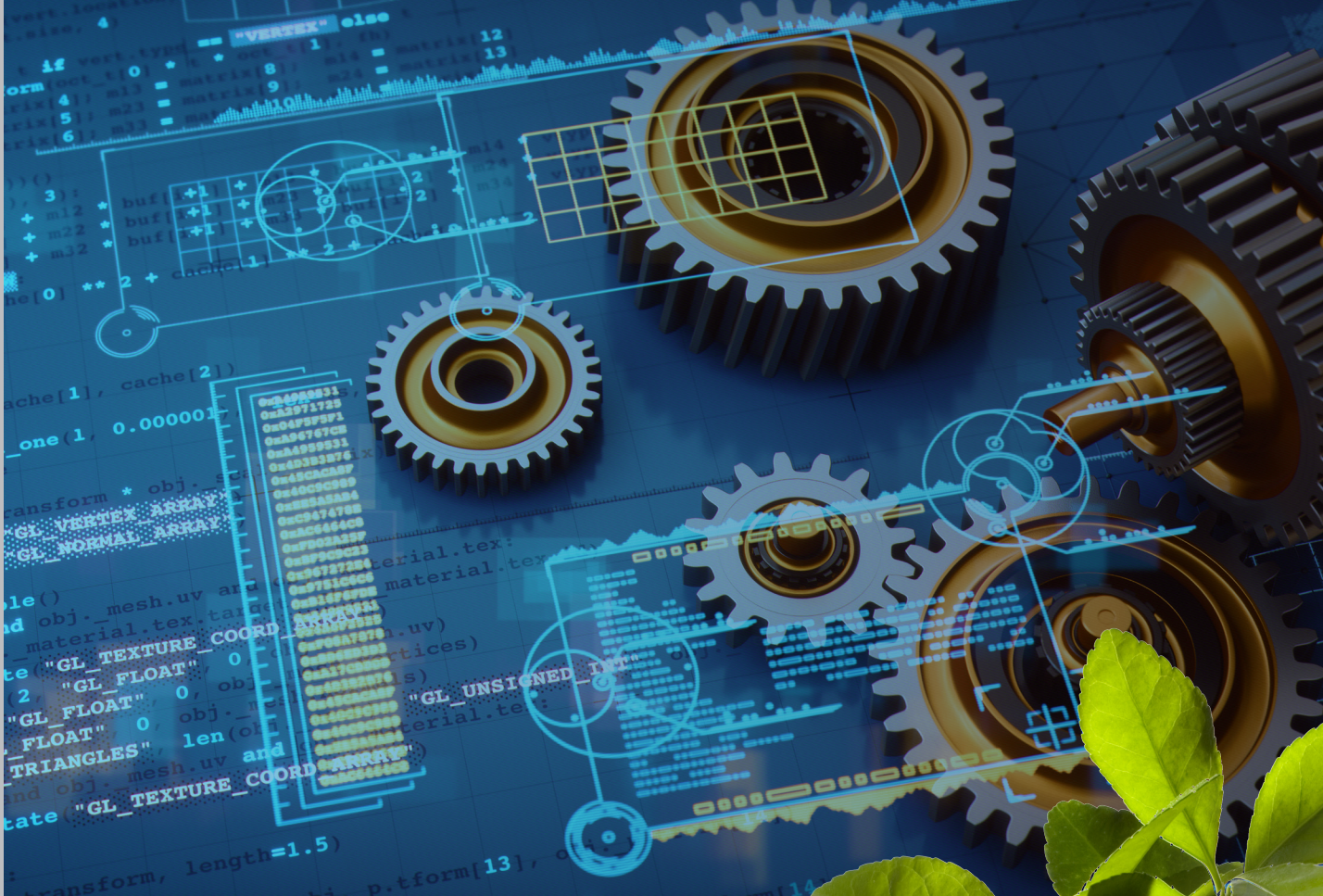


2024



*Accelerate*LEARNING™  
THE LEADER in STEM EDUCATION

# STEM PROFESSIONAL LEARNING CATALOG

## TABLE OF CONTENTS

Science	PAGE <b>3</b>	Engineering	PAGE <b>12</b>	Coaching	PAGE <b>20</b>
Technology	PAGE <b>10</b>	Mathematics	PAGE <b>14</b>	NISE	PAGE <b>23</b>

Welcome to Accelerate Learning!

We provide STEM Professional Learning across the country for:

**HIGH IMPACT, STANDARDS-BASED, STEM INSTRUCTION**

**THE IMPLEMENTATION OF ALL ACCELERATE LEARNING PRODUCTS**

**STEM CERTIFICATION PROGRAMS OFFERED THROUGH THE NATIONAL INSTITUTE FOR STEM EDUCATION**

We hope you find what meets your individual district, school, teacher and student needs in this catalog. If not, please contact your account manager to discuss how we might better support you.

We are honored to continue learning with you.

*\* The information provided in this Professional Learning catalog supersedes all prior catalogs.*





# Science

## STEMscopes Navigation Training

Participate in an introductory overview as we learn to navigate the components of the STEMscopes content 5E+I/A toolbar.

- OBJECTIVES**
1. Navigate through the 5E's (Engage, Explore, Explain, Elaborate, and Evaluate) and the Intervention and Acceleration tabs to locate scope specific resources.
  2. Locate video and print support resources to support implementation of the STEMscopes components.



 VIRTUAL  
 60 MIN  
 ISBN 9781643063904



## STEMscopes Implementation Training Part 1 - Just the Basics

The 60-minute session will introduce teachers to STEMscopes Science and develop an understanding of how to locate the most essential elements of a lesson.

The 90-minute session will introduce teachers to STEMscopes Science with a focus on the Explore/Explain Cycle.

- OBJECTIVES**
1. Understand the Value of the 5E+IA model, constructivism, and hands-on inquiry.
  2. Navigate the digital teacher edition to locate instructional materials with ease.
  3. Understand the Explore/Explain cycle.



 FACE TO FACE  
 60 MIN  
 ISBN 9798893530025

 FACE TO FACE  
 90 MIN  
 ISBN 9798893530032

## STEMscopes Implementation Training Part 1 (Virtual)

This two hour product training equips teachers with the knowledge and skills needed to use the essential elements of the STEMscopes curriculum. Teachers will develop an understanding of where resources are located and the value of the 5E +IA model, constructivism, and hands-on inquiry.



- OBJECTIVES**
1. Navigate the STEMscopes platform to locate instructional materials with ease.
  2. Identify resources within STEMscopes that provide teacher background information and assist with effective planning for learning.

 VIRTUAL  
 120 MIN  
 ISBN 9781643062174

## STEMscopes Implementation Training Part 1 (Face to Face)

This three hour product training equips teachers with the knowledge and skills needed to use the essential elements of the STEMscopes curriculum. Through HANDS-ON, inquiry-based strategies, teachers will experience a 5E+IA lesson and develop an understanding of where resources are located.

- OBJECTIVES**
1. Understand the value of the 5E+IA model, constructivism, and hands-on inquiry.
  2. Navigate the digital teacher edition to locate instructional materials with ease.
  3. Experience a 5E lesson/scope from beginning to end using all essential elements.

 FACE TO FACE  
 180 MIN  
 ISBN 9781643057927



## STEMscopes Implementation Training Part 2





STEMscopes offers a variety of resources and tools to get the most out of your STEMscopes experience. During this session, teachers will explore the vast amount of resources designed to help teachers plan dynamic lessons, as well as discover how to use the teacher gradebook feature of STEMscopes.

**OBJECTIVES**

1. Understand how to access and navigate the additional elements (beyond the elements in Implementation Part 1) in the STEMscopes platform.
2. Explore the student platform and teacher gradebook.
3. Understand the multiple aspects of the teacher gradebook and how this information can inform teaching practices.

 **FACE TO FACE**  
 **180 MIN**  
**ISBN** 9781643057873



 **VIRTUAL**  
 **120 MIN**  
**ISBN** 9798888264676

## New Teacher Implementation for Year 2+ (Virtual)

This two hour product training equips new teachers with the knowledge and skills needed to use the essential elements of the STEMscopes curriculum. Teachers will develop an understanding of where resources are located and the value of the 5E+IA model, constructivism, and hands-on inquiry.

**OBJECTIVES**

1. Navigate the STEMscopes platform to locate instructional materials with ease.
2. Identify resources within STEMscopes that provide teacher background information and assist with effective planning for learning.



 **VIRTUAL**  
 **120 MIN**  
**ISBN** 9798893539769

## New Teacher Implementation for Year 2+ (Face to Face)

This three hour product training equips new teachers with the knowledge and skills needed to use the essential elements of the STEMscopes curriculum. Through HANDS-ON, inquiry-based strategies, teachers will experience a 5 E+ IA lesson and develop an understanding of where resources are located.

**OBJECTIVES**

1. Understand the value of the 5E+IA model, constructivism, and hands-on inquiry.
2. Navigate the digital teacher edition to locate instructional materials with ease.
3. Experience a 5E lesson/scope from beginning to end using all essential elements.



 **FACE TO FACE**  
 **180 MIN**  
**ISBN** 9798893539752

## Understanding and Implementing CER

Claim-Evidence-Reasoning (CER) is an acclaimed and highly successful instructional strategy changing how students understand scientific concepts and write explanations for phenomena. In this 3 hour face-to-face session, educators will learn how the CER process supports multiple elements in our STEMscopes platform, examine exemplar CER responses relating to hands-on investigations, vocabulary, multiple-choice items, diagrams, data, charts & graphs, and more!

**OBJECTIVES**



1. Experience making a claim, providing evidence, and developing reasoning statements based on a shared experience.
2. Understand many ways in which CERs can be used to check for understanding by reviewing exemplar responses related to elements with the STEMscopes platform.



 **FACE TO FACE**  
 **180 MIN**  
**ISBN** 9781643062242

## Using Literacy and Writing Elements to Strengthen Science Understanding

Literacy strategies, such as analyzing, discussing, and summarizing, can be utilized while reading science-based articles, authentic science research, journals, and textbooks. The use of these strategies provides a cross-curricular bridge that not only increases understanding but also increases a student's ability to think critically. Our professionally trained STEM coaches know what it takes to integrate literacy and writing into the science content effectively. Using a constructivist approach, participants will experience hands-on learning that will give them a greater understanding of literacy in science.

- OBJECTIVES**
1. Learn and practice literacy based structures and strategies that are effective for all learners.
  2. Explore STEMscopes resources that help build STEM Literacy in your classroom.
  3. Gain an understanding of how to integrate literacy strategies into the STEM classroom effectively.



 **FACE TO FACE**  
 **180 MIN**  
**ISBN** 9781643057804

 **VIRTUAL**  
 **90 MIN**  
**ISBN** 9781643062266

## Kide Navigation Training

Participate in an introductory overview as we learn to navigate the components of the Kide Science site



- OBJECTIVES**
1. Navigate through the Kide site to locate lesson specific resources.
  2. Locate video and print support resources to support implementation of the Kide lessons.



 **VIRTUAL**  
 **60 MIN**  
**ISBN** 9798893530049

## Kide Impementation

Kide Science is an award-winning and research-backed program that engages our youngest learners, ages 3-8, in meaningful play-based STEAM learning. Kide lessons always start with a story where a character is experiencing a tricky problem and are seeking help to solve it! This imaginary play evokes empathy, which in turn, allows your children to become investigators who are intrinsically motivated to find solutions to those problems. Students will practice observation, measurement, classification, interpretation, prediction, and conclusion skills all while communicating with their peers as scientific investigators.

- OBJECTIVES**
1. Learn what Kide and playful inquiry is all about and understand why it is important.
  2. Navigate the Kide platform to see hundreds of lesson ideas.
  3. Participate in a hands-on learning activity.
  4. Begin to plan for learning.

 **FACE TO FACE**  
 **180 MIN**  
**ISBN** 9798891926776

 **VIRTUAL**  
 **120 MIN**  
**ISBN** 9798891926783



## Collaborate Science 3 Day Summer Institute

During this 3-day professional learning institute, participants will learn about the 3 dimensions of NGSS and examine and explain them through the use of engaging hands-on experiences. Once a foundation has been established around NGSS, the idea of coherence will be reviewed within the Collaborate Science units of study. Participants learn about the features of PBL Unit 1 and observe phenomenon for a specific unit of study. Within the professional learning session, participants will record questions for the DQB; engage in hands-on learning and sense-making that aligns to the specific unit of study. In addition, participants will discuss ways to implement PLB lessons into their science classroom. Discourse moves will be modeled, and brainstorming will occur on how to build on student thinking.

- OBJECTIVES
1.

2.

3.

4.

5.

6.
- Establish a deep understanding of the NGSS 3 dimensions of learning


Define and review coherence and experience how it incorporates into units.


Develop strategies to support students in 3D learning using Collaborate Science.

Begin to form a community of PBL teachers and students to support deep sensemaking.

Investigate our integrated approach to science, math, ELA, and discourse in the collaborate science units.

Explore the curriculum and technology resources in a specific Collaborate Science unit of study.

 FACE TO FACE



18 HOURS

ISBN

9798891928763

## Collaborate Science Implementation Training - Part 1 (Face to Face)

Unit 2: Participants learn about the features of PBL and observe phenomenon for a specific unit of study. Within the professional learning session, participants will record questions for the DQB; engage in hands-on learning and sense-making that aligns to the specific unit of study. In addition, participants will discuss ways to implement PLB lessons into their science classroom. Discourse moves will be modeled, and brainstorming will occur on how to build on student thinking.

- OBJECTIVES
1.

2.


3.


4.
- Develop strategies to support students in 3D learning using Collaborate Science.

Begin to form a community of PBL teachers and students to support deep sensemaking.

Investigate our integrated approach to science, math, ELA, and discourse in the collaborate science units.

Explore the curriculum and technology resources in a specific Collaborate Science unit of study.

 FACE TO FACE



180 MIN

ISBN

979888262498

## Collaborate Science Implementation Training - Part 1 (Virtual)

Unit 2: Participants learn about the features of PBL and discuss phenomenon for a specific unit of study. Within the professional learning session, participants will record questions for the DQB; engage in discussions around sense-making that aligns to the specific unit of study. In addition, participants will discuss ways to implement PLB lessons into their science classroom. Discourse moves will be modeled, and brainstorming will occur on how to build on student thinking.

### OBJECTIVES

1. Investigate our integrated approach to science, math, ELA, and discourse in the a specific unit.
2. Explore the curriculum and technology resources in a specific Collaborate Science unit of study.

 VIRTUAL 120 MIN

ISBN 9798888262511

## Collaborate Science Implementation Training - Part 2 (Face to Face)

Unit 3: Participants learn about the features of PBL and observe phenomenon for a specific unit of study. Within the professional learning session, participants will record questions for the DQB; engage in hands-on learning and sense-making that aligns to the specific unit of study. In addition, participants will discuss ways to implement PLB lessons into their science classroom. Discourse moves will be modeled, and brainstorming will occur on how to build on student thinking.

### OBJECTIVES

1. Develop strategies to support students in 3D learning using Collaborate Science.
2. Begin to form a community of PBL teachers and students to support deep sensemaking.
3. Investigate our integrated approach to science, math, ELA, and discourse in the collaborate science units.
4. Explore the curriculum and technology resources in a specific Collaborate Science unit of study.

 FACE TO FACE 180 MIN

ISBN 9798888262504

## Collaborate Science Implementation Training - Part 2 (Virtual)

Unit 3: Participants learn about the features of PBL and discuss phenomenon for a specific unit of study. Within the professional learning session, participants will record questions for the DQB; engage in discussions around sense-making that aligns to the specific unit of study. In addition, participants will discuss ways to implement PLB lessons into their science classroom. Discourse moves will be modeled, and brainstorming will occur on how to build on student thinking.

### OBJECTIVES

1. Investigate our integrated approach to science, math, ELA, and discourse in the a specific unit.
2. Explore the curriculum and technology resources in a specific Collaborate Science unit of study.

 VIRTUAL 120 MIN




ISBN 9798888262528



Collaborate Science Implementation Training - Part 3 (Face to Face)

Unit 4: Participants learn about the features of PBL and observe phenomenon for a specific unit of study. Within the professional learning session, participants will record questions for the DQB; engage in hands-on learning and sense-making that aligns to the specific unit of study. In addition, participants will discuss ways to implement PLB lessons into their science classroom. Discourse moves will be modeled, and brainstorming will occur on how to build on student thinking.




- OBJECTIVES**
- 1. Develop strategies to support students in 3D learning using Collaborate Science.
  - 2. Begin to form a community of PBL teachers and students to support deep sensemaking.
  - 3. Investigate our integrated approach to science, math, ELA, and discourse in the collaborate science units.
  - 4. Explore the curriculum and technology resources in a specific Collaborate Science unit of study.

 FACE TO FACE  
 180 MIN  
 9798891928770

Collaborate Science Implementation Training - Part 3 (Virtual)

Unit 4: Participants learn about the features of PBL and discuss phenomenon for a specific unit of study. Within the professional learning session, participants will record questions for the DQB; engage in discussions around sense-making that aligns to the specific unit of study. In addition, participants will discuss ways to implement PLB lessons into their science classroom. Discourse moves will be modeled, and brainstorming will occur on how to build on student thinking.

- OBJECTIVES**
- 1. Investigate our integrated approach to science, math, ELA, and discourse in the a specific unit.
  - 2. Explore the curriculum and technology resources in a specific Collaborate Science unit of study.

 VIRTUAL  
 120 MIN  
 9798891928787





# Technology



## Bitsbox Coding

STEMscopes Coding is a standalone fully digital program that teaches students how to code by building apps. While it can be used K-12, the target audience is students in grades 3-8. Implement as independent student work, enrichment, collaborative small groups, or as a whole class. Coding can be completed in the classroom, at home, in an after-school program, or during the summer. STEMscopes Coding Powered by Bitsbox is designed to work in any and all of these configurations. To fully engage in this experience, the use of a laptop is encouraged.



- OBJECTIVES**
1. Articulate the significance of coding.
  2. Code apps independently.
  3. Share your app and learn from others' apps.

 VIRTUAL  
 ↑ TO 60 MIN  
 ISBN 9781643062198

## TUVA Premium (Science or Math) Part 1 - Onboarding & Orientation

In this introductory TUVA Premium session, participants will learn the importance of data literacy as a 21st century skill. They will experience powerful real-world pedagogy through inquiry-based lessons while using research-based data and graphing tools to enhance their instruction.



- OBJECTIVES**
1. Manipulate the Interface with Tuva tools, features, datasets, and educational materials.
  2. Understand the importance of data literacy as a 21st century skill and pedagogy for how to integrate data into all realms of teaching and learning.
  3. Discuss ways to implement TUVA data sets for different grade levels and subject areas moving forward.

 VIRTUAL  
 ↑ TO 90 MIN  
 MATH ISBN 9781648611162  
 SCI ISBN 9781648611131

## TUVA Premium (Science or Math) Part 2 - Exploring Pedagogy

In this followup, advanced session, participants will discover ways in which Tuva Premium strengthens data literacy, a necessary 21st century skill. Participants will experience powerful real-world pedagogy, inquiry-based lessons, research-based data and graphing tools into their science and math instruction.

- OBJECTIVES**
1. Work through the CER process using Tuva Data Literacy.
  2. Manipulate the Interface with Tuva tools, features, datasets, and educational materials.
  3. Understand the importance of data literacy as a 21st century skill and pedagogy for how to integrate data into all realms of teaching and learning.

 VIRTUAL  
 ↑ TO 90 MIN  
 MATH ISBN 9781648611179  
 SCI ISBN 9781648611148


The background is a blue-tinted image of an industrial facility with tall chimneys. Overlaid on this are several white line-art icons: a globe, interlocking gears, a network of dots connected by lines, and a cluster of hexagons. Some hexagons contain icons of a hard hat, a laptop, and a gear with a wrench.


# Engineering

DIVE-in Engineering Implementation Training


Engineers solve problems by using a systematic process called the Engineering Design Process, which includes identifying the problem, identifying the constraints and criteria,generating ideas,and testing possible solutions. With a growing demand that scholars be prepared for STEM-focused careers, teachers have an increased responsibility to incorporate engineering into their classroom—often a difficult task. In this session, experienced STEM coaches will take participants on an engineering journey! Hands-on learning will be the focus and will include structures and strategies that teachers can implement in their classroom the very next day. Engaging and useful formative assessments will be used to check for understanding to be sure that no participant is left behind. Participants need to come to the virtual session with the specified prototype the district has purchased as well as a student journal from the kit.


- OBJECTIVES**
- 1. Engage in the engineering design process (EDP) with reverse engineering!
  - 2. Navigate the DIVE-in platform.

FACE TO FACE

↑ TO 180 MIN

ISBN 9781643057941

VIRTUAL

↑ TO 90 MIN

ISBN 9781648620805







# Mathematics

## STEMscopes Mathematics Navigation Training

Participate in an introductory overview as we learn to navigate the components of the STEMscopes content 5E + IA toolbar.

- OBJECTIVES**
1. Navigate through the 5E's (Engage, Explore, Explain, Elaborate, and Evaluate) and the Intervention and Acceleration tabs to locate scope specific resources.
  2. Locate video and print support resources to support implementation of the STEMscopes components.



 VIRTUAL  
 60 MIN  
 ISBN 9781643063911



## STEMscopes Implementation Training - Just the Basics

The 60-minute session will introduce teachers to STEMscopes math and develop an understanding of how to locate the most essential elements of a lesson.

The 90-minute session will introduce teachers to STEMscopes math with a focus on the Explore/Explain Cycle.

- OBJECTIVES**
1. Understand the Value of the 5E+IA model, constructivism, and hands-on inquiry.
  2. Navigate the digital teacher edition to locate instructional materials with ease.
  3. Understand the Explore/Explain cycle.



 FACE TO FACE  
 60 MIN  
 ISBN 9798893530018

 FACE TO FACE  
 90 MIN  
 ISBN 9798893530056

## STEMscopes Mathematics Implementation Training Part 1 (Virtual)

This two hour navigation training equips teachers with the knowledge and skills needed to use the essential elements of the STEMscopes curriculum. Teachers will develop an understanding of where resources are located and the value of the 5E + IA model, constructivism, and hands-on inquiry.



- OBJECTIVES**
1. Navigate the STEMscopes platform to locate instructional materials with ease.
  2. Identify resources within STEMscopes that provide teacher background information and assist with effective planning for learning.

 VIRTUAL  
 120 MIN  
 ISBN 9781643062112

## STEMscopes Mathematics Implementation Training Part 1 (Face to Face)

This three hour navigation training equips teachers with the knowledge and skills needed to use the essential elements of the STEMscopes curriculum. Through HANDS-ON, inquiry-based strategies, teachers will experience a 5E+ IA lesson and develop an understanding of where resources are located.



- OBJECTIVES**
1. Understand the value of the 5E+IA model, constructivism, and hands-on inquiry.
  2. Navigate the digital teacher edition to locate instructional materials with ease.
  3. Experience a 5E lesson/scope from beginning to end using all essential elements.



 FACE TO FACE  
 180 MIN  
 ISBN 9781643067513

## STEMscopes Mathematics Implementation Training Part 2

STEMscopes offers a variety of resources and tools to get the most out of your STEMscopes experience. During this session, teachers will explore the vast amount of resources in the Teacher Toolbox section as well as discover how to use the teacher gradebook features of STEMscopes.

- OBJECTIVES**
1. Understand how to access and navigate the Teacher Toolbox and STEMcoach in Action.
  2. Explore the student platform and teacher gradebook.
  3. Understand the multiple aspects of the teacher gradebook and how this information can inform teaching practices.



 FACE TO FACE  
 180 MIN  
 ISBN 9781643063898

 VIRTUAL  
 120 MIN  
 ISBN 9798888264829

## STEMscopes Mathematics Virtual Extensions: Student Side/Grading

In this virtual session, educators will learn how to analyze data from the STEMscopes assignments and assessments. We will walk through the process of assigning work to students from the teacher platform and then explore the student platform options. A demo assignment will be taken by the trainer while on the student platform and then an in-depth view of the teacher gradebook will accompany the activity.



- OBJECTIVES**
1. Explore the student platform and teacher gradebook.
  2. Understand the multiple aspects of the teacher gradebook and how this information can inform teaching practices.



 VIRTUAL  
 60 MIN  
 ISBN 9781648615177

## Math Talks: Promoting Dialogue in the Math Classroom

Effective teaching of mathematics involves encouraging students to construct meaning through mathematical discourse. Students learn how to communicate and articulate mathematical ideas and use their reasoning skills to analyze perspectives shared by their peers in order to deepen their own mathematical understanding.

- OBJECTIVES**
1. Establish the significance of promoting dialogue and discourse in the math classroom.
  2. Experience mathematical discourse using daily routines and activities like Create Your Own or Problem-Based Task.

 FACE TO FACE  
 180 MIN  
 ISBN 9781648626050


 VIRTUAL  
 90 MIN  
 ISBN 9781648626067





## Manipulatives and Models in the Elementary Classroom

Deepen your understanding of how common math models and manipulatives help support the conceptual understanding of overarching math concepts that span the primary grade levels. Together we will explore how students can work collaboratively and transform their learning through the Concrete, Pictorial/Representational, and Abstract (CPA/CRA) approach by utilizing models and manipulatives in classrooms and how this supports strong number sense.

- OBJECTIVES**
- 1. Teachers will know how to use the targeted manipulatives for their grade band.
  - 2. Teachers will understand how manipulatives and models build from and to other grade levels.
  - 3. Teachers will collaboratively discuss alternative uses for the manipulatives outside of the targeted uses from this session.

 FACE TO FACE


 180 MIN


 9798893531701


## Manipulatives and Models in Middle and High School

In this session, teachers will engage with a variety of manipulatives and models from middle school and high school. Teachers will receive instruction on how to use the manipulatives and will also complete a model lesson that involves manipulative usage. The facilitator and participants will discuss how the use of these manipulatives and models in their grade level both builds from elementary and prior grade level knowledge, as well as into future grade level spiraling.

- OBJECTIVES**
- 1. Teachers will know how to use the targeted manipulatives for their grade band.
  - 2. Teachers will understand how manipulatives and models build from and to other grade levels.
  - 3. Teachers will collaboratively discuss alternative uses for the manipulatives outside of the targeted uses from this session.

 FACE TO FACE


 180 MIN


 9798888264089


## Math Nation Navigation Training

Participants will be shown how to navigate Math Nation’s student edition and explore the plethora of teacher resources that are available in their digital teacher edition.

- OBJECTIVES**
- 1. Successfully locate Math Nation resources as a student.
  - 2. Locate Math Nation teacher resources, and printable assessment tools.

 VIRTUAL

 60 MIN



 9798888264812



## Math Nation Implementation Training Part 1

Participants will engage in an introduction to Math Nation's Content created exclusively by Teachers for Teachers. Participants will explore Math Nation as a student, experiencing all of the features of the Student Area. Then, teachers will move to the Teacher Area to explore the plethora of resources available to them.

### OBJECTIVES

1. Navigate the digital Student Area and Teacher Area.
2. Understand the purposeful design of the Math Nation Curriculum and resources.
3. Explore the variety of formative, summative, digital, and paper-based assessments built into Math Nation's Curriculum.

 FACE TO FACE  
 180 MIN  
 ISBN 9781648612886



 VIRTUAL  
 120 MIN  
 ISBN 9781648612893



## Math Nation Implementation Training Part 2

Now that teachers have explored the resources, participants will experience these tools in action with a Model Lesson from their Math Nation facilitator. Participants will consolidate their understanding from the Part 1 training by analyzing each of the components of the model lesson, discuss customization and edibility of resources, and lesson planning. If time allows, teachers will end the session with facilitated lesson planning strategies with their Math Nation facilitator.

### OBJECTIVES

1. Engage in and analyze a Math Nation Model Lesson.
2. Explore customizable and editable Math Nation resources .
3. Begin a focus on lesson planning with Math Nation resources.

 FACE TO FACE  
 180 MIN  
 ISBN 9798888264843



 VIRTUAL  
 120 MIN  
 ISBN 9798888264836

## Exam Prep with Math Nation

Guided by Math Nation facilitators, teachers will dive into assessment data to identify benchmarks or standards in need of remediation prior to Standardized Assessments. Once the needs of the students are identified, teachers will work with grade level aligned resources to create and develop Exam Preparation aids. Teachers will identify pre-made and customizable Math Nation resources to meet the needs of their students. Finally, teachers will have facilitated planning and development time to personalize their Exam Prep.

### OBJECTIVES

1. Teachers will analyze and identify benchmarks/standards in need of remediation.
2. Teachers will understand the plethora of Math Nation resources to use for Exam Prep.
3. Teachers will plan, build, and develop aids for Exam Prep.



 FACE TO FACE  
 180 MIN  
 ISBN 9798890699831

## Math Nation Virtual Extensions: On Ramp

Let's talk about Math Nation's On-Ramp to 6th Grade and On-Ramp to Algebra 1 tools for students to identify individual needs and help bring struggling students up to grade level expectations, using these adaptive, personalized tools. This session will provide participants tools and plans for helping students fill gaps in learning.

### OBJECTIVES

1. Login to the Math Nation site and practice with the student facing tools in tandem with the presenter.
2. Engage in discussion on best practices, different use cases, and resources in the Math Nation suite to engage every student in your classroom.



 VIRTUAL  
 60 MIN  
 ISBN 9798888264898

## Math Nation Virtual Extensions: Practice Tools/Resources

In this session, participants will dive deeper into the many Practice Tools and Resources that are available to them in the Math Nation platform. This includes Math Nation's Check Your Understanding, Test Yourself! Practice Tool, Additional Practice Problems, and other print resources.

### OBJECTIVES

1. Locate Math Nation's Digital Practice Tools.
2. Explore Math Nation's Digital Practice Tools that are designed for classroom use.
3. Locate Math Nation's printable Practice Resources.



 VIRTUAL  
 60 MIN  
 ISBN 9798888264904

## Math Nation Virtual Extensions: Math Nation Reporting

In this session, participants will be walked through each of the many Math Nation reporting features that are available. These reports include: Check Your Understanding, Test Yourself! Practice Tool, Math Nation Study Expert Videos, and more! Also, participants will be walked through how to access the Item Analysis for each of these tools, and discuss ways the data can be used for grading purposes or applied in their classroom.

### OBJECTIVES

1. Locate Math Nation reports in the Teacher Account.
2. Pull a Math Nation report for Digital Resources.
3. Discuss opportunities for data usage in the classroom.

 VIRTUAL  
 60 MIN  
 ISBN 9798888264911







# Coaching

STEMscopes Science Unit Unpacking and Lesson Planning


Your Accelerate Learning Coach will partner with STEMscopes science teachers to discuss pacing for a STEMscopes scope or scopes based on your district calendar and time allotted for science instruction. Using the 5E model for inquiry-based instruction, along with a backwards design approach for planning, core components of the scope(s) will be identified and supporting resources will be added to ensure student learning is maximized. District pacing guidance, district calendars, and other pacing information that may impact the final product will be requested from the district prior to the coaching sessions. To maximize impact, one grade level/course per coaching session is preferred.


- OBJECTIVES**
- 1. Understand the essential components of each scope that are required to teach the state approved science standards.
  - 2. Use district approved calendars and expectations to guide pacing so teachers walk away with a solid plan for preparation and implementation of STEMscopes elements using the 5E inquiry based approach.
  - 3. Begin with the end in mind to plan for learning using STEMscopes elements that will reach the level of depth and complexity of the standard(s) while differentiating resources and strategies for a variety of student proficiency levels.

 FACE TO FACE

 60 MIN  
(3 HR MINIMUM)

ISBN 9798888264737

 VIRTUAL


 ↑ TO 60 MIN


ISBN 9798888264713

STEMscopes Mathematics Unit Unpacking and Lesson Planning


Your Accelerate Learning Coach will partner with STEMscopes math teachers to discuss pacing for a STEMscopes scope or scopes based on your district calendar and time allotted for math instruction. Using the 5E model for inquiry-based instruction, along with a backwards design approach for planning, core components of the scope(s) will be identified and supporting resources will be added to ensure student learning is maximized. District pacing guidance, district calendars, and other pacing information that may impact the final product will be requested from the district prior to the coaching sessions. To maximize impact, one grade level/course per coaching session is preferred.


- OBJECTIVES**
- 1. Understand the essential components of each scope that are required to teach the currently adopted mathematics state education standards.
  - 2. Use district approved calendars and expectations to guide pacing so teachers walk away with a solid plan for preparation and implementation of STEMscopes elements using the 5E inquiry based approach.
  - 3. Begin with the end in mind to plan for learning using STEMscopes elements that will reach the level of depth and complexity of the standard(s) while differentiating resources and strategies for a variety of student proficiency levels.

 FACE TO FACE

 60 MIN  
(3 HR MINIMUM)

ISBN 9798888264744

 VIRTUAL


 ↑ TO 60 MIN


ISBN 9798888264720

## Math Nation Unit Unpacking and Lesson Planning


Your Accelerate Learning Coach will partner with Math Nation teachers to discuss pacing for a unit and lesson based on your district calendar and time allotted for math instruction. District pacing guidance, district calendars, and other pacing information that may impact the final product will be requested from the district prior to the coaching sessions. To maximize impact, one grade level/course per coaching session is preferred.


- OBJECTIVES**
- 1. Understand the essential components of each unit that are required to teach.
  - 2. Use district approved calendars and expectations to guide pacing so teachers walkaway with a solid plan for preparation and implementation of Math Nation.
  - 3. Begin with the end in mind to plan for learning using Math Nation elements that will reach the level of depth and complexity of the standard(s) while differentiating resources and strategies for a variety of student proficiency levels.

 FACE TO FACE

 60 MIN  
(3 HR MINIMUM)

ISBN 9798888264775

 VIRTUAL


 ↑ TO 60 MIN


ISBN 9798888264782

## Kide Science Unit Unpacking and Lesson Planning

Your Accelerate Learning Coach will partner with Kide Science users to discuss the pacing and planning for Kide lessons based on your district calendar and time allotted for science instruction. District pacing guidance, district calendars, and other pacing information that may impact the final product will be requested from the district prior to the coaching session. To maximize impact, one grade per coaching session is preferred.

- OBJECTIVES**
- 1. Understand the scope and sequence provided for the grade level.
  - 2. Walk through the selection process of activities based on the scope and sequence.

 VIRTUAL

 ↑ TO 60 MIN

ISBN 9798893530001




# NISE


## Designing and Supporting STEM Initiatives

Thinking about a one-year or multi-year STEM project for your school or district? Strategic planning is a critical element, but the time needed to accomplish this may vary based on your unique circumstances. Include additional hours for strategic planning for these longer-term projects. NISE, with our knowledge and insight of national STEM trends and strategies, can provide additional time to:

- Assess needs
- Review school/district data
- Strategize action steps
- Collaboratively plan
- Analyze progress monitoring data

Building extra consulting time into projects like NCST or micro-certificate cohorts, and NCSE (campus and district) is beneficial to accommodate the changing nature of long-term endeavors.

 VIRTUAL

 ↑ TO 60 MIN

ISBN 9781648615276


## NISE Onsite PD


Would you like additional support to strengthen and customize leaders’ or teachers’ use of STEM instructional strategies with all students? These sessions will reflect the research and pedagogy within NISE’ STEM Teacher and Campus Certificates, while providing educators relevant, extended practice and learning opportunities to increase their understanding and effective use of STEM instruction. Completion of a NISE certificate is not required.

- OBJECTIVES**
1. Increase educators’ comfort and effectiveness in applying the 15 STEM Teacher Actions to maximize standards-based instruction and mastery for all students.


2. Increase educators’ use of the STEM Teacher Action Protocol to inform instruction and future professional learning opportunities.


3. Strengthen STEM visions, goals and practices at the teacher, school and district level using an evidence-based framework and practices.

 FACE TO FACE

 ↑ TO 180 MIN  
(HALF DAY)

ISBN 9781641684354

 FACE TO FACE

 ↑ TO 360 MIN  
(FULL DAY)

ISBN 9781641684316


## NISE Virtual PD


Would you like additional support to strengthen and customize leaders’ or teachers’ use of STEM instructional strategies with all students? These sessions will reflect the research and pedagogy within NISE’ STEM Teacher and Campus Certificates, while providing educators relevant, extended practice and learning opportunities to increase their understanding and effective use of STEM instruction. Completion of a NISE certificate is not required.

- OBJECTIVES**
1. Increase educators’ comfort and effectiveness in applying the 15 STEM Teacher Actions to maximize standards-based instruction and mastery for all students.

2. Increase educators’ use of the STEM Teacher Action Protocol to inform instruction and future professional learning opportunities.

3. Strengthen STEM visions, goals and practices at the teacher, school and district level using an evidence-based framework and practices.

 VIRTUAL



 ↑ TO 60 MIN

ISBN 9798890696151

## The National Certificate for STEM Teaching (NCST)

Self-paced, competency-based certification. Supported by a virtual coach, teachers build a portfolio demonstrating proficiency across the 15 STEM Teacher Actions.



- OBJECTIVES**
1. Engage in observations and collect evidence focused on 15 STEM Teacher Actions.
  2. Apply understanding of 15 STEM Teacher Actions to define performance levels with evidence.
  3. Synthesize understanding of 15 STEM Teacher Actions to recommend appropriate instructional improvements.

 VIRTUAL  
 ↑ TO 90 HRS  
 ISBN 9781630376833W

## National Certificate for STEM Excellence - Campus (NCSE)

With the support of a virtual coach, campus and/or district leadership teams work through a site-based process of planning, implementing, and sustaining best practices in 21st century skills and STEM strategies. A minimum of 5 NCST purchases are required to earn the NCSE.



- OBJECTIVES**
1. Collect data on current STEM realities and create a system-level action plan in support of STEM experiences for all students.
  2. Implement accountability measures, maximize STEM curriculum, and integrate STEM instructional strategies across disciplines and grade levels.
  3. Identify opportunities to sustain STEM efforts through ongoing monitoring of instructional decisions, professional learning, and progress toward STEM goals.

 BLENDED  
 VARIES  
 ISBN 9781643069180

## National Certificate for STEM Excellence - Campus, No Coaching (NCSE)

With the support of a virtual coach, campus and/or district leadership teams work through a site-based process of planning, implementing, and sustaining best practices in 21st century skills and STEM strategies. A minimum of 5 NCST purchases are required to earn the NCSE.


- OBJECTIVES**
1. Collect data on current STEM realities and create a system-level action plan in support of STEM experiences for all students.
  2. Implement accountability measures, maximize STEM curriculum, and integrate STEM instructional strategies across disciplines and grade levels.
  3. Identify opportunities to sustain STEM efforts through ongoing monitoring of instructional decisions, professional learning, and progress toward STEM goals.


 VIRTUAL  
 VARIES  
 ISBN 9781630379858

National Certificate for STEM Excellence - Campus, Recertification (NCSE-R)

Continue building on the work completed during your school’s STEM Certification process and maintain access to the most current research and practices around STEM. With support from a virtual STEM Leadership Coach, plan on receiving an updated banner and plaque every 3 years to help keep your community informed regarding your school’s commitment to STEM.

- OBJECTIVES**
- 1. Maintain the focus needed to continually strengthen STEM instruction.
  - 2. Monitor and review progress toward your long-term STEM goals.
  - 3. Systemically adjust plans and resources as needed over time to ensure effective STEM support for all students.

 VIRTUAL


 VARIES


ISBN 9781648623790

National Certificate for STEM Excellence - District (NCSE-D)

The National Certificate for STEM Excellence at the district level is the outcome of sustained, job-embedded professional learning focused on continually improving district wide systems and structures that support STEM education for all students. The process is facilitated by a seasoned instructional leader working collaboratively with a district STEM guiding coalition. Along with this district-level engagement, a percentage of campuses and teachers must complete the STEM teacher and campus certificate process. (purchased in addition to NCSE-D)

- OBJECTIVES**
- 1. Develop and communicate a shared understanding of what STEM means.
  - 2. Create a clear, compelling, district level STEM vision that provides direction and clarity for all stakeholders.
  - 3. Establish STEM goals and implement action plans focused on two STEM pathways.

 BLENDED

 VARIES

ISBN 9781648613043



# NISE Micro Certificates



## STEM Essentials Series

The STEM Essentials Certificate represents an understanding and application of 12 specific highly effective instructional strategies that are essential to creating and sustaining STEM learning. This certificate requires the completion of six Micro Certificates listed below. You can also complete any of the individual micro certificates, or pick any single course, to refine your practice and learn new strategies. *All courses in the STEM Essentials series are appropriate for educators of all grade levels and content areas.*

### MICRO CERTIFICATE **SCIENTIFIC ARGUMENTATION**



#### Argumentation

Learn protocols that help students positively and productively develop, analyze, critique, and defend arguments. Create a customized tool to develop appropriate goals for your students' use of argumentation while outlining strategies to accomplish these goals. This is an asynchronous, self-paced online course that, when taken with *Claim-Evidence-Reasoning*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 ISBN 9781643058009

#### Claim, Evidence, Reasoning



Examine current understanding and implementation of the Claim-Evidence-Reasoning (C-E-R) framework and develop practical, classroom tools and resources. Develop a customized tool for integrating C-E-R into instruction across content areas. This is an asynchronous, self-paced online course that, when taken with *Argumentation*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 ISBN 9781643050041

### MICRO CERTIFICATE **SCIENTIFIC INQUIRY**



#### 5E Instructional Model

Learn how to design lessons that pique student interest while developing conceptual understanding through hands-on exploration. Develop a standards-aligned lesson using the 5E model, which can be applied in the development of learning experiences across content areas. This is an asynchronous, self-paced online course that, when taken with *Scientific Investigations*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 ISBN 9781643058023



#### Scientific Investigations

Examine why doing science is essential to learning science. Learn how to refine existing classroom materials and resources so higher degrees of inquiry may be achieved. Create a planning tool that facilitates the development of standards-aligned, inquiry-based investigations. This is an asynchronous, self-paced online course that, when taken with *5E Instructional Model*, will lead to a digital micro-certificate digital badge.

 ONLINE  
 ↑ TO 180 MIN  
 ISBN 9781643057811



MICRO CERTIFICATE **SCIENTIFIC INNOVATION****Engineering Solutions**

Explore the role of the Engineering Design Process (EDP) to address real-world problems while learning how to realistically integrate the EDP into your classroom instruction and develop students' mastery of its use. Create a customized tool for planning instruction with the EDP. This is an asynchronous, self-paced online course that, when taken with *Technology Integration*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643050065



**Technology Integration**

Learn how to embed various technological tools and instructional strategies into your lessons to increase student engagement and learning. Develop a customized tool for planning technology-integrated, standards aligned lessons. This is an asynchronous, self-paced online course that, when taken with *Engineering Solutions*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643058016



MICRO CERTIFICATE **SCIENTIFIC COLLABORATION****Cooperative Learning**

Examine current implementation of cooperative learning in classrooms as a means of increasing students' future success in postsecondary careers. Develop a customized tool to plan for the purposeful teaching of social skills, protocols, and tools for collaboration in the classroom. This is an asynchronous, self-paced online course that, when taken with *Project-Based Learning*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643057996




**Project-Based Learning**

Learn the student, classroom, and teacher characteristics that are essential to the effective implementation of Project-Based Learning (PBL) and make targeted decisions about which of those need to be addressed to achieve student success. Develop a customized PBL plan using a seven-step process. This is an asynchronous, self-paced online course that, when taken with *Cooperative Learning*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643050058




MICRO CERTIFICATE **SCIENTIFIC THINKING****Questioning Strategies**

Explore several educational taxonomies and questioning techniques that will foster students' critical thinking and lead to more productive classroom discussions. Develop a personalized planning tool to grade-level standards to stimulate students' thinking and participation in robust discourse. focuses on developing multi-leveled questions and intentionally selecting discussion formats aligned to grade-level standards to stimulate students' thinking and participation in robust discourse. This is an asynchronous, self-paced online course that, when taken with *Addressing Misconceptions*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 9781643050034




**Addressing Misconceptions**

Examine how to intentionally plan for instruction that uses probing questions to identify and understand students' misconceptions while fostering their skills to begin identifying their own misunderstandings. Create a customized tool for addressing student misconceptions. This is an asynchronous, self-paced online course that, when taken with *Questioning Strategies*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 9781643050027




MICRO CERTIFICATE **SCIENTIFIC LITERACY****Reading in STEM**

Explore how to use primary and secondary text resources with students while implementing a variety of comprehension strategies aligned to varying purposes for reading. Develop a customized tool to support the use of reading resources for STEM learning. This is an asynchronous, self-paced online course that, when taken with *Writing in STEM*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 9781643057842

**Writing in STEM**

Learn how to use a variety of writing strategies to help K-12 students become better writers of informational text. Create a customized planning tool to support writing integration across subjects. This is an asynchronous, self-paced online course that, when taken with *Reading in STEM*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 9781643065588



## Teaching Online Series

Learn how to use evidence-based, hands-on strategies for teaching online with NISE's Teaching Online Essentials Certificate. Earn your Teaching Online Essentials Certificate by completing the four Micro Certificates listed below, each including two, 3-hour, online courses. You may also choose to complete any individual Micro Certificate or pick individual courses to refine your practice and learn new strategies for teaching online - in addition to onsite. *All courses in the Teaching Online Series are appropriate for educators of all grade levels and content areas.*

### MICRO CERTIFICATE ESTABLISHING THE VIRTUAL CLASSROOM



#### Getting Started: Establishing the Virtual Classroom

Explore four foundational elements of successful online learning: routines, teaching presence, assessment, and the organization of learning. Educators demonstrate their learning by developing a personalized action plan that addresses each of these fundamental components of successful online learning. This is an asynchronous, self-paced online course that, when taken with *Advanced Practices: Establishing the Virtual Classroom*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 ISBN 9781643062549

#### Advanced Practices: Establishing the Virtual Classroom



Strengthen instruction by exploring four advanced practices: synchronous learning, continual improvement, human elements, and online teaching standards. Educators demonstrate their learning by developing a personalized action plan that addresses the four advanced practices. This is an asynchronous, self-paced online course that, when taken with *Getting Started: Establishing the Virtual Classroom*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 ISBN 9781643062556

### MICRO CERTIFICATE BUILDING COMMUNITY IN THE VIRTUAL CLASSROOM



#### Getting Started: Building Community in the Virtual Classroom

Explore four topics related to the community of inquiry framework: the framework, social presence, cognitive presence, and teaching presence. Educators demonstrate their learning in this course by developing a personalized action plan that addresses each of these four topics. This is an asynchronous, self-paced online course that, when taken with *Advanced Practices: Building Community in the Virtual Classroom*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 ISBN 9781643062563

#### Advanced Practices: Building Community in the Virtual Classroom



Examine the following: meaningful context, synchronous and asynchronous collaboration, hands-on inquiry, and evidence-based explanations. Educators demonstrate their learning by developing a personalized action plan that addresses each of the four advanced practices. This is an asynchronous, self-paced online course that, when taken with *Getting Started: Building Community in the Virtual Classroom*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
 ISBN 9781643062570





MICRO CERTIFICATE **ACHIEVING 21ST CENTURY OUTCOMES IN THE VIRTUAL CLASSROOM****Getting Started: Achieving 21st Century Outcomes in the Virtual Classroom**

Examine four types of learning outcomes: workforce needs, 21st-century skills, content area needs, and safe online practices. Educators demonstrate their learning by developing a personalized action plan that addresses each set of learning outcomes. This is an asynchronous, self-paced online course that, when taken with *Advanced Practices: Achieving 21st Century Outcomes in the Virtual Classroom*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643062587



**Advanced Practices: Achieving 21st Century Outcomes in the Virtual Classroom**

Explore strategies to support deep understanding of learning outcomes through relevant real-world connections using virtual field trips and tours, careers and current events, home and community, and technology standards. Teachers demonstrate their learning by developing a personalized action plan that addresses each of the four advanced practices. This is an asynchronous, self-paced online course that, when taken with *Getting Started: Achieving 21st Century Outcomes in the Virtual Classroom*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643062594



MICRO CERTIFICATE **IMPLEMENTING MEANINGFUL ASSESSMENT IN THE VIRTUAL CLASSROOM****Getting Started: Implementing Meaningful Assessment in the Virtual Classroom**

Explore how to embed assessment practices into the virtual classroom through four strategies: formative tools, summative data, feedback on student work, and feedback on students' behaviors and processes. Educators demonstrate their learning by developing a personalized action plan that addresses each of the four areas. This is an asynchronous, self-paced online course that, when taken with *Advanced Practices: Implementing Meaningful Assessment in the Virtual Classroom*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643062600

**Advanced Practices: Implementing Meaningful Assessment in the Virtual Classroom**



Examine the following online assessment practices: learning artifacts, presentations to authentic audiences, capacity matrices, and meta-cognitive strategies. Educators demonstrate their learning by developing a personalized action plan that addresses each of these four advanced practices. This is an asynchronous, self-paced online course that, when taken with *Getting Started: Implementing Meaningful Assessment in the Virtual Classroom*, will lead to a digital micro-certificate badge.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643062617

## Other Online Courses



### Always Time for Science

Explore how to find more time to maximize science learning when time is an obstacle. Examine a wide variety of strategies to increase science learning at school, at home, and throughout the community. Develop a customized plan for increasing science learning for your students. This is an asynchronous, self-paced online course.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643057835



### Maximizing STEMscopes NGSS Curriculum

Examine the philosophical underpinnings and features of the Next Generation Science Standards (NGSS), and how to maximize student learning through effective planning and instruction with NGSS. Create or refine a planning tool to support NGSS standards aligned instruction. This is an asynchronous, self-paced online course.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643057828



### Maximizing STEMscopes Curriculum

Learn how to make the most of your STEMscopes curriculum with some very practical advice for lesson planning and classroom instruction. Develop a customized planning tool with a clear and thorough way to organize your instruction using STEMscopes resources. This is an asynchronous, self-paced online course.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643058030

### Understanding NGSS

Examine the philosophical underpinnings and features of the Next Generation Science Standards (NGSS), and how to maximize student learning through effective planning and instruction with NGSS. Create or refine a planning tool to support NGSS standards-aligned instruction. This is an asynchronous, self-paced online course.

 ONLINE  
 ↑ TO 180 MIN  
ISBN 9781643050072