



MiSTEM Network Region #6 2022-2023 Strategic Plan

Dr. Sarah Keenan-Lechel
Genesee ISD

MiSTEM Network Region Strategic Plan

Region #[6] 2022-23

Checklist (BEFORE starting your strategic plan):

If you **cannot** check off each box below, reach out to Carlee to help begin your strategic plan.

- Is the information for your region up to date on our shared [AirTable](#)? [This is important for our network to be current and up to date.]
 - Email Carlee (madisc@michigan.gov) any updates
- Reviewed any feedback on your 2021-2022 Regional Grant Submission (copy placed in your [Regional Strategic Plan Google folder](#))
- Worked through the Needs Assessment (located in your [Regional Strategic Plan Google folder](#)).
- Shared or received insight on your Needs Assessment from your regional team or advisory council
- Reviewed the [Frequently Asked Questions Document](#) to check for feedback, recommendations, and pitfalls from other Regional Directors
- Communicated with your fiscal to prepare for the budget and coding process moving forward
 - Reviewed or sent the [funding codes sheet](#) to budget support
 - Reviewed the [three grant funds](#) that can be accessed with your strategic plan

Resource Drop

(please link any/all source resources that you used to support you in your work, i.e. previous strategic plans, etc.)

- Needs Assessment: [Needs Assessment 2022-2023 - Region #6](#)
- Previous Strategic Plan: [Region 6 Strategic Plan 2021-2022](#)

Needs Assessment

Stakeholders Involved:

Use the list from the Preparing for the Conversation Section in your completed Needs Assessment (located in your [Regional Strategic Plan Google folder](#)).

| Stakeholder | Affiliation |
|--|---|
| Leyla Sanker | Program Manager of Great Lakes Stewardship Initiative Hub: Discovering PLACE |
| Michael Pillay | Science and STEM Coordinator at Genesee ISD |
| Dr. Mary Behm | Assistant Superintendent of Education and Learning at Genesee ISD |
| Dawn Cowey | Assistant Principal at Lapeer Career and Technical Education |
| Dawn Mosher | Instructional Services Manager at Lapeer ISD |
| Suzanne Knight | Director of K-12 Partnerships, School of Education and Human Services, UMFlint |
| Dr. Beth Kubitskey | UMFlint, Professor of Education and Dean, School of Education and Human Services |
| Laura Chambless | K-8 Math and Science Consultant, St Clair County RESA |
| Minna Turrell | Secondary Math and Science Consultant, St Clair County RESA |
| Kristin Day | Instructional Technology Consultant at St. Clair County RESA / REMC |
| Jessie Billiau, Wanda Bigelow, and Angela Libkie | MichiganWorks! Shiawassee, Genesee and Thumb |
| Ron Madison | Instructional Technologist at Genesee ISD / REMC |
| Ann Konarski | Lapeer County CAN! Coordinator and Adjunct Instructor of Computer Information Systems at St. Clair County Community College |

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|----------------------|---|
| Anthony Najor | Lapeer County Education Technology Center Principal and Assistant Principal |
| Sarah Neal | Director of Education Services at St Clair County RESA |
| Jim Licht | Secondary Math Consultant, St Clair County RESA |
| Bonnie DiNardo | Executive Director of Community and Public Relations, St Clair County Community College |
| Cheryl Wilson | Computer Science Consultant - Michigan Department of Education |
| Pat Yanick | St Clair RESA Career and Technical Education Director |
| Jon Blanchard | STEMLETICS |
| Christy Cloud-O'Hare | Michigan Afterschool Partnership |

Data Sources:

At a minimum, use the results from the Discovering Data Section in your completed Needs Assessment (located in your [Regional Strategic Plan Google folder](#)).

| | |
|--------------|---|
| DS1: Careers | Regional Career Outlooks through 2028, High Demand, High Wage STEM occupations in Eastern Michigan with projected percentage growth , Michigan Bureau of Labor Market Information and Strategic Initiatives county analysis, conversations with educators and students at Mt Morris High School |
| DS2 : Need | MiSchool Data, Our Schools - At a Glance , MCAN Impact Map , Mackinac Center for Public Policy - Michigan Public Elementary and Middle School Context and Performance Database |
| DS3 : STEM | STEM Opportunity Index , Summary of advanced STEM Coursework opportunities, mapping of OST STEM institutions, mapping of 3P interest and support |

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Needs Statements from your completed Assessment:

Use the results from the Write Needs Statements Section in your completed Needs Assessment (located in your [Regional Strategic Plan Google folder](#)).

