

# *Virtual Learning Experiences*

## Fall Program

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### Early Childhood (ECE): PreK – 2nd

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom
September	<p><b>Building Oral Language Skills</b>                      A student cannot learn to read and comprehend on grade level if their oral language skills are weak. Learn how to integrate language and vocabulary building activities and strategies throughout your day.</p>	<ul style="list-style-type: none"> <li>• The importance of talking with your students</li> <li>• Building in time for students to talk to each other</li> <li>• Techniques to lift and build language</li> <li>• Integrate vocabulary instruction into read alouds and other teacher-directed activities</li> </ul>	<ul style="list-style-type: none"> <li>• Students use words they hear modeled for them</li> <li>• Conversations happen between students</li> <li>• Vocabulary and oral language skills improve</li> </ul>
October	<p><b>Increasing rigor across the curriculum and the school day</b>                      Are you unsure how to approach rigor in an ECE classroