General Information

REMC Microcredential Program

Show how your learning impacts your teaching practice!

The REMC Microcredential Program is designed to provide educators with digital, shareable acknowledgment of their professional learning - called a microcredential or badge - to certify that in addition to achieving new learning they have implemented the learning to positively impact teaching practice and student learning.

Document Contents

This manual is organized into document tabs. The additional sections are linked below:

You can also access this list by clicking on the "Show tabs and outlines" in the top left of the document.

How Microcredentials Are Used

Some of the ways teachers use a microcredential include:

- Demonstrate qualifications in a non-certifiable teaching area, such as Computer Science.
- Provide evidence of continued mastery in the profession of teaching, which is often shared and documented during the evaluation process.
- Exhibit application and reflection of learning within classroom practices.
- Utilize as evidence towards fulfilling a district's or building's personalized professional development hours.

REMC Microcredential Competencies

REMC Microcredentials focus on a participant's application of their learning with self-reflection around the competencies of:

- Capacity - How has my practice changed as a result of my learning?
- Student Outcomes - What impact did my learning have on my students?
- Mindset - How has my mindset changed as a result of my learning?
- Network - How have I shared my learning processes with colleagues within and beyond my school community?

More Information

If you are interested in receiving more information or you have additional questions please reach out to Melinda Waffle with questions: melindawaffle@remc.org

Former Participant Examples

Below are some examples of artifacts created by previous participants:

- Stephanie Scandalito - Design and Implement an Online Learning Environment
- Beverly George - Design and Implement an Online Learning Environment
- Anna McCrumb - Design and Implement an Online Learning Environment
- Rachel Mills - Student Engagement and Collaboration

Earning a Microcredential

Earning a Microcredential

The process of earning a microcredential for any pathway involves:

1. Learning
2. Application
3. Reflection
4. Demonstration

Learning

Participants complete learning that is equivalent to or greater than 27 hours of professional learning within a single pathway. (Choosing to get SCECHs is optional; completion is the requirement.) All learning must be completed in the 18 months prior to submitting the microcredential artifact.

Currently this is achieved through the following types of learning:

- **REMC Courses**: instructor-moderated courses offered virtually, these are 3 weeks in length and are made up of mostly asynchronous activities along with a minimum of at least one (1) synchronous connection with the instructor; each is worth 10 hours
- **REMC Learning Cohort**: facilitator-led learning cohorts that take place over several months, these are made up of both asynchronous and synchronous activities and encourage sharing and networking amongst participants; these have a range of hours that are based on what an individual actually participates in and completes.
- **REMC Webinars**: facilitator-led webinars offered virtually, these are usually 1-2 hours in length and usually have an asynchronous activity to complete at the conclusion; often these are grouped into a series.
- **REMC Workshops**: facilitator-led workshops offered in person or virtually; the number of hours varies and they are usually tied to learning how to use or implement resources provided by REMC or in collaboration with another organization.
- **Collaboration Workshops**: workshops offered by another organization in collaboration with REMC. These are learning opportunities that have been aligned specifically to one of our microcredential pathways.

You can find current professional learning opportunities that apply to one or more microcredential pathways on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Application

Participants apply their professional learning into their practice. They are encouraged to **document this throughout the process** so they can reference their learning and growth within the culminating artifact. It is strongly recommended that participants **store this documentation** in an easily-accessible area from the onset as the entire process could take up to 18 months to complete.

Reflection

Participants reflect on how their learning has impacted their practice. Participants are encouraged to reflect on their learning and growth throughout the process, especially areas where they work through barriers or failure, OR where they have new experiences. This could range from major implementation of new practices, to minor tweaks of existing practice; any way it positively impacts student learning or increases efficiency.

Demonstration

Participants demonstrate their growth through this process by creating and submitting a 6-8 minute video artifact. Once submitted, participants can expect an email response that their submission has been received and a timeline for review.

There are currently 2 submission deadlines participants can choose from, and evaluations will only take place in the month following submission window closures.

Submission Deadlines:

- Winter Window: December 31
- Summer Window: June 20

Participants who need to resubmit will be given details on how to do so along with initial feedback.

Pathways

REMC Microcredential Pathways

REMC has development 9 different microcredential pathway offerings:

- **Category: Learning Environments**
  - Design and Implement Blended and Online Learning
    - Rubric for Design and Implement Blended and Online Learning
  - Tech-Enhanced Instructional Design and Delivery
    - Rubric for Tech-Enhanced Instructional Design and Delivery
- **Category: Promoting Learner Agency**
  - Goal-Driven Growth with Digital Resources
    - Rubric for Goal-Driven Growth with Digital Resources
  - Leveraging Technology for Engagement & Collaboration
    - Rubric for Leveraging Technology for Engagement & Collaboration
  - Utilizing Technology as an Educational Leader
    - Rubric for Utilizing Technology as an Educational Leader
- **Category: Supporting Learners in a Digital World**
  - Computational Thinking for Computer Science
    - Rubric for Computational Thinking for Computer Science
  - Design Thinking and Engineering Design
    - Rubric for Design Thinking and Engineering Design
  - Digital Literacy & Citizenship
    - Rubric for Digital Literacy & Citizenship
  - Supporting Literacy Instruction with Technology
    - Rubric for Supporting Literacy Instruction with Technology

Design and Implement Blended and Online Learning

Design and Implement Blended and Online Learning

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway design and deliver learning opportunities that blend online and in-person learning that can shift their practice toward more authentic and learner-centric instruction that accommodates learner differences and needs. Through blended and hybrid approaches, they design classroom systems and structures to support each student's learning path within a course or content area and empower students to safely, ethically, and legally access a range of digital resources that support anytime or any place integrated learning experiences.

Foundational Competencies

1. Capacity
    a. Facilitates a shift to instruction that blends learning modalities online and in-person along each learner's path within a course or subject
    b. Structures classroom systems to empower learners to access a full range of learning experiences anytime or place, in-person and online, to guide independent or collaborative learning
    c. Collaborates and co-learns with students to learn about and manage digital

tools and learning strategies that support blended and online learning including troubleshooting issues that may arise

2. Student Outcomes
    a. Provides learners access to relevant digital tools and resources to engage in blended and online learning experiences
    b. Models and supports strategies and resources so learners can interact safely, legally, and ethically in digital environments and improve the digital literacy, media fluency, citizenship, and collaboration skills necessary for learning and work
    c. Facilitates environments in which learners can leverage digital tools to support their learning anytime or any place while managing and protecting their data and information
3. Mindset
    a. Values opening access to student learning that moves beyond the constraints of place and space
    b. Exhibits a growth mindset to continually explore new and emerging digital tools and the current research behind them in order to use them effectively and safely to support blended and online teaching and learning
4. Network
    a. Actively participates in local and global learning networks to expand their capacity to create authentic learning experiences that integrate blended and online learning strategies and resources
    b. Models new digital resources and strategies that support online and blended learning with colleagues and reflects with them on their effectiveness

MITECS/ISTE Alignment

Table with pathway alignment to ISTE Standards for Educators and the MITECS Competencies:

Educator (ISTE Standards for Educators)	Student (MITECS)
Learner 1a-c	Empowered Learner 1a–d
Leader 2c	Digital Citizen 2 a-d

Citizen 3a-d	Knowledge Constructor 3a-d
Collaborator 4b-c	Creative Communicator 6a
Designer 5a–c	Global Collaborator 7a-b
Facilitator 6b	

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

Many educators point to the work of the Christensen Institute for defining and describing different blended learning models. Their work is based on their observations of how educators were blending learning in educational settings and are not a prescription but do show how many ways educators can blend learning.

Consider searching the ISTE website to find a wealth of resources on blended and online learning. Just a few articles to get you started include *Get Started with Blended Learning* by Nicole Krueger, *4 Tips for Better Blended Learning* by Jennifer Snelling, and *10 Strategies for Online Learning* by Diana Fingal. ISTE offers articles, guides, blog posts, classes, and more, some of which are limited to paid members only.

Heather Staker, formerly of the Christensen Institute now offers her own resources for educators on her website Ready to Blend, some of which are free, including classes, a podcast, and white papers and case studies among other materials.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Rubric: Design & Implement Blended/Online Learning

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Design and Implement Blended and Online Learning			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Facilitates a shift to instruction that blends learning modalities online and in-person along each learner's path within a course or subject Structures classroom systems to empower learners to access a full range of learning experiences anytime or place, in-person and online, to guide independent or collaborative learning Collaborates and co-learns with students to learn about and manage digital tools and learning strategies that support blended and online learning including troubleshooting issues that may arise	Provides learners access to relevant digital tools and resources to engage in blended and online learning experiences Models and supports strategies and resources so learners can interact safely, legally, and ethically in digital environments and improve the digital literacy, media fluency, citizenship, and collaboration skills necessary for learning and work Facilitates environments in which learners can leverage digital tools to support their learning anytime or any place while managing and protecting their data and information	Values opening access to student learning that moves beyond the constraints of place and space Exhibits a growth mindset to continually explore new and emerging digital tools and the current research behind them in order to use them effectively and safely to support blended and online teaching and learning	Actively participates in local and global learning networks to expand their capacity to create authentic learning experiences that integrate blended and online learning strategies and resources Models new digital resources and strategies that support online and blended learning with colleagues and reflects with them on their effectiveness

Pathway Competency: Design and Implement Blended and Online Learning			
Reflection Self-Assessment Questions			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).

Tech-Enhanced Instructional Design and Delivery

Tech-Enhanced Instructional Design and Delivery

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway stay current with research from the learning sciences and explore proven instructional design practices and teaching strategies that leverage available digital tools and resources for authentic learning activities. They ensure that pedagogies and the digital resources they use to support them are aligned to desired learning outcomes including academic and behavioral outcomes, digital literacy and media fluency, and student dispositions. These strategies and resources are also aligned to the content and can accommodate learner differences and needs. Educators who incorporate systematic instructional design strategies also include multiple and varied opportunities for formative and summative assessment of learning and reflect on the tools and processes that were used to deliver learning opportunities.

Foundational Competencies

1. Capacity:
    - Analyzes and aligns desired learning outcomes, including academic and behavioral outcomes, digital literacy and media fluency, and student

dispositions, to the demands of the content being studied and the rigor implied by content or other standards

- Matches learning opportunities to the skills and knowledge relevant to the content and accommodates learner differences and needs by exploring and integrating relevant digital tools and resources
- Designs learning opportunities that integrate relevant technologies that motivate learners to persevere through appropriate levels of challenge, reach desired learning outcomes, and be successful on assessments
- Plans for and provides multiple and varied opportunities for self-, peer-, and adult-led formative and summative assessments during each student's learning experience, some of which are facilitated by digital tools and resources

2. Student Outcomes:
    - Designs learning opportunities that allow learners to engage in positive, safe, legal, and ethical behavior when engaged in learning in a technology-rich environment, including when interacting in collaborative environments with peers, educators, community members, or experts
    - Encourages learners to take ownership of their learning by leveraging digital tools and resources to establish, monitor, and evaluate personal learning goals and determine actions to reach those goals
    - Provides multiple opportunities for learners to monitor their progress towards learning goals and make adjustments to their learning strategies, the resources they are using, or their goals, as necessary
3. Mindset:
    - Believes that each and every student can learn at high levels if given the resources and opportunities to showcase their skills and talents
    - Values integration of learner-centered approaches and moving beyond whole-group, direct instruction to designing and delivering opportunities that differentiate learning experiences and move toward mastery of competencies versus seat time
    - Empowers learners to take greater ownership of their learning by incorporating relevant digital resources and tools that provide varied opportunities for learners to structure, monitor, and assess their learning
4. Network:

- Builds or nurtures networks of colleagues, education leaders, and other key stakeholders through PLC, social media, and other forms of online and in-person collaboration to engage in collaborative professional growth opportunities that allow them to learn from, share, and reflect on new learning
- Uses digital tools to collect and evaluate student performance data and reflects upon and communicates relevant findings with colleagues, students, parents, and others to guide individual and group progress and improve professional practice

MITECS/ISTE Alignment

Table with pathway alignment to ISTE Standards for Educators and the MITECS Competencies:

Educator (ISTE Standards for Educators)	Student (MITECS)
Learner 1a-c	Empowered Learner 1a – c
Collaborator 4a, 4c	Digital Citizen 2b
Designer 5a-c	Creative Communicator 6a, 6d
Facilitator 6a, 6b	Global Collaborator 7a-b
Analyst 7a-c	

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

There are a variety of instructional design models educators can study and apply in their practice. Those that fall under the category of backwards design models follow a similar framework that

1. encourages educators to consider the needs of their learners

2. thoroughly understand the skills and knowledge implied by content standards and other learning outcomes
3. designing relevant assessments that allow students to demonstrate their new knowledge and skills
4. And working backwards from the assessment to design learning activities that can assure student success on those assessments.

A popular backwards design model many educators become familiar with is *Understanding by Design (UbD)* by Wiggins and McTighe. There are numerous resources, including classes, books, and other media available to help you explore and integrate UbD in your own practice but many start with the textbook by the same name.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Rubric: Tech-Enhanced Inst. Design

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Tech-Enhanced Instructional Design and Delivery			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Analyzes and aligns desired learning outcomes, including academic and behavioral outcomes, digital literacy and media fluency, and student dispositions, to the demands of the content being studied and the rigor implied by content or other standards Matches learning opportunities to the skills and knowledge relevant to the content and accommodates learner differences and needs by exploring and integrating relevant digital tools and resources Designs learning opportunities that integrate relevant technologies that motivate learners to persevere through	Designs learning opportunities that allow learners to engage in positive, safe, legal, and ethical behavior when engaged in learning in a technology-rich environment, including when interacting in collaborative environments with peers, educators, community members, or experts Encourages learners to take ownership of their learning by leveraging digital tools and resources to establish, monitor, and evaluate personal learning goals and determine actions to reach those goals Provides multiple opportunities for learners to monitor their progress towards learning goals	Believes that each and every student can learn at high levels if given the resources and opportunities to showcase their skills and talents Values integration of learner-centered approaches and moving beyond whole-group, direct instruction to designing and delivering opportunities that differentiate learning experiences and move toward mastery of competencies versus seat time Empowers learners to take greater ownership of their learning by incorporating relevant digital resources and tools that provide varied opportunities for learners to structure, monitor, and assess	Builds or nurtures networks of colleagues, education leaders, and other key stakeholders through PLC, social media, and other forms of online and in-person collaboration to engage in collaborative professional growth opportunities that allow them to learn from, share, and reflect on new learning Uses digital tools to collect and evaluate student performance data and reflects upon and communicates relevant findings with colleagues, students, parents, and others to guide individual and group progress and improve professional practice

Pathway Competency: Tech-Enhanced Instructional Design and Delivery			
appropriate levels of challenge, reach desired learning outcomes, and be successful on assessments Plans for and provides multiple and varied opportunities for self-, peer-, and adult-led formative and summative assessments during each student's learning experience, some of which are facilitated by digital tools and resources	and make adjustments to their learning strategies, the resources they are using, or their goals, as necessary	their learning	
Reflection Self-Assessment Questions			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).

Goal-Driven Growth with Digital Resources

Goal-Driven Growth through Digital Resources

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway explore and hone their capacity to create, monitor, and evaluate relevant and measurable professional growth goals and engage in learning opportunities to expand their pedagogical approaches made possible by technology as they work toward their goals. Educators co-learn with students and peers, modeling goal-directed learning with them, including reflecting on their learning and the effectiveness of their pedagogical approaches for enhancing teaching, learning, and operations with digital resources. Reflections on how well they achieved their goals influence the generation and shaping of future professional growth goals.

Foundational Competencies

1. Capacity:
    - Crafts and monitors professional growth goals and engages in learning opportunities to explore and integrate instructional approaches for enhancing learning through technology

- Stays current with research from the learning sciences in order to optimally utilize digital resources to positively impact student learning outcomes
- Advocates for equitable access to digital resources, content, and the learning opportunities they support to accommodate the diverse needs of learners

2. Student Outcomes:
    - Uses student learning data to inform personal professional goals, refine teaching practices, and communicate about student progress with students, parents, and education stakeholders
    - Models and guides learners in goal-directed learning experiences using digital resources in both independent and group settings by reflecting on feedback and data from a variety of formative and summative assessment experiences
    - Designs authentic learning opportunities that require learners to use digital resources safely, ethically, and legally to support active, deep learning
3. Mindset:
    - Reflects on the effectiveness of instructional practices and the digital resources that support them and builds resilience in determining ways to refine and improve approaches
    - Relies on instructional design principles to create digital learning environments that promote authentic engagement and support learning
    - Understands student use of digital resources during independent and collaborative learning opportunities should be monitored so that students use them safely, legally, ethically and effectively
4. Network:
    - Seeks opportunities to learn from and with colleagues, receive and offer feedback on progress, and/or contribute to the professional community by creating and actively participating in local and global professional learning networks
    - Models for peers their goal-directed strategies for exploring, identifying, and integrating digital resources to support teaching, learning, and management

MITECS/ISTE Alignment

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Learner 1a-c	Empowered Learner 1a, 1c
Leader 2b-c	Digital Citizen 2b
Citizen 3c	
Collaborator 4b	
Designer 5a-c	
Facilitator 6a-b	
Analyst 7a-c	

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

The textbook *Technology Integration for Meaningful Classroom Use | A Standards Based Approach* (Cennamo, Ross, & Kalk, 2019) introduces teachers to the ISTE Standards for Educators through the use of a goal-setting framework called **the GAME Plan.** It's an acronym for: Set **G**oals, Take **A**ction, **M**onitor Your Progress, and **E**valuate and **E**xtend. It's a framework that can easily be adopted by learners of every age.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Rubric:Goal-Driven Growth through Digital Resource

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Goal-Driven Growth through Digital Resources			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Crafts and monitors professional growth goals and engages in learning opportunities to explore and integrate instructional approaches for enhancing learning through technology Stays current with research from the learning sciences in order to optimally utilize digital resources to positively impact student learning outcomes Advocates for equitable access to digital resources, content, and the learning opportunities they support to accommodate the diverse needs of learners	Uses student learning data to inform personal professional goals, refine teaching practices, and communicate about student progress with students, parents, and education stakeholders Models and guides learners in goal-directed learning experiences using digital resources in both independent and group settings by reflecting on feedback and data from a variety of formative and summative assessment experiences Designs authentic learning opportunities that require learners to use digital resources safely, ethically, and legally to support active, deep learning	Reflects on the effectiveness of instructional practices and the digital resources that support them and builds resilience in determining ways to refine and improve approaches Relies on instructional design principles to create digital learning environments that promote authentic engagement and support learning Understands student use of digital resources during independent and collaborative learning opportunities should be monitored so that students use them safely, legally, ethically and effectively	Seeks opportunities to learn from and with colleagues, receive and offer feedback on progress, and/or contribute to the professional community by creating and actively participating in local and global professional learning networks Models for peers their goal-directed strategies for exploring, identifying, and integrating digital resources to support teaching, learning, and management

Pathway Competency: Goal-Driven Growth through Digital Resources			
Reflection Self-Assessment Questions			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).

Leveraging Technology: Engagement & Collaboration

Leveraging Technology for Engagement & Collaboration

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway expand their capacity to integrate instructional technology resources to promote authentic engagement in learning and support effective student collaboration. Educators design and deliver technology-supported instructional activities that accommodate learner differences and needs and are connected to learner interests in order to promote high levels of authentic engagement. Educators model, teach, and embed effective collaboration strategies and structures in their learning environments and prepare students to leverage collaborative learning technologies within and beyond the classroom.

Foundational Competencies

1. Capacity:
    - Researches and evaluates how instructional technology resources can be leveraged to promote authentic student engagement in learning
    - Explores and curates technologies and strategies to create collaborative experiences for learners to make positive, socially responsible contributions and build relationships and community

2. Student Outcomes:.
    - Designs and delivers instruction that leverages digital resources to authentically engage learners safely, ethically, and legally in independent and collaborative learning activities
    - Facilitates positive student collaborative learning, scaffolding learners over time to empower them to make their own decisions related to goals, tools, and strategies to support successful collaboration
    - Incorporates strategies that help learners develop individual and group goals and hold themselves accountable in group settings
3. Mindset:
    - Demonstrates flexibility and agility when integrating learning opportunities and resources that authentically engage students in learning
    - Actively researches, evaluates, and curates proven and emerging digital resources and strategies that hold strong potential to support student collaboration
4. Network:
    - Pursues opportunities to collaborate in local and global learning networks to explore digital resources that can promote authentic engagement in learning and facilitate effective collaboration
    - Models their experiences exploring, evaluating, and curating new digital tools and resources with peers and students

MITECS/ISTE Alignment

Table with pathway alignment to ISTE Standards for Educators and the MITECS Competencies:

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Learner 1b-c	Empowered Learner 1a-b
Leader 2c	Digital Citizen 2b

Citizen 3a, c	
Collaborator 4a-c	
Designer 5a-c	
Facilitator 6a-b	Creative Communicator 6a
	Global Collaborator 7a-d

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

Phil Schlechty and his colleagues have developed a framework that describes different levels of engagement in learning. These five levels include authentic engagement, strategic compliance, ritual compliance, retreatism, and rebellion. Perhaps best known for his *Working on the Work* series, Dr. Schlecthy was a prolific writer who coached educators across the country. You can review a list of publications on his website or visit the Schlechty Center for more information.

Education leader Dr. Dylan Wiliam my be best known for his groundbreaking work on formative assessment (*Inside the Black Box: Raising Standards through Classroom Assessment*); however, his legacy of accomplishments includes research on effective collaboration in learning. You can view this short video on YouTube (2:44) where Dr. Wiliam notes that "collaborative learning in the classroom works when you have group goals…and individual accountability."

After conducting a meta-analysis on the topic, researchers writing for Pearson have compiled helpful information on promoting effective collaboration in their white paper *Skills for Today: What we Know about Teaching and Assessing Collaboration*.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings

that can apply to that pathway along with other pertinent information.

Rubric: Leveraging Tech for Engagement & Collab

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Leveraging Technology for Engagement & Collaboration			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Researches and evaluates how instructional technology resources can be leveraged to promote authentic student engagement in learning Explores and curates technologies and strategies to create collaborative experiences for learners to make positive, socially responsible contributions and build relationships and community	Designs and delivers instruction that leverages digital resources to authentically engage learners safely, ethically, and legally in independent and collaborative learning activities Facilitates positive student collaborative learning, scaffolding learners over time to empower them to make their own decisions related to goals, tools, and strategies to support successful collaboration Incorporates strategies that help learners develop individual and group goals and hold themselves accountable in group settings	Demonstrates flexibility and agility when integrating learning opportunities and resources that authentically engage students in learning Actively researches, evaluates, and curates proven and emerging digital resources and strategies that hold strong potential to support student collaboration	Pursues opportunities to collaborate in local and global learning networks to explore digital resources that can promote authentic engagement in learning and facilitate effective collaboration Models their experiences exploring, evaluating, and curating new digital tools and resources with peers and students
Reflection Self-Assessment Questions			

Pathway Competency: Leveraging Technology for Engagement & Collaboration			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).

Utilizing Technology as an Educational Leader

Utilizing Technology as an Educational Leader

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway advocate for and communicate a shared vision for equitable access to digital tools and resources and skilled teachers who routinely use them to optimize teaching, learning, and management. Leaders can and do exist in the classroom, as coaches, as well as school and district administration roles. Leaders foster collaboration and empower others--students and adults--to build confidence and competency in integrating digital tools and resources. They implement their vision through strategic planning for technology integration and routinely communicate their plan and monitor its progress. Leaders stay current on innovation and connect with others to navigate change and learn about and explore new and emerging technologies that show promise for supporting teaching, learning and management.

Please note: This pathway is not limited to those individuals who serve in school administration roles, as leadership is demonstrated through skills and dispositions rather than professional titles for the purpose of this microcredential.

Foundational Competencies

1. Capacity:

- Advocates for district, school, and classroom cultures where educators and students have equitable access and are encouraged and empowered to use technology to enrich teaching, learning, and management
- Creates and communicates a shared vision for technology use in classrooms, schools, and the district and implements that vision through strategic planning and monitors the effectiveness of the plan
- Empowers students and colleagues to build their confidence and competency in using technology resources to meet the diverse needs of learners
- Collaborates with others to implement a systems-based approach for technology use that promotes equitable use and encourages adults and students to protect privacy and security by following data management policies

2. Student Outcomes
    - Advocates for and provides access to a robust technology infrastructure with relevant technology resources and processes necessary to engage learners in authentic experiences that support their academic, cultural, and social-emotional needs
    - Plans for and establishes structures and procedures that give students and adults the time and space to explore, experiment, innovate, and collaborate through the intentional integration of technology in teaching and learning environments
    - Leverages technology and data analytics so that students, parents, teachers, and others can take the best actions to provide differentiated and relevant learning opportunities to all learners
3. Mindset
    - Knows that growth requires challenging assumptions and being open-minded to new opportunities and resources
    - Believes in creating and advocating for a shared vision for using technology to improve educator and student engagement, growth, and success
    - Understands the potential for technology to engage in reflective practices supporting their own and others personal and professional growth
4. Network
    - Routinely works with others to monitor and explore the potential of new and emerging technologies to enhance teaching and learning and provide

students with the most relevant learning opportunities for their futures

- Respects, supports, and empowers others to collaborate on a shared journey towards continuous improvement and professional learning
- Develops the skills necessary to lead and navigate change, establishes the conditions that promote a mindset of continuous improvement, and supports others to reach personal and organizational goals

MITECS/ISTE Alignment

Table with pathway alignment to ISTE Standards for Educators and the MITECS Competencies:

Education Leaders (ISTE Standards for Education Leaders)	**Student (MITECS)**
Equity and Citizenship Advocate 1a-d	Empowered Learner 1c-d
Visionary Planner 2a-e	Digital Citizen 2b, d
Empowering Leader 3a-e	
Systems Designer 4a-c	
Connected Learner 5a - d	

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

In their white paper *Skills for Today: What we Know about Teaching and Assessing Leadership* by Pearson (link from American University), the authors identify eight characteristics of leaders based on a review of research literature. They include: From Pearson: 1) Challenges assumptions, 2) Establishes vision, 3) Fosters collaboration, 4) Respects followers, 5) Empowers followers, 6) Maintains accountability, 7)Stays open-minded, 8) Supports followers.

While this pathway is aligned to some of the ISTE Standards for Educators and the MITECS, it is primarily informed by the ISTE Standards For Education Leaders.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Rubric: Utilizing Technology as an Edu Leader

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Utilizing Technology as an Educational Leader			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Advocates for district, school, and classroom cultures where educators and students have equitable access and are encouraged and empowered to use technology to enrich teaching, learning, and management Creates and communicates a shared vision for technology use in classrooms, schools, and the district and implements that vision through strategic planning and monitors the effectiveness of the plan Empowers students and colleagues to build their confidence and competency in using technology resources to	Advocates for and provides access to a robust technology infrastructure with relevant technology resources and processes necessary to engage learners in authentic experiences that support their academic, cultural, and social-emotional needs Plans for and establishes structures and procedures that give students and adults the time and space to explore, experiment, innovate, and collaborate through the intentional integration of technology in teaching and learning environments Leverages technology and data analytics so that students, parents, teachers, and others can	Knows that growth requires challenging assumptions and being open-minded to new opportunities and resources Believes in creating and advocating for a shared vision for using technology to improve educator and student engagement, growth, and success Understands the potential for technology to engage in reflective practices supporting their own and others personal and professional growth	Routinely works with others to monitor and explore the potential of new and emerging technologies to enhance teaching and learning and provide students with the most relevant learning opportunities for their futures Respects, supports, and empowers others to collaborate on a shared journey towards continuous improvement and professional learning Develops the skills necessary to lead and navigate change, establishes the conditions that promote a mindset of continuous improvement, and supports others to reach personal and organizational goals

Pathway Competency: Utilizing Technology as an Educational Leader			
meet the diverse needs of learners Collaborates with others to implement a systems-based approach for technology use that promotes equitable use and encourages adults and students to protect privacy and security by following data management policies	take the best actions to provide differentiated and relevant learning opportunities to all learners		
Reflection Self-Assessment Questions			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).

Computational Thinking for Computer Science

Computational Thinking for Computer Science

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway build their capacity to create learning experiences that integrate computational thinking processes and leverage the power of technological methods in understanding and exploring computational problems. Educators should be able to recognize and define computational problems and incorporate them into learning experiences in which students decompose computational problems into parts and use data to understand the problem better. Patterns in data are represented as abstractions, generalizations, models, or visualizations that are used to explore the problems and create computational artifacts using algorithmic thinking and automation. The learning process should include opportunities for iterative design where students test and refine computational artifacts to improve their performance with an intended audience.

Foundational Competencies

1. Capacity:
    - Identifies computational problems for use in instructional settings that can be explored through computational thinking and related processes that rely on logic

- Utilizes technology to collect, organize and analyze data in a variety of formats to recognize and represent patterns as abstractions, generalizations, models, or visualizations
- Decomposes computational problems in order to design a computational artifact using algorithmic thinking and automation
- Incorporate and facilitate an iterative design process that includes opportunities for systematic testing, preferably with potential target audience members, to debug and revise solutions to improve reliability, usability, and accessibility of computational artifacts

2. Student Outcomes:
    - Provides iterative opportunities for students to interact with computational problems and identify potential problems from authentic situations they find in their own lives
    - Incorporates various technologies to accommodate learner differences and needs as they collect, organize, and analyze data in a variety of formats to recognize and represent patterns in data as abstractions, generalizations, models, or visualizations
    - Facilitates independent and group-based learning activities where students apply algorithmic thinking and automation, including but not limited to coding, to design computational artifacts that address computational problems
    - Structures opportunities that allow students to engage in an iterative design process that includes systematic testing to debug, revise, and improve their computational artifacts and share their results with others
3. Mindset:
    - Explores and analyzes areas in the content and relevant authentic applications that can lend themselves well to computational thinking problems
    - Recognizes that data can be collected and represented in various formats by multiple tools to identify patterns and make generalizations that can help learners address key learning outcomes related to the content as well as engage in the computational thinking process
    - Demonstrates values for creativity, risk-taking, and perseverance in exploring technological solutions to ambiguous and open-ended problems
4. Network:

- Collaborates and co-learns with students as they engage with computational problems, manipulate the data using various technologies, and create and revise computational artifacts in which they may need to diagnose and troubleshoot issues
- Engages with a diverse educational community that includes experts to stay current with research and identify, explore, evaluate, and adopt promising practices and technologies that support computational thinking in the curriculum

MITECS/ISTE Alignment

Table with pathway alignment to ISTE Standards for Educators and the MITECS Competencies:

Educator (ISTE Standards for Educators)	Student (MITECS)
Learner 1b-c	Empowered Learner 1c-d
Leader 2c	
Citizen 3b	Knowledge Constructor 3a-d
Collaborator 4b, 4c	Innovative Designer 4a - d
Designer 5a-c	Computational Thinker 5a - d
Facilitator 6a-d	Creative Communicator 6a-d
	Global Collaborator 7b, d

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

Several state and national organizations have created computational thinking frameworks that you can refer to for ideas about identifying and integrating computational thinking and related pedagogies. These frameworks overlap in many areas. You may want to check out

- K-12 Computer Science Framework
- Michigan Computer Science Standards
- CSTA K-12 Computer Science Standards

ISTE has launched its own computational thinking initiative with competencies designed in conjunction with CSTA. You can learn more about the four pillars of their framework and explore resources to build your own computational thinking skills as well as those of your students on their website.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Rubric: Computational Thinking for CS

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Computational Thinking for Computer Science			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Identifies computational problems for use in instructional settings that can be explored through computational thinking and related processes that rely on logic Utilizes technology to collect, organize and analyze data in a variety of formats to recognize and represent patterns as abstractions, generalizations, models, or visualizations Decomposes computational problems in order to design a computational artifact using algorithmic thinking and automation Incorporate and facilitate an iterative design process that includes opportunities for	Provides iterative opportunities for students to interact with computational problems and identify potential problems from authentic situations they find in their own lives Incorporates various technologies to accommodate learner differences and needs as they collect, organize, and analyze data in a variety of formats to recognize and represent patterns in data as abstractions, generalizations, models, or visualizations Facilitates independent and group-based learning activities where students apply algorithmic thinking and automation, including but not limited to coding, to design	Explores and analyzes areas in the content and relevant authentic applications that can lend themselves well to computational thinking problems Recognizes that data can be collected and represented in various formats by multiple tools to identify patterns and make generalizations that can help learners address key learning outcomes related to the content as well as engage in the computational thinking process Demonstrates values for creativity, risk-taking, and perseverance in exploring technological solutions to ambiguous and open-ended problems	Collaborates and co-learns with students as they engage with computational problems, manipulate the data using various technologies, and create and revise computational artifacts in which they may need to diagnose and troubleshoot issues Engages with a diverse educational community that includes experts to stay current with research and identify, explore, evaluate, and adopt promising practices and technologies that support computational thinking in the curriculum

Pathway Competency: Computational Thinking for Computer Science			
systematic testing, preferably with potential target audience members, to debug and revise solutions to improve reliability, usability, and accessibility of computational artifacts	computational artifacts that address computational problems Structures opportunities that allow students to engage in an iterative design process that includes systematic testing to debug, revise, and improve their computational artifacts and share their results with others		
Reflection Self-Assessment Questions			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).

Design Thinking and Engineering Design

Design Thinking and Engineering Design

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway build their capacity to leverage technological resources to create learning experiences that integrate either design thinking or engineering design processes that help learners understand and explore problems and propose potential solutions. Design thinking and engineering design have some overlapping steps and processes, such as brainstorming, ideation, and prototyping, but each also includes some unique elements that are suited to the types of problems they address. Educators pursuing this pathway should understand the types of problems suitable to each approach and demonstrate the application of relevant strategies for implementing one or the other in a learning setting.

Foundational Competencies

1. Capacity:
    - Sets and monitors professional learning goals to integrate learning activities that rely on design thinking or engineering design to explore relevant problems and pose potential solutions

- Employs proven instructional design processes to leverage the power of technological methods to help learners to understand and explore authentic problems addressed by design thinking or engineering design

2. Student Outcomes:
    - Designs and delivers learning opportunities that allow students to employ design thinking or engineering design processes and strategies to better understand and explore problems
    - Guides students as they research, evaluate, create, and curate information and resources to build knowledge and test theories and solutions and share their results with a relevant audience
    - Collaborates with students to identify authentic problems suitable for exploration through design thinking or engineering design that allow students to engage with peers or experts locally or globally
3. Mindset:
    - Demonstrates values for creativity, risk-taking, and perseverance in using technology resources to explore complex and open-ended problems
    - Explores and identifies the real-world application of design thinking or engineering design in authentic contexts and problems and relevant content and learning expectations
    - Uses technology to personalize learning experiences that foster independent and group-based learning while accommodating learner differences and needs
4. Network:
    - Engages with a diverse educational stakeholders to plan for, model, and champion a vision for the purposeful integration of design thinking or engineering design through technology solutions
    - Models for colleagues the exploration, curation, and adoption of digital resources that support learning opportunities that incorporate design thinking or engineering design

MITECS/ISTE Alignment

Table with pathway alignment to ISTE Standards for Educators and the MITECS Competencies:

Educator (ISTE Standards for Educators)	Student (MITECS)
Learner 1a	Empowered Learner 1c
Leader 2a, 2c	
	Knowledge Constructor 3a-d
Collaborator 4a, 4c	Innovative Designer 4a-d
Designer 5a-c	Computational Thinker 5b-c
Facilitator 6c-d	Creative Communicator 6a-d
	Global Collaborator 7b-d

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

There are many resources available that explore and explain design thinking along with tips and strategies for implementing it in various educational settings. A couple of places to start include:

- Get Started with Design Thinking from the dschool at Stanford, recognized as one of the leaders in promoting design thinking in education.
- Design Thinking from ideoU. Ideo is recognized for their practice of design thinking in many fields, including technology where they are attributed with designing the first computer mouse.
- The Design Squad from PBS has a variety of resources for students of different ages

Likewise, support for understanding and applying the engineering design process can be found from many reputable content providers online. Consider reviewing some of these for ideas:

- What is the Engineering Design Process? is a short video (4:50) from PBS Learning Media that provides an overview of the process and includes input from engineers and teachers.

- Engineering for Kids provides a step-by-step process and connects it to the Scientific Method.
- TeachEngineering from the University of Colorado at Boulder is an extensive resource on the Engineering Design Process for teachers, including links to complete lessons with videos and printable activities.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Rubric: Design Thinking & Eng Design

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Design Thinking and Engineering Design			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Sets and monitors professional learning goals to integrate learning activities that rely on design thinking or engineering design to explore relevant problems and pose potential solutions Employs proven instructional design processes to leverage the power of technological methods to help learners to understand and explore authentic problems addressed by design thinking or engineering design	Designs and delivers learning opportunities that allow students to employ design thinking or engineering design processes and strategies to better understand and explore problems Guides students as they research, evaluate, create, and curate information and resources to build knowledge and test theories and solutions and share their results with a relevant audience Collaborates with students to identify authentic problems suitable for exploration through design thinking or engineering design that allow students to engage with peers or experts	Demonstrates values for creativity, risk-taking, and perseverance in using technology resources to explore complex and open-ended problems Explores and identifies the real-world application of design thinking or engineering design in authentic contexts and problems and relevant content and learning expectations Uses technology to personalize learning experiences that foster independent and group-based learning while accommodating learner differences and needs	Engages with a diverse educational stakeholders to plan for, model, and champion a vision for the purposeful integration of design thinking or engineering design through technology solutions Models for colleagues the exploration, curation, and adoption of digital resources that support learning opportunities that incorporate design thinking or engineering design

Pathway Competency: Design Thinking and Engineering Design			
	locally or globally		
Reflection Self-Assessment Questions			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).

Digital Literacy & Citizenship

Digital Literacy and Citizenship

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway empower learners to positively and responsibly participate in and contribute to the digital world in ways that keep learners safe and their personal data secure. They help learners develop skills and strategies to navigate and manage the changing digital environments necessary for learning and promoting positive interactions with others both in school and beyond. They promote digital literacy and media fluency by choosing and operating relevant platforms and digital resources and managing and troubleshooting the resources they use. They model how to honor intellectual property, verify the authority of information they find, and create digital media to meet the goals of an audience or desired learning outcome.

Foundational Competencies

1. Capacity:
    - Values the capacity of digital resources to support teaching and deliver authentic learning activities that can accommodate learner differences and needs
    - Uses collaborative tools to effectively and responsibly engage in online communities and environments, both professionally and with learners

- Collaborates and co-learns with students and imparts best practices when selecting and using digital resources including applying troubleshooting practices
- Honors the intellectual property of others through modeling and explicit instruction and encourages learners to create verifiable information and products that contribute to larger communities of thought and practice

2. Student Outcomes:
    - Facilitates experiences that support learners in the safe, ethical, legal, and responsible use of technology through modeling and explicit instruction
    - Engages learners to interact and collaborate effectively and responsibly with others when using digital tools and in digital environments while helping them manage their digital identity and protecting their data
    - Promotes digital literacy and media fluency by introducing best practices to learners for selecting, using, and troubleshooting digital resources
    - Structures opportunities that allow learners to explore learning, evaluate resources, curate information, and contribute to diverse communities in digital environments
3. Mindset:
    - Values the intellectual rights and property of others by modeling safe, legal, and ethical practices with learners
    - Understands that digital tools and communities can provide support and interaction for learning, work, and entertainment when used appropriately
    - Knows that to be a digital citizen requires basic operational and troubleshooting skills to participate successfully
    - Believes that educators should support and inspire learners to positively contribute to the digital world
4. Network:
    - Actively partners and collaborates with colleagues, both locally and across the globe, to create authentic learning experiences that leverage technology for student learning, collaboration, and productivity
    - Incorporates technology tools to engage with colleagues, experts, students, and their families to develop and model cultural competency and global awareness

- Engages with education stakeholders to develop and share a vision for equitable access to digital resources and learning opportunities that empower learners

MITECS/ISTE Alignment

Table with pathway alignment to ISTE Standards for Educators and the MITECS Competencies:

Educator (ISTE Standards for Educators)	Student (MITECS)
Learner 1b	Empowered Learner 1b-d
Leader 2a-c	Digital Citizen 2a-d
Citizen 3a-d	Knowledge Constructor 3a-c
Collaborator 4a-d	
Designer 5a-b	Creative Communicator 6a-d
Facilitator 6b	Global Collaborator 7a-d

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

Digital Citizenship is an important topic for ISTE that provides the #digcit community, blogs, videos, and a variety of resources to use in any classroom or grade level.

Resources under Technological Literacy from PBS Learning Media cover both digital literacy and digital citizenship and can be filtered by topic, grade, and resource type.

Common Sense Education's Digital Citizenship curricula leveled by grade bands has long been a go-to resource for many educators and is updated over time to reflect new and emerging technologies.

Lessons and activities for digital literacy and digital citizenship that you can download and use in your classroom can be found on popular technology resources, such as Nearpod and Curipod.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Rubric: Dig Literacy & Citizenship

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Digital Literacy and Citizenship			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Values the capacity of digital resources to support teaching and deliver authentic learning activities that can accommodate learner differences and needs Uses collaborative tools to effectively and responsibly engage in online communities and environments, both professionally and with learners Collaborates and co-learns with students and imparts best practices when selecting and using digital resources including applying troubleshooting practices Honors the intellectual property of others through modeling and explicit instruction and	Facilitates experiences that support learners in the safe, ethical, legal, and responsible use of technology through modeling and explicit instruction Engages learners to interact and collaborate effectively and responsibly with others when using digital tools and in digital environments while helping them manage their digital identity and protecting their data Promotes digital literacy and media fluency by introducing best practices to learners for selecting, using, and troubleshooting digital resources Structures opportunities that allow learners to explore learning,	Values the intellectual rights and property of others by modeling safe, legal, and ethical practices with learners Understands that digital tools and communities can provide support and interaction for learning, work, and entertainment when used appropriately Knows that to be a digital citizen requires basic operational and troubleshooting skills to participate successfully Believes that educators should support and inspire learners to positively contribute to the digital world	Actively partners and collaborates with colleagues, both locally and across the globe, to create authentic learning experiences that leverage technology for student learning, collaboration, and productivity Incorporates technology tools to engage with colleagues, experts, students, and their families to develop and model cultural competency and global awareness Engages with education stakeholders to develop and share a vision for equitable access to digital resources and learning opportunities that empower learners

Pathway Competency: Digital Literacy and Citizenship			
encourages learners to create verifiable information and products that contribute to larger communities of thought and practice	evaluate resources, curate information, and contribute to diverse communities in digital environments		
Reflection Self-Assessment Questions			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).

Supporting Literacy Instruction with Technology

Supporting Literacy Instruction with Technology

REMC Microcredential Program Pathway Sheet

Overview

Educators pursuing this pathway will enhance their capacity to design and deliver literacy instruction and positively impact student achievement in the four language domains of reading, writing, listening, and speaking through the purposeful integration of technology tools and resources. These strategies and resources can be used to support students across the spectrum of proficiency levels, including those who may benefit from enrichment activities, students working at grade level, as well as English Learners (ELs) identified through screening tools developed by WIDA. Student literacy skills are expanded to include digital literacy and media fluency using the digital resources and strategies that are now a prevalent component of literacy.

Foundational Competencies

1. Capacity
    - Leverages technology and proven instructional design principles to create learning experiences supporting student growth and achievement in literacy
    - Stays current with research that supports both literacy development and the appropriate use of digital resources through proven pedagogies and learning activities

- Promotes a learning culture that promotes the development of digital literacy and media fluency and honoring intellectual rights and property

2. Student Outcomes
    - Designs opportunities for learners to participate in authentic learning experiences that accommodate their differences and needs while they enhance their literacy skills and develop positive dispositions toward literacy
    - Provides literacy instruction that allows students to demonstrate increased engagement in reading, writing, speaking, and listening activities through the use of technology tools that support independent and group-based literacy integration
    - Designs and facilitates learning experiences for students to apply their language skills through authentic opportunities for creative expression and to communicate ideas, knowledge, or connections
3. Mindset
    - Sets goals to seek a deeper understanding of literacy development in all four language domains in order to identify and apply pedagogical approaches made possible by technology to support student learning at all levels of language proficiency
    - Values the integration of technology to support differentiated instructional practices for literacy and advocates for equitable access to digital resources aligned to the diverse needs of learners
    - Understands that authentic student engagement in learning and positive student dispositions are essential elements for learning
4. Network
    - Actively seeks opportunities to learn from and with colleagues in order to receive and/or offer support and contribute to local and global learning networks on topics related to literacy skills development
    - Explores, curates, and models proven and emerging technology resources that support literacy development with colleagues and students

MITECS/ISTE Alignment

Table with pathway alignment to ISTE Standards for Educators and the MITECS Competencies:

Educator (ISTE Standards for Educators)	Student (MITECS)
Learner 1a-c	Empowered Learner 1c-d
Leader 2b-c	Digital Citizen 2c
Citizen 3b-c	Knowledge Constructor 3a-c
Designer 5a-c	Creative Communicator 6 a-d
Facilitator 6d	

*It is important to note that standards listed above are aligned to the REMC Professional Development listed on the next page collectively and microcredential candidates do not need to address every standard listed as they are only required to complete a minimum of 27 hours prior to applying. These standards are offered to give a deeper understanding of the pathway only.

For More Information

Students in Michigan who are identified as English Learners (EL), are given the WIDA Screener Assessment to determine whether they need English language instructional services. Refer to the Michigan Department of Education website for more information about WIDA assessments.

WIDA provides a range of supports for educators in member states, such as Michigan. The core of their work focuses around the WIDA ELD Standards Framework that provide guidance to educators on the key language uses and expectations for students across the range of six language proficiency level descriptors. Additional information is available from the WIDA website.

Professional Learning Opportunities

You can find current professional learning opportunities on the Professional Learning Aligned to Microcredentials spreadsheet. Note: It will reset when you open it. Select the pathway you are exploring from the dropdown menu in cell B2 to see a list of all offerings that can apply to that pathway along with other pertinent information.

Rubric: Supporting Literacy Inst.

Rubric Table: Pathway Competencies, Reflection Questions, Credential Requirements

Pathway Competency: Supporting Literacy Instruction with Technology			
Capacity	**Student Outcomes**	**Mindset**	**Network**
Leverages technology and proven instructional design principles to create learning experiences supporting student growth and achievement in literacy Stays current with research that supports both literacy development and the appropriate use of digital resources through proven pedagogies and learning activities Promotes a learning culture that promotes the development of digital literacy and media fluency and honoring intellectual rights and property	Designs opportunities for learners to participate in authentic learning experiences that accommodate their differences and needs while they enhance their literacy skills and develop positive dispositions toward literacy Provides literacy instruction that allows students to demonstrate increased engagement in reading, writing, speaking, and listening activities through the use of technology tools that support independent and group-based literacy integration Designs and facilitates learning experiences for students to apply their language skills through authentic opportunities for creative expression and to	Sets goals to seek a deeper understanding of literacy development in all four language domains in order to identify and apply pedagogical approaches made possible by technology to support student learning at all levels of language proficiency Values the integration of technology to support differentiated instructional practices for literacy and advocates for equitable access to digital resources aligned to the diverse needs of learners Understands that authentic student engagement in learning and positive student dispositions are essential elements for learning	Actively seeks opportunities to learn from and with colleagues in order to receive and/or offer support and contribute to local and global learning networks on topics related to literacy skills development Explores, curates, and models proven and emerging technology resources that support literacy development with colleagues and students

Pathway Competency: Supporting Literacy Instruction with Technology			
	communicate ideas, knowledge, or connections		
Reflection Self-Assessment Questions			
How has my practice changed because of my learning?	What impact did my learning have on my students?	How has my mindset changed because of my learning?	How have I shared my learning with colleagues within and beyond my school community?
Submission Criteria to Meet Credential Requirements			
Submission provides concrete examples of applied learning that reflect the development of the above competency.	Submission provides specific examples of evidence of impact on student learning experiences as a result of teacher development of the competency.	Submission references specific examples of informed risks taken and/or changes to instructional practices that represent a shift or growth in mindset towards the competency since engaging in this new learning.	Submission includes specific examples of how learning and practice reflect interactive professional engagement within and beyond the teacher's classroom (e.g., professional learning communities, school and district colleagues, professional associations).