| | |
|-----|--|
| NS1 | <p>Access to high-quality STEM learning opportunities: Analysis of STEM-related learning opportunities, conversations with curriculum directors, teachers, and students show inconsistent access to science (especially in the elementary grades), computer science (especially K-8), and integrated STEM learning opportunities. There are pockets of dedicated effort but few coherent K-12 opportunities for students to engage in STEM-related practices and see the connection between content and real-life applications. Early exposure to these subjects is critical for supporting students’ ability to see themselves as capable and belonging in STEM subjects, especially those who are traditionally underrepresented in these fields (American Association of University Women: STEM Gap).</p> |
| NS2 | <p>Awareness around STEM Careers / pathways: There are uneven opportunities available for teachers and counselors to connect with community / business partners and learn about how the content they teach is applied across various careers. There is a strong interest in doing so and having learning around how to best do so (Mi-STAR community partner survey results), but a lack of time to seek partners and a lack of structural support for exploring this space. Supporting teacher knowledge about STEM Careers and related pathways has a direct impact on student awareness and interest in STEM Careers (Knowles, Kelley, & Holland, 2018).</p> |
| NS3 | <p>Access to out-of-school STEM experiences: Out-of-school opportunities are limited by geography (there are a concentration of programs run by community partners in Port Huron and Flint, and almost exclusively school-based opportunities in more rural areas). The afterschool programs that are available are not able to serve all students who would like to attend (Michigan Afterschool Alliance Factsheet) and the instructors available generally lack high-quality STEM training.</p> |
| NS4 | <p>Support for 3P learning: Although MiSTEM Region 6 has a GLSI Hub (Discovering PLACE), and is connected with multiple PBE curricula (e.g., FRWC BRIDGES, Health in Our Hands), these opportunities primarily serve educators and students in Genesee County. Indeed, even within Genesee County, it is routinely the same several districts engaged in these efforts. There is a clear need to expand information and support available across the eastern half of the region. Across Curriculum Directors surveyed there was a lack of awareness of what 3P is, and whether or not it was being taken up by teachers; however, there was an interest in grants, PLCs, PD, and more information. One Curriculum Director also asked for connections with schools who are “getting it right”. The need for a clear plan and messaging was reiterated during the spring months as state funds were released and there was a flurry of interest around project based learning during summer camps.</p> |

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Strategic Plan

Culture (Priority Area) - Bring together STEM actors within and across regions in a research-informed way

The priority area language is still used in NexSys

- Strategy #1 Transform STEM learning with innovative and integrated 3P instruction opportunities
- Strategy #2 Create business-community-education STEM partnerships
- Strategy #3 Build equitable, inclusive change by investing STEM resources and opportunities in places with demonstrated need
- Strategy #4 Scale STEM successes in our regions related to MiSTEM goals and culture

State Level

The core of the state-level work is to support the understanding, evaluation, and execution of the strategies listed above.

| Action Item (Resource: Sample Regional Actions) | Strategies <small>*checkmark for all that apply*</small> | | | | Measure <small>Name the data, not the evaluator</small> | Timeline | Person(s) Responsible | Funding Source <small>*If multiple name the percentages of allocation*</small> <small>*Break these down in your budget descriptions below*</small> | Grant Criteria |
|--|---|-------------------------------------|--------------------------|-------------------------------------|--|-------------|--------------------------|--|-----------------|
| | 1 | 2 | 3 | 4 | | | | | |
| Outcome 1: Increase equitable growth in student knowledge and interest in STEM Careers | | | | | | | | | |
| R1.1a | Expand online summer courses for students in calculus, statistics, and biology to support students gain confidence before continuing to advanced courses , with a focus on the applicability of these subjects to STEM careers | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | SAMPI surveys Number of students served | Summer 2023 | Sarah Keenan-Lechel | Regional Mi... 100% | 99(s)5 & 9... ▾ |

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| R1.1b | Support summer camps focused on STEM career exploration. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Number of students served SAMPI surveys for students on career interest / awareness | Summer 2023 | Sarah Keenan-Lechel Genesee Opportunity Lapeer ISD St Clair RESA | Regional Mi... 50% In-kind supp... 0% In-kind supp... 50% | 99(s)5 & 9... ▾ |
| R1.1c | Support student tours at local STEM industries in collaboration with Local College Access Network | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Number of students served | September, 2022 - May, 2023 | Ann Konarski | Carry Over - ... 70% Local or Co... 30% | 99(s)5 & 9... ▾ |
| Outcome 2: Increase teacher knowledge about STEM Careers for students | | | | | | | | | | |
| R2.1a | Pilot Teacher STEM Tours with local businesses and host Showcase for teachers and students to discuss career awareness work in the classroom | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Number of teachers served Survey | October, 2022 - April, 2023 | Michael Pillay | Carry Over - ... 100% | 99(s)5 & 9... ▾ |
| Outcome 3: Increase student STEM test scores, advanced coursework and post-secondary credentials | | | | | | | | | | |

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| R3.1a | <p>Focus on developing PBE Teacher professional learning</p> <ul style="list-style-type: none"> - Work with GLSI and regional science consultants to develop monthly professional learning sequence around PBE - Offer registration for GLSI Climate Change workshops - Work with GLSI to coordinate Place-Based Education mini-grants with coaching and mentoring support - Support Discovering PLACE 2023 Summer Institute | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <p>Number of teachers served</p> <p>GIS mapping of participants</p> <p>Evaluation by GLSI</p> | October 2022 - September 2023 | Leyla Sanker Sarah Keenan-Lec hel | <p>Carry Over - ... 40%</p> <p>Regional Mi... 30%</p> <p>AC Grant fu... 30%</p> | <p>99(s)3 & 9... 99(s)5 & 9...</p> |
| R3.1b | <p>Expand MI-STAR / PBE integration by supporting another cohort of 8th grade teachers go through professional learning sequence and action projects. Develop 6th grade pilot for Summer 2023</p> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Evaluation by GLSI | November 2022 - September 2023 | Leyla Sanker Kelly Sanborn | <p>Regional Mi... 80%</p> <p>Other 20%</p> | 99(s)3 & 9... |
| R3.1c | <p>Support high-quality instruction with professional learning opportunities for STEM educators through research-based pedagogical programming:</p> <ul style="list-style-type: none"> - Introduction to Modeling workshop - Math Recovery - MiSTAR (new teachers) - Picture Perfect Science - Computer Science summit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Number of teachers served | October 2022 - September 2023 | Sarah Keenan-Lec hel Erin Peyerk Melissa Wing Michael Pillay | <p>Carry Over - ... 60%</p> <p>AC Grant fu... 30%</p> <p>Local or Co... 10%</p> | <p>99(s)3 & 9... 99(s)5 & 9...</p> |

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| | - Cereal City PL | | | | | | | | | |
| R3.1d | <p>Support 3P STEM champions and on-ramps across the region</p> <ul style="list-style-type: none"> - Continue the 3P STEM Star competitive award program - Support Sturgeon PBE experience with 5th grade teachers and SCCRESA - Support Health in Our Hands and Flint River Watershed Coalition curricula | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <p>Number of teachers served</p> <p>GIS mapping</p> | <p>October 2022 - September 2023</p> | <p>Sarah Keenan-Lec hel</p> <p>Laura Chambless</p> <p>Kelly Sanborn</p> <p>Renee Bayer</p> | <p>Carry Over - ... ▾</p> <p>40%</p> <p>Regional Mi... ▾</p> <p>10%</p> <p>Business/Pr... ▾</p> <p>10%</p> <p>Title funds ▾</p> <p>10%</p> <p>National Fu... ▾</p> <p>30%</p> | <p>99(s)3 & 9... ▾</p> |
| R3.1e | <p>Increase student engagement in advanced STEM courses by providing 3P learning opportunities for teachers</p> <ul style="list-style-type: none"> - Send cohort of teachers to PBL AP Environmental Science summer course - Pilot IMPACT (Improving Mathematical Performance for A-P Calculus Teachers) cohort with professional learning and mock exam | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <p>Survey of teachers who attend</p> | <p>January 2023 - September 2023</p> | <p>Sarah Keenan-Lec hel</p> <p>Karen Sleno</p> | <p>Carry Over - ... ▾</p> <p>50%</p> <p>Regional Mi... ▾</p> <p>50%</p> | <p>99(s)3 & 9... ▾</p> <p>99(s)5 & 9... ▾</p> |

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| R3.1f | Encourage the development of K-12 pathways in Computer Science by coordinating SCRIPT workshops and offer follow up funding and professional learning to achieve district goals | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Number of teachers attending | October 2022 - September 2023 | Sarah Keenan-Lec hel Cheryl Wilson | AC Grant fu... 100% | 99(s)3 & 9... 99(s)5 & 9... |
| R3.1g | Participate in each of the Math, Science & Engineering , and Computer Science Advisory Council Action Area activities as aligned to the Action Areas' 4-year strategic plans. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Reporting as requested by Action Areas | October 2022 - September 2023 | Action Area Leads | AC Grant fu... 100% | 99(s)3 & 9... 99(s)5 & 9... |
| Outcome 4: Increase business-community-education partnerships around STEM learning and careers | | | | | | | | | | |
| R4.1a | Realign the STEM Partnership Directory to correlate with STEM topics, include more local partners, and develop workshop for educators on making community partner connections | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Survey associated with directory use | October 2022 - September 2023 | Michael Pillay | Carry Over - ... 100% | 99(s)3 & 9... |
| R4.1b | Pilot a competitive run of 3P STEM Mini Grants that incentivize engaging new teachers with community partners | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Number of applicants, types of community partners | October 2022 - September 2023 | Sarah Keenan-Lec hel | Carry Over - ... 100% | 99(s)3 & 9... |
| R4.1c | Work with community partners to support out-of-school STEM opportunities across the region, - Partnering to develop PBE OST curriculum and training focused on water quality | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Number of teachers trained and students served | October 2022 - September 2023 | Flint River Watershed Coalition | Carry Over - ... 50% Regional Mi... 30% | 99(s)3 & 9... |

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| | <p>testing</p> <ul style="list-style-type: none"> - Partnering with MSU Extension to train teachers and informal educators in Family Engineering | | | | | | | Genesee County Parks | <p>In-kind supp... ▾</p> <p>20%</p> | |
| R4.1d | <p>Partner with GLSI to develop a region-wide effort focused on developing infrastructure that supports professional learning around PBE, collaboration across community partners, and a new advisory framework.</p> | <p>☑</p> | <p>☑</p> | <p>☑</p> | <p>☑</p> | Number of partners convened | October 2022 - September 2023 | <p>Leyla Sanker</p> <p>Sarah Keenan-Lec hel</p> | <p>Carry Over - ... ▾</p> <p>90%</p> <p>In-kind supp... ▾</p> <p>10%</p> | <p>99(s)3 & 9... ▾</p> |

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| Regional Budget Breakdown - Strategic Plan & NexSys Alignment | | | | | | | | | | | | |
|---|---|--|---|--------------------------|--------------------------|-------------------------------------|----------------------|----------|----------|--------------------|----------|----------------|
| Function Code & Name | Budget Item Description <small>*Add all necessary details (i.e. # of participants, amount for stipends, specific supplies for programs)*</small> | Action Item(s) <small>Ex. R1.1a</small> | Strategies <small>*checkmark for all that apply*</small> | | | | NexSys Budget Labels | | | | | |
| | | | 1 | 2 | 3 | 4 | FTE/Hours | Salaries | Benefits | Purchased Services | Supplies | Capital Outlay |
| 29... ▾ | Network Evaluation & Marketing: This includes the regional contribution to ongoing evaluation contracts, quarterly meetings, conferences, and marketing. | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | \$16000 |
| 11... ▾ | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | |

Alternative: [TEMPLATE Budget Spreadsheet](#)

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Strategic Plan Narratives

Narrative: correlation to outcomes in pillars:

Pillar 2: Empower STEM teachers

Pillar 3: Integrate Business & Education

The region 6 strategic plan actions work to empower STEM teachers by creating opportunities to expand learning (R2.1a, R3.1a, R3.1c, R3.1d, R3.1e, R3.1g, R4.1c) while building support networks alongside these opportunities that are designed to support teachers in the execution of their learning and provide ongoing professional support (R3.1b, R3.1f, R4.1d). Region 6 is also focused on ensuring STEM teachers have the resources they need to support students (R4.1b).

Region 6 strategic plan actions are designed to integration business and education by developing support structures that enable communication and collaboration between the two worlds (R1.1c, R4.1a, R4.1c), and specifically designing events that bring actors from each arena together (R2.1a, R4.1d).

Narrative: correlation to needs assessment, in particular the equity area

Actions are geared to address equity concerns across the region in multiple ways: 1) by promoting, supporting, and working to sustain 3P pedagogies as a culturally relevant approach to engaging traditionally underserved students in learning and 2) by intentionally offering invitations to participate in learning across the region to organizations that serve a larger percentage of economically disadvantaged students, students of color, or have a demonstrated need to more equitably serve students.

Narrative for how regional actions support state action items (stakeholders involved, need addressed, etc.)

State action items focus on “supporting the understanding, evaluation, and execution of regional activities” – this regional strategic plan will support this effort by making available all data collected is made available to state staff and that information about upcoming events is communicated.

Additional Information