



NEWARK STEM Ecosystem



NEWARK **STEM**
ECOSYSTEM

NJIT
New Jersey Institute
of Technology

RUTGERS
UNIVERSITY | NEWARK



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Contributing Exhibitors





NEWARK STEM Ecosystem Executive Committee



Bruce Bukiet, PhD.

Professor of Mathematical
Sciences & Associate Dean
College of Science & Liberal Arts
NJIT



Alexander Gates, PhD.

Director & PI, Garden State LSAMP /
Distinguished Service Professor
Earth & Environmental Sciences
Rutgers University



James Lipuma, PhD.

Director of CLEAR Center,
Humanities and Social Sciences,
NJIT



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Coordinator - Newark STEM Ecosystem
LEAD STEM Fellow, SLECoP
Consultant - Schenker Consulting Group



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Executive Director,
Research & Development Council of NJ



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Ex. Dir., Newark City of Learning Collaborative
Assistant Professor Rutgers-Newark



Shirley Mautone

Programs Manager - R&D Council of NJ
Project Manager - NJSPN



Mark Maire

Superintendent
Morris Plains School District



Janice McDonnell STEM Agent

Dept. of 4-H Youth Development
Rutgers University



Jessica McKenzie, MPA

Lead of CSR & Program Officer
The Panasonic Foundation



Marissa Staffen

County 4-H Agent, Dept. of 4-H Youth Development
Rutgers University-Newark



Kathleen Tierney

Director, Department of Science
Newark Public Schools



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MORNING AGENDA

STEM Connections: Building Bridges to Our Workforce

Time	Topic
8:15-9:00	Check In, Networking, Exhibitors, with Continental Breakfast
9:00-9:15	Welcome - Newark STEM & University Leadership
9:15-9:45	A STEM Professionals Story Corey Samuels - LEGO Master & STEM Educator
9:45-10:30	Outlining the STEM & Innovation Landscape w/ the Innovation Atlas - Jarell Brown, The Henry Ford
10:30-10:45	Break
10:45-11:20	Identifying the Opportunities & Needs of the Region Small Group Session
11:20-11:30	Remarks from NJSPN and NJIT Leadership
11:30-11:45	Newark STEM: Seven Organizations, One Collaboration Story
11:45-1:00	Visit Tables & Networking - Lunch served at 12pm



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AFTERNOON AGENDA

STEM Connections: Building Bridges to Our Workforce

Main Ballroom		Room 240
1:00-1:15	Move to small group sessions	
1:15-1:45	Student-to-Student Mentorship A Discussion with: Jennie Thomas, 4-H Rutgers Coop. Extension Eileen Neri, The Achieve Foundation	Young Innovators: Empowering Kids to Become Future Entrepreneurs Alissa Schonmann Morris Plains Borough School
1:45-1:50	Move to small group sessions	
1:50-2:20	Student-to-Student Mentorship A Discussion with: Jennie Thomas, 4-H Rutgers Cooperative Extension Shannon Kirk, The Achieve Foundation	Cultivating a STEM Mindset in K-6 Classrooms. Discussion with the National Inventors Hall of Fame Andrea Dulac - NIHOF DeAnne Fischbach, Lafayette Elementary School Gina Petrusky, Smalley School
2:20-2:35	Break	
2:35-3:20	Main Room Panel Discussion: Building Our Bridge Between PK-20 and the Workforce From DEI to empowering teachers and securing essential resources, these are some of the priorities that drive transformative STEM education. Join us as experts share their insights and strategies to inspire meaningful change.	
3:20-4:00	Taking Action with Collaboration and Commitment Group reflection on the day's discussions and information sharing, and what steps can be taken to turn talk into action.	



NEWARK STEM Ecosystem

Today's Vision:

To uncover and create pathways that empower our youth to pursue their hopes and dreams, ensuring a future filled with endless possibilities and fulfilling careers.

Our Mission:

To empower students' success by being the Connector, Collaborator and Clearinghouse between educators, industry and STEM/Innovation professionals (collectively "STEM Shareholders").

Through understanding the work and activities of STEM Shareholders, we can co-design an inclusive educational support system that works towards workforce readiness.

We strive for equitable outcomes for a diverse population of K-20 learners in Newark and Essex, Morris, Passaic, Sussex, Union, and Warren counties.



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Our Goals for Today:

1. Developing the **Opportunity Landscape** for STEM and Innovation Learning programs and how they connect to workforce readiness
2. **Identifying Gaps** for Newark STEM to address in 2025
3. **Making Commitments** for NJ STEM Month (March)
4. **Painting a Picture** of the State of STEM within our CoP



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Morning Speakers

Corey D. Samuels

CEO

Samzbrego

LEGO Master and winner of the 2024 Fox TV Show “LEGO Master Bricktacular”

Dr. Kevin Belfield

Dean

College of Science and Liberal Arts, NJIT

Professor of Chemistry and Environmental Science

Fellow of the Royal Society of Chemistry

Jarell Brown

Director of Analytics & Business Intelligence

The Henry Ford

Dr. John Pelesko

Provost

Senior Vice President for Academic Affairs

NJIT

Jeffrey A. Robinson, Ph.D.

Interim Chancellor

Rutgers University - Newark

Alexander Gates (PI)

is a Distinguished Service Professor at RUN and will serve as director of the Project. Gates is the PI/Director of the GS-LSAMP



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Learning Blade Special Offer

Sign up for the CTE and STEM lessons, 18 month license for 12 month price

STEM, Computer Science, and CTE lessons

Appropriate for grades 5-9, Learning Blade provides ready-to-use online lessons for math, science, social studies, and language arts aligned to state standards and include corresponding lesson plans for teachers, parent handouts, and more!

This opportunity is open to the Newark STEM Ecosystem community, covering the counties of Essex, Morris, Passaic, Sussex, Union and Warren.

Must sign up before March 31, 2025

Visit their table for more information

www.newarkstem.org



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Student-to-Student: A Look at Peer-to-Peer Mentoring and Tutoring Models

Jennie Thomas

Community Manager

3-H / Rutgers Cooperative Extension



Shannon Kirk - Manager

Achieve Volunteer Tutor Program

The Achieve Foundation of South Orange
& Maplewood



**Achieve
Foundation**



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Building Our Bridges Between Education and the Workforce



Jason Bing

Superintendent

South Orange-Maplewood School District



James Howard

Executive Director

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Chrissy Rebert

VP of Global Instructional Solutions

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Convening Outcomes January 16, 2025 Held at NJIT

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NEWARK STEM Ecosystem

The Story

The Event

- Over 220 registrants, with 120+ attendees from 85 different towns and 87 different organizations
- Cross-section of STEM shareholders attended, covering most of our targeted sectors
- Strong support for Newark STEM to continue, and focus, its work

Desired Outcomes for Newark STEM (based on survey results):

1. Provide and share info on STEM learning and career readiness
2. Provide resources for shareholders to share information
3. Provide more opportunities for collaboration and learning through in-person and virtual events
4. Further explore how data can be used to advanced the work of Newark STEM and its community



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87 Organizations Represented (125 registered)

4-H Rutgers Cooperative Extension
Achieve Foundation
Arman Roy Foundation
Berkeley Heights Public Schools
Bound Brook School District
Broadridge Financial Solutions
Caldwell University
Caring for Children - Bricks 4 Kidz Essex
Central High SCHOOL
CHS Consulting Services
Dover Public School District
Dunellen Public Schools
East Orange School District
East Side High School
eDynamic Learning
Fair Lawn High School
Fair Lawn School District
Girl Scouts Heart of NJ
High School Research Mentorship
Hillside Public Schools
Hoboken Public Schools
HSMC STEM Ecosystem
iLearn Schools
Ironbound Academy
Jefferson Schools

Jersey City Public Schools
Keansburg School District
Kearny School District
Kittatinny Regional High School
Maplewoodshop
Marion P. Thomas Charter School
Montclair State University
Morris Plains School District
Morris School District
Mountain Lakes School District
MRRI Institute
MTSD
NAACP Newark NJ Branch
National Inventors Hall of Fame
net.America
New Jersey Institute of Technology
NJ Academy of Science
NJ Commission on Science, Innovation, and Technology
NJ Department of Transportation
NJ STEM Pathways Network
NJIT - Gear Up/College Bound
Passaic Academy of Science and Eng.
Passaic Preparatory Academy
Passaic Public Schools
Pennsylvania Alliance for STEM Education

Plainfield Public Schools
Plainfield Public Schools/21st CCLC
PSEG
Quintilian
Rahway Public School
Rekindle Education
Research & Development Council of NJ
Retired STEM teacher
Roselle Borough Schools
Rutgers - New Brunswick
Rutgers - Newark
Rutgers - Newark, GS-LSAMP
Rutgers University - Newark Center for PreCollege Programs
Samz Brego
Schenker Consulting Group
Science Park High School
Silverquicken Education, Inc.
South Orange-Maplewood School District
State of NJ - Div. of Civil Rights/Affirmative Action
STEAM for ME NJ Inc
STEAM URBAN
Stevens Institute of Technology
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TBA!
Technology High School
Teq
Terra North Jersey STEM Fair
Terra Science and Education
The Henry Ford
TIES
TRC Environmental Corp.
UCNJ Union College of Union County, NJ
University Academy Charter High School
WCRC
West New York Public Schools
William Paterson University
Youth Spirit Club Incorporated

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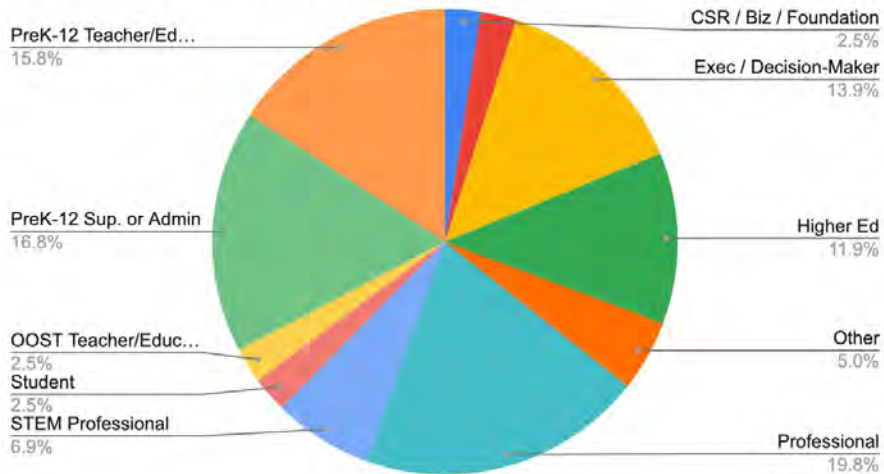
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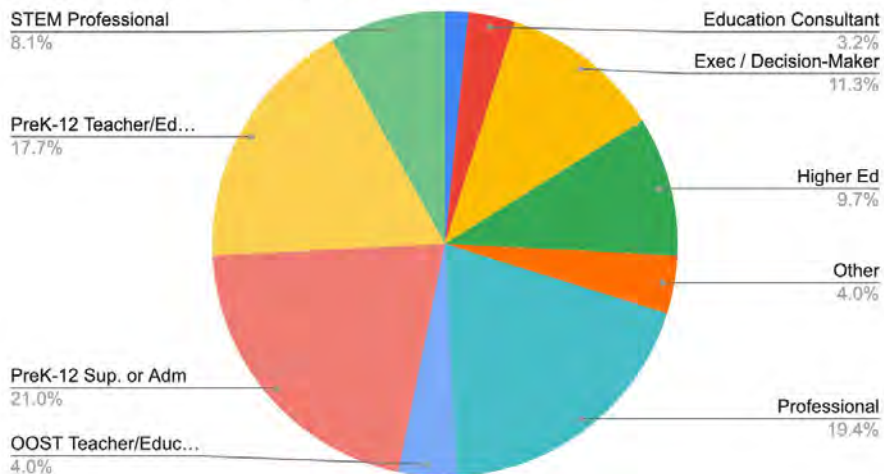


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Registrants - Role/Responsibility



Attendees - Role/Responsibility



Registrants and Attendess:

202 registrants, including exhibitors and volunteers

- 85 different towns
- 20% - Professionals related to STEM
- 17% - PreK-12 Sup/Admin
- 16% - PreK-12 Teacher/Educator
- 14% - Executives/Decision Makers at STEM related org

124 'checked in' from 54 different towns

- 21% - PreK-12 Sup/Admin
- 19% - Professionals related to STEM
- 18% - PreK-12 Teacher/Educator
- 11% - Executives/Decision Makers at STEM related org

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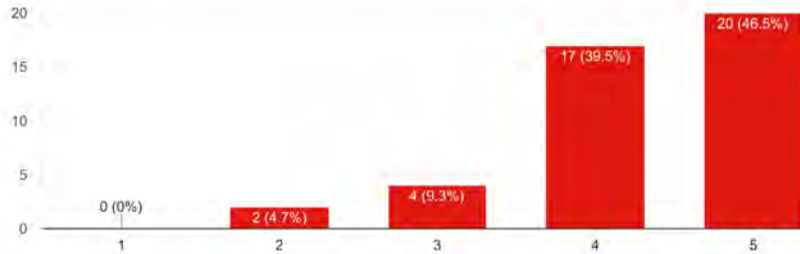


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EVENT EXPERIENCE

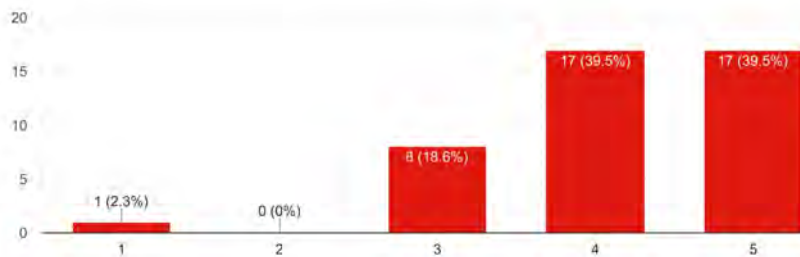
How relevant was the content presented at the convening to your current work in STEM or workforce readiness?

43 responses



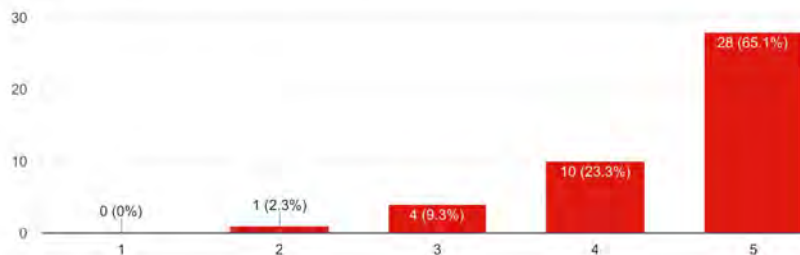
How well did the convening help you understand the current challenges and opportunities in STEM education?

43 responses



How likely are you to participate in future STEM Ecosystem events?

43 responses



- 86% found the content very or extremely relevant
- 79% responded that convening helped to understand the current challenges and opportunities in STEM Education
- 88% would participate in a future Newark STEM event



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EVENT EXPERIENCE - COMMENTS

What specific ideas or strategies from today's convening do you plan to implement in your work?

1. More open access, collaboration and access for students
2. Creating more community & STEM learning partnerships
3. Increase utilization of data



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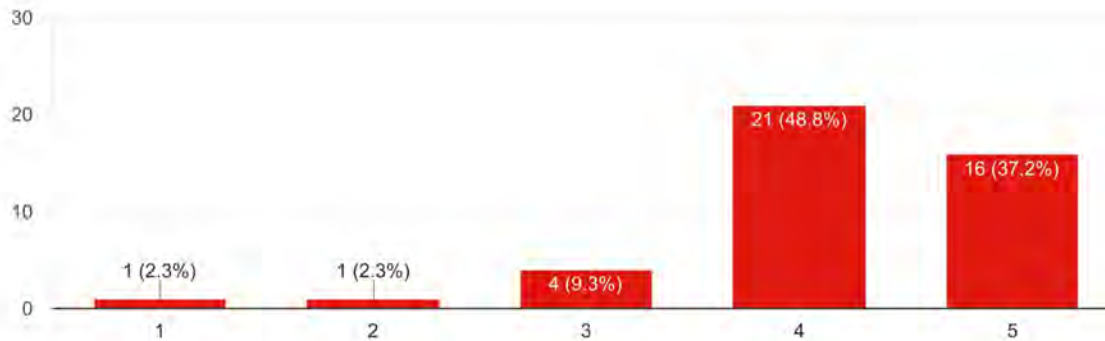


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Networking Opportunities

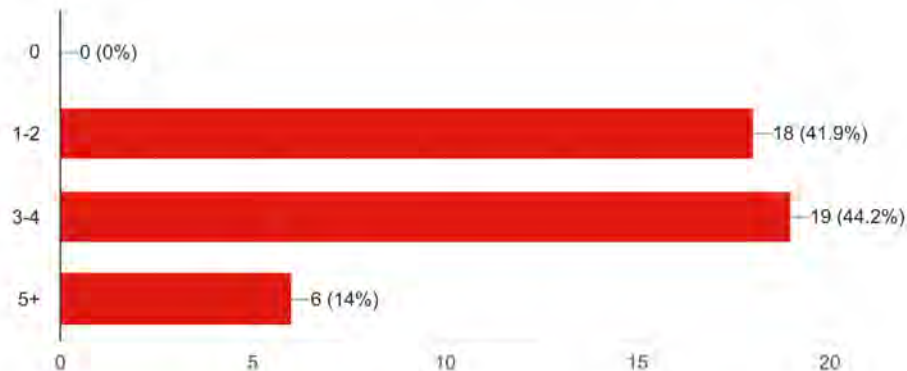
How valuable were the networking opportunities provided during the convening?

43 responses



How many new, meaningful connections did you make during the convening?

43 responses



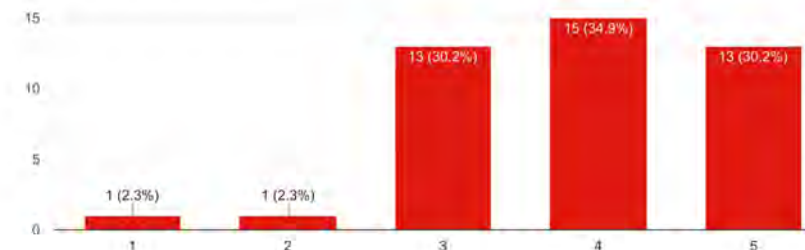
86% valued the networking opportunities

58% making 3 or more new connections

65% found Exhibitor time valuable

How valuable was your time with the Exhibitors?

43 responses



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EVENT EXPERIENCE - COMMENTS

What types of collaboration or partnerships do you envision developing from connections made at the convening?

1. Vendors and Programs
2. Workforce, Career or Executive Shareholders
3. Developing and implementing new curriculum, programs or services



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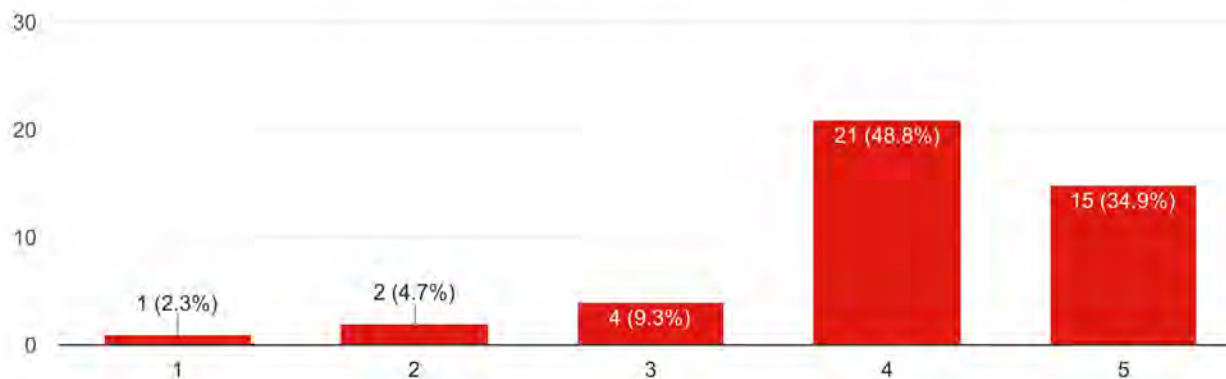


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Speakers & Sessions

How effective were these speakers in engaging participants and facilitating discussion?

43 responses



Top Comments:

Corey Samuel's inspirational personal story, and how LEGO can impact and engage child and adult learns

"Bridging Education and the Workforce" nicely summarized the day

The Henry Ford (Innovation Atlas)

All three PM breakout sessions

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Speakers & Sessions

Topic Ideas for next year:

- More student involvement
- STEM lesson planning
- Success stories
- Opportunities for internships
- More career pathway discussion
- More exposure to more STEM subjects (ie life science, CS careers)
- More time for collaboration
- More breakout sessions

Next year, NSE may want to consider tracks for 'teachers' and 'EDU admin/workforce'



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Speakers & Sessions

Biggest takeaways

- More awareness of the opportunities and resources available
- The opportunity to network and begin collaborating
- Ensuring STEM opportunities are available to ALL students

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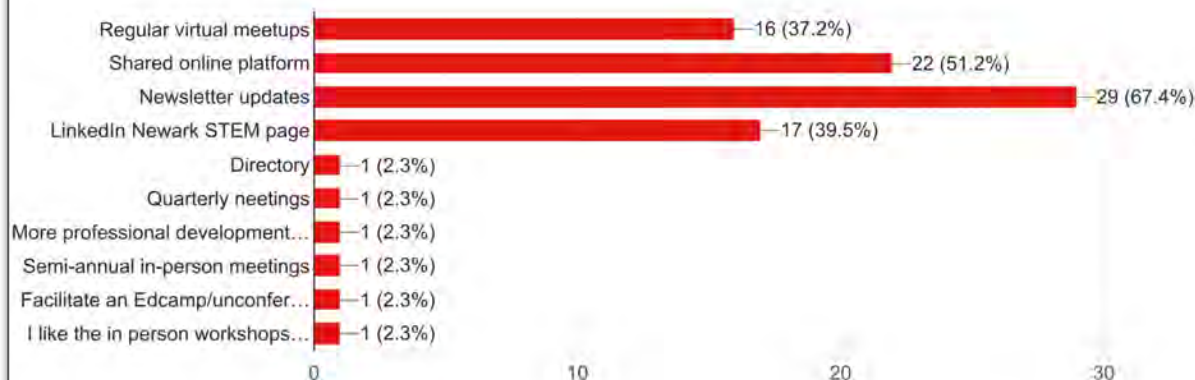


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How can Newark STEM Support Shareholders?

What specific support would help you maintain connections made at the convening? (Select all that apply)

43 responses



Action items:

- Newsletters
- Shared Online Platform
- LinkedIn STEM page updates
- Regular Virtual Meetups

Some interest in regular in-person meet ups

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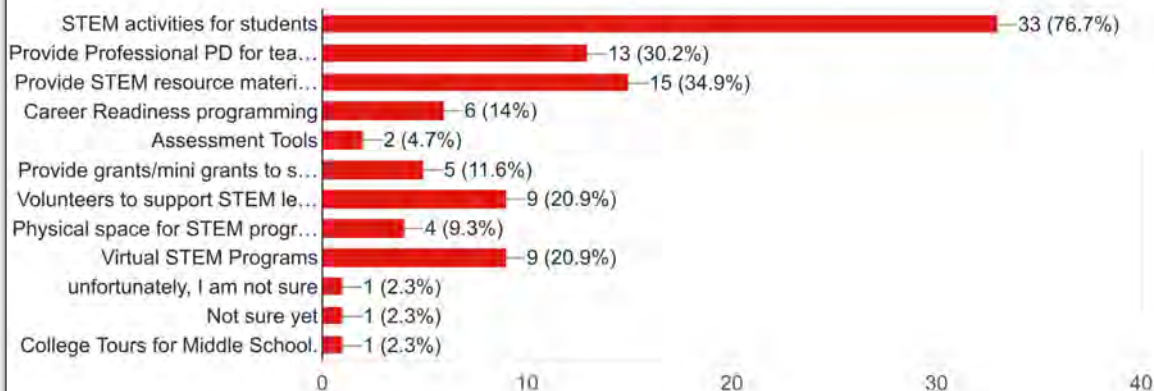


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NJ STEM Month Commitments

What commitment(s) can you, or your organization, make to support STEM learning activities during NJ STEM Month in March?

43 responses



Action items:

- Outreach to individuals on these commitments
- Create an intake form for STEM events, similar to NJSPN intake forms

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