities both during the school day and in an afterschool enrichment program in Los Angeles Unified School District".
- Rebekah @ New Orleans: "STEM NOLA STEM Saturdays, bringing together students, teachers, college students, and STEM professionals".
- Eric Meyer, San Diego STEM Ecosystem: "Collaborative training of STEM role models for girls together with local industry partners".
- Heather Sherman: "The Ohio STEM Learning Network and Tennessee STEM Innovation network host a Manufacturing and Engineering Externship Program for teachers.
 Teachers spend a week at an industry site and create project-based lessons to bring to their classrooms".

- Edward Rohmer: "Warrior works lab at Nauset Public Schools collaboration with MIT labs and Industry to introduce students to hands-on project / challenge-based learning.
 Students gain foundational skill with emerging technologies".
- Paula Golden@Broadcam Foundation: "In Kind gifts of decommissioned computers +
 fun funding is a CSR partnership with out of school programs for underserved in Bronx,
 Orange County, Utah, NJ as well as in Canada."
- Heather Mallak @PGH | Remake Learning: "In Pittsburgh region ABC CREATE + Nextovation ,
 - o http://www.abccreate.org/nextovation.html".
- Henri Shimojyo@Ogos Education Systems, Lake Elsinore CA: "Great experiences with
 the Inland Empire ecosystem, where Higher Ed, Local Technology Businesses, schools
 districts, County office ecosystem, along with various other engineering universities,
 manufacturing entities in the inland empire".
 - Henri Shimojyo@Ogos Education Systems, Lake Elsinore CA: "All meet in one event that takes 3 days".
 - o http://www.stepconference.org/
- Steph @ PA SEED Ecosystem: "We've partnered our education service agency with a business and environmental education center to build an environmental literacy design challenge tied to standards with a lesson guide for teachers".
- Tonya Matthews @SE Michigan STEM: "Effective Scalable Cross-Sector Collab Several informal STEM orgs came together w/ Detroit Public Schools to create a program adopt entire grade levels to fill gaps across STEM disciplines (each org adopting a different grade) and staging "interventions" aligned to timing of curriculum".

- Heather Niebauer@ CSB2: "CSB2 STEM Ecosystem facilitated the creation of a
 business advisory board for our school district as we seek innovative ways to prepare our
 students for the life after high school: college and workforce".
- Kristina Woods@Cape Cod, MA: "41 years of k-12 science fairs with community mentoring through a woods Hole Science Tech education partnerships. 3 day trips to local isolated islands, National seashore, science labs and start up businesses".
- Bruce Middleton: "Have been facilitating a conversation with a regional rural museum network to co-design virtual classroom activities which culminate in a virtual Family STEM Night that is co-hosted by each school and a museum".
- Bonnie Maur: "We have started mentorships for education students in priority needs
 districts in order to encourage them to ultimately teach in priority needs districts. We
 scholarship them for their efforts and they "pay back" the scholarships by teaching in
 these districts after completing their masters degrees".
- Martha McCabe KC STEM Alliance: "We have a wonderful partnership with our local arts organization, KC Young Audiences, who partnered with us to engage teaching artists with STEM teachers trained in Project Lead The Way Launch to embed arts into STEM experiences to further understand the concepts. Imagine a mime working with the classroom teacher to help students use miming to express how a virus transmits within a classroom. Excellent cross-sector partners school districts and non-profit arts partner. Truly scalable".
- Jen Davis Carey @Worcester Massachusetts: "Underdevelopment in Worcester, MA is Woo-Labs, a partnership between the philanthropic community and the extended education ecosystem (youth development, local cultural and ethnic cultural organizations)

- to provide robust out-of-school time experiences grounded in student centered projectbased learning".
- Heather Mallak @PGH | Remake Learning: "www.abccreate.org" An incubator of curriculum and project design across K-12 public education with a vision to be the change agents for the Alle-Kiski Valley by investing in the region's next generation of students through innovative STEAM education. ABC CREATE includes fourteen school districts in Western Pennsylvania with a community of educators active in contributing to the learning landscape of the Region. Nexovation Using entrepreneurship, innovation, cutting edge technologies and skill sets NextovationTM is an inclusive and collaborative initiative focused on real change and regional revitalization in the new digital economy, referred to as the fourth industrial revolution".
- Roz Norman: "As an emerging social enterprise, GatewayGIS is collaborating with academia, government, industry, and nonprofit organizations to integrate geospatial technologies and geoscience in an immersive STEAM curriculum for preschool to 12th grade in a community-building support system".
- Kristina Woods@Cape Cod, MA: "STEM boosters offering any student who applies a grant to purchAse equipment so those for whom cost is prohibitive".
- Jennifer Irvin@STEMSTL: "BJC HealthCare partnership with St. Louis Public School CTE) Career and Technical Education Program to start the BJC C N A Pipeline Program. As a result, we have been able to work with the students enrolled in the program to prepare them for hard-to fill-careers in our hospitals. This program has been very successful with several students now working for BJC HealthCare. The students are able to take advantage of tuition reimbursement to further education".

- o <u>www.bjcschooloutreach.org</u>
- Tom Manger @ Robot Garden in Livermore, CA: "Robot Garden makerspace has partnered with local Girl Scout, Boy Scout, and 4-H groups to help them run better informal STEM learning activities. We have allowed them to either double in size, make it to national robotics competitions, and run large STEM badge programs. It has allowed us to recruit additional volunteers both parents and STEM mentors to run these programs. So, we are able to offer very low-cost activities. We are building a connected STEM community and working to create a template that can both scale for larger oversight and replicate so that local control is maintained".
- Sue Parrish, Consultant, Oregon Solutions: "Oregon's STEM Hubs bring together early learning, K-12, higher ed, biz/industry, youth development and culturally specific organizations to promote equitable access to STEM training and careers and strengthen the STEM system in Oregon's varied communities".
- Kevin Bringe, principal @ Amos K. Hutchinson Elementary School Greensburg, PA: "Our school hosts a STEAM Carnival each year, which brings business, community, and education leaders, who share STEAM-related, hands-on/minds-on projects with our K-5 students, including Google, Penn State Univ., University of Pittsburgh, the Army Corps of Engineers, First Energy Corp., Alcoa, Carnegie Science Center, the Spectroscopy Society of Pittsburgh and others".
- Soleil Boyd: "Washington STEM works through 10 regional networks in WA State that
 bring together local business leaders to look at career entry data for local high school
 grads and design pathways from high school to regional family sustaining careers".
 - https://washingtonstem.org/focus_area/career-pathways/ -

- Xan Black, Tulsa Regional STEM:" K-12 Drone competitions; STEM IN A BAG kits;
 Space week; Space Week; Innovation Fair".
- Harry Wood: "We are a great STEM organization that brings STEM initiatives to Deaf and Hard of Hearing students nationwide"!
 - o <u>www.aidb.org/nrsc</u>
- Patricia Smeyers, Liberty STEM Alliance, Hudson C NJ: I am looking to learn more
 about the DOD STEM and discuss areas teachers can intern or visit to find out what is
 needed in our schools to foster STEM within our Military Service possibilities and future
 service men and women
- Susan Freeman, NU, Boston, MA: "Northeastern University engineering students working in local communities and schools teaching engineering design and robotics to local students ages 7-14".
- Christine Girtain @CCGirt Toms River Regional Schools NJ: "Toms River, NJ we
 partner with the Navy and Camp Invention to offer STEM camps to underserved
 students".
 - o https://www.invent.org/programs/camp-invention
- Bernadette Uzzi@ Brookhaven National Lab (NY): "We collaborate with Girls Inc., NY
 Science, Technology, Entry Program, Girl Scouts, by offering activities that build skills
 and exposure to STEM careers. Also, K-12 teacher training".
- John McFarlane ID STEM Ecosystem: "We have an externship program that places educators in host businesses for 200 hours over the summer. They bring the lessons learned back to their students to better prepare them for potential STEM careers".

- Patricia Smeyers, Liberty STEM Alliance, Hudson C NJ: "Policy with deep history learning with privacy and security at the forefront of innovation and to foster this in education as well".
- Craig Rosen @ Nevada STEM Network: "We recently hosted a Statewide STEM Summit bringing together our sectors to set a STEM Strategic Direction for the 3 regions in our state. This is followed up by a round of mini grants to allow for the growth of high-quality STEM programming. Our next steps include developing a subcommittee focusing on our 3 core Outcomes including STEM Equity, STEM Awareness, and High-Quality STEM Programming".
 - o https://osit.nv.gov/STEM/Regional_STEM_Networks/
- Anna Hennes Kansas City: "We are proud to work on a regional initiative (bi-state, 6 counties, 30+ school districts) to redesign high school with attainment of Real-World Learning experiences".
 - o https://www.kauffman.org/real-world-learning/
- Michael Lemon, KC STEM Alliance: "The Kansas Enrichment Network (Kansas Statewide Afterschool Network) partners with KC STEM Alliance. As well, through our partnership with the C.S. Mott Foundation, we're partnering with STEM Next as well as Million Girls Moonshot grantee".
 - o https://stemnext.org
 - o https://milliongirlsmoonshot.org
- Mary Eileen Wood, Terra Science and Education: "Terra connected with a local school district and the water treatment facility in their town for innovative engineering design and scientific research by PRE-collegiate students"!

- Paul Eichen: "We founded Kid Spark Education to help educators in informal and formal spaces teach applied engineering to pre-K 8th grade students. We have learned that starting early and sustaining the STEM journey are the keys to STEM Equity".
 - o https://kidsparkeducation.org/
- Betsy Barent-LNKSE: "UNL Engineering Ambassadors are leading STEM Explorations for elementary students".
- Suzanne Sontgerath: "Director of Pre-collegiate Outreach, Worcester Polytechnic Institute, MA. Connecting higher ed STEM opportunities to K-12 students".
- Tamara Goetz: "STEM in Motion (SIM)— Mobile STEM programs for virtual and in person STEM instruction and professional learning opportunities".
 - https://stem.utah.gov/educators/stem-in-motion/"
- Dr. Leah Bug: "The Engineering Place at NC State provides Engineering Education experiences for K-20 students and teachers, focusing on providing programming for underserved groups".
 - o https://www.engr.ncsu.edu/theengineeringplace/
- Karen Whitson: "Oregon Science Project Rural Learning Collaborative initiatives with NGSS".
 - o https://www.nepris.com/home/v4
- Karen Morris @ Notre Dame, IN AP-TIP IN: "we are a NMSI partner state focusing on using AP MSE courses to support STEM college readiness"!
 - o http://iei.nd.edu/aptipin
- Sara Ludovise @ OC STEM, CA: "Our organization, Crystal Cove Conservancy, partners with environmental engineers from UC Irvine and California State Parks to get

underserved high school students involved in studying coastal erosion and changing coastlines".

- o https://crystalcove.org/education/overview/coastal-dynamics/".
- Kelly Zelesnik, Lorain County Community College: "FlexFactor".
 - o https://www.lorainccc.edu/stories/sparking-innovation/
- Betsy Payne@Philadelphia STEM Ecosystem: "The Philadelphia STEM Ecosystem is a participant in the recently formed Pennsylvania Statewide STEM Ecosystem (PSSE).
 PSSE is a collaborative of formal and informal STEM Ecosystems across Pennsylvania.
 Its goal is to support all Pennsylvanians' access to quality STEM education and career pathways, so that they may become tomorrow's leaders, influencers, and problemsolvers. The PSSE supports the PA STEM Coalition".
- Michael Goodman @ Arlington, VA: "Metro Warriors STEM Organization provides supplemental STEM opportunities and competitions to DC area schools and the Prince George's County community. MWSO.org. Focus is on STEM Equity and is a member of NSBE".
- Lisa Milenkovic @BrowardSTEM: "Many examples of the positive opportunities the collaboration across the ecosystem Most recently was a districtwide CSEdWeek program which brought industry to schools for an hour of code and STEM career exploration. The connections will continue as mentors beyond the week celebration of CS".
 - o https://www.browardschools.com/browardcodes
- LaTina Taylor@STEM Texas State University: "NASA STEM Engagement &
 Educator Professional Development Collaborative (EPDC) is a national educator

professional development and STEM engagement organization designed to partner with NASA in service to STEM educators and their students across the country. Our mission is to guide and support a broader group of educators to utilize the best of NASA's professional learning resources integrated with culturally relevant STEM pedagogies to serve diverse student audiences by inspiring and motivating them to pursue STEM fields of study, careers, and opportunities with NASA".

- o https://www.txstate-epdc.net/
- Anne Turner@TERC in Boston: "TERC is a 50 year old STEM education research, evaluation, and curriculum development non-profit largely funded with public funds. We're eager to collaborate, write grants with, conduct research with schools and OST programs to enhance teaching and learning for all students".
- Kevin Anderson, Wisconsin DPI Science/STEM: "What about soapbox advocacy? The type that happens with a science/STEM fair at the White House?"
- Janelle Johnson @STEMequity CO: How about a student research symposium instead of a traditional science fair?
 - Kevin Anderson, Wisconsin DPI Science/STEM: "I agree that a traditional science fair has some issues, particularly in the realms of equity and access.
 Needs some revisioning, but the opportunity for positive communication is still strong".
- Janelle Johnson @STEMequity CO: "GLOBE has had great luck broadening STEM
 pathways with their SRSs".

- Bonnie Maur @sacredheart.edu: Yes I wouldn't think any of us would be speaking about
 a traditional science fair. I hope we are moving away from that and more into
 STEM/STEAM project ideas.
- Rachel Levy, AAAS/AMS Congressional Fellow, Senator Maggie Hassan: "Programs
 that build teacher leadership, collaboration and professional learning communities, so that
 teachers are empowered to grow together and support each other and their students".
- Xan Black Tulsa Regional STEM: "Tulsa has a Tulsa Research Kids event in which k12 students present alongside college students and university professors on the same
 broad topic".
- Jennifer Irvin@STEMSTL: "How about a 'STEM for America' program with similar benefits as "Teach for America" the template is already set. The goal is to work directly with schools-educators to design and facilitate STEM opportunities i.e. career fairs, guest speakers, mentors etc..".
- Joan Harper-Neely: "The NASA eClips team leads and supports active participation in the advancement of knowledge for learners of all ages within the STEM ecosystems and communities we serve and support. Working with local public television and interns from HSBCU, television episodes were created to reach rural audiences with limited access to internet services. In each episode, interns work together to explore and demonstrate scientific concepts related to a specific topic".
 - o https://vpm.org/articles/15145/nasa-eclipstm-at-home
- Beonica Rutherford-Frazier @North Louisiana STEM Alliance: "Professional learning communities is a great idea that I hope to bring to my area".

- Amanda Smith: "Student research symposiums occur in which every student in earth science/biology participates in county based systems in VA...but even then it was inequitable, so much to improve on"!
- Henri Shimojyo@Ogos Education Systems, Lake Elsinore CA: "There is a need to
 reassess the great value of CTE courses and its alignment to STEM along with its impact
 in the economy, technology and support of our local industries and communities".
- Amanda Smith: "Research experiences for teachers to develop relevant meaningful
 research activities aligned to science/engineering research is actually possible these
 experiences can be done in person and virtually with educators".
 - https://www.csats.psu.edu/overview-of-csats-programs/csats-summer-research-experience-for-stem-teachers-information-application-portal
- Janelle Johnson @STEMequity CO: "When amazingly innovative CTE programs do not count as "college prep," we have a problem. Students who plan on attending college are tracked out of those classes. In Colorado, schools that accomplish blending CTE and college prep are the exception rather than the rule".
- Terence Laughlin @ ENGINE of Central PA: "Begin equity by closing the gap on the digital divide? Start with the T in STEM".
- Scott Dietz@Catalyst Connection, Pittsburg,PA: "I have a feeling we are going to need a national call to action for new teachers post Covid. Have seen a lot of people retire, get burnt out, and tons of colleges in our state have super low enrollment in teaching bachelor programs. WE have an almost crisis level lack of substitute teachers as well that make STEM hard to do effectively".

- Bonnie Maur @sacredheart.edu: "We are also partnering with community colleges in
 order to ensure that we can assist students and ensure equity to bring students to ensure
 them a 4 year college education and ultimately return them to their communities as
 educators".
- Dr. Deborah Smith: "We need to engage preservice teachers, practicing teachers and students K-12 in scientific thinking and practices".
- Janelle Johnson @STEMequity CO: "Standardized testing is driving curriculum, though, and science isn't tested until late in elementary".
- Kevin Anderson, Wisconsin DPI Science/STEM: "Effective teaching in STEM definitely needs more research. Much of the research we have tends to show that integration of subjects isn't always as effective as we'd hope, so we need better models of how that could work and research to support it"!
- Dr. Marcella Klein Williams: VC STEM: "We should capitalize on the investment in expanded learning and provide a clear and compelling path for expanded learning workers implementing STEM learning to the teaching profession".
- Mary Adams Gr. Cincinnati STEM Collaborative: "Pay / compensation is key to attracting the best. How to support low-income communities with additional monies?".
- Patricia Smeyers, Liberty STEM Alliance, Hudson C NJ: "We partnered with the US ARMY and were thinking of how we could do a buddy system with underserved populations as a way to introduce ROTC and Military Service for those not realizing the possibilities for their future. We also wanted a better method of showcasing STEM in the DOD to our high school students. We toyed with VA assistance for this project. Work in progress".

- Anne Turner@TERC in Boston: "We're brainstorming providing competency-based tools to help classroom aids progress in their careers to augment the pipeline".
- Tonya Matthews @SE Michigan STEM: "My new go-to mindset is 'cultural nimbleness'
 as the 2.0 of cultural competency, acknowledging the range of diversity within any given classroom/community. You've got to be able to flow".
- Rachel Levy, AAAS/AMS Congressional Fellow, Senator Maggie Hassan:
 "Performance-based assessments with problem-based tasks in rich contexts".
- Beonica Rutherford-Frazier @North Louisiana STEM Alliance: "We are partnering with the local community college and local chambers, linking business and industry directly to students to support valuable work-based learning opportunities".
- Shanie Holman, Orange County CA: "I second the pay/compensation issue. Folks with a solid background in STEM can earn *so* much more outside of education".
- Jennifer Irvin@STEMSTL: "We facilitate a quarterly school-business partnership meeting. The purpose is to bring together school districts with businesses that can assist with offering career exploration, educator internships, scholarships etc.. The local chamber also participated".
- Jen Davis Carey @Worcester Massachusetts: "One of the troubling facts that I believe impacts teacher effectiveness in the STEM areas is the fact that many teachers, particularly those in the K-8 grades were drawn to education as a career because they are math and science averse. If we are to improve teacher effectiveness, we need to improve teacher competence in these fields".

- Scott Dietz@Catalyst Connection, Pittsburg,PA: "Need career nimbleness prepared students too...just because your piece of paper says X doesn't mean you can't do Y and Z. That whole, jobs of tomorrow don't even exist today".
- Ann Zimmerman, KC STEM Alliance: "There is a big opportunity to leverage best
 practice STEM curriculum that provides teacher professional development; i.e., Project
 Lead The Way, Innovation curriculum with Inventors Hall of Fame and Destination
 Imagination".
- Xan Black Tulsa Regional STEM: "Externships for educators during summers at local STEM business partners".
- Jennifer Imm @San Diego STEM Ecosystem: "In Escondido (San Diego County) we created a partnership between nonprofit outdoor education organizations and the local school district to be able to provide STEM-based outdoor education programming to all students in the district in grades 3-7, with the hopes of expanding to K-12, and beyond our district. We also started the California Statewide Outdoor Learning movement (CalSOL) to push for statewide access to outdoor STEM education for ALL K-12 students in California.
 - o https://www.californiasol.org/
- Patricia Smeyers, Liberty STEM Alliance, Hudson C NJ: "We were thinking of that with the military idea when partnering with the Army. How to best support our troops looking for career change since NJ has some methods to ease the transition and honors service on pay scale. As far as diverse, also the project into schools may help".
- Deana Brown Boise, ID: "In many smaller communities, libraries are the only informal learning center, and there are some amazing STEM programs happening there"!

- Mary Eileen Wood, Tearra Science and Education: "Terra Science and Ed is developing
 creative ways to engage underserved, under-represented students via our local, regional
 and international fairs and our support structures for them TerraFairs@terraed.org if you
 want more info".
 - o https://terraed.org/
- Rowley @Alamo (Witte Museum): "Current STEM education efforts almost exclusively focus on career readiness, but as we have seen during this pandemic STEM understanding is critical for much more than career. How can we ensure we expand STEM mindsets beyond career?"
 - o Kevin Anderson, Wisconsin DPI Science/STEM: : "Yes! We need a focus on a general STEM literacy for all, not just preparation for a particular career".
- Natalie Dusi: "I represent Industry so I have a bit of a different perspective then most on here. One thing that I think presents an immediate opportunity is around prioritizing STEM as part of our Economic Recovery plan as a country. More now than ever, STEM and Workforce Development is critical and I think creating some urgency at the Federal, State and local level as part of our Economic Recovery could help STEM take front and center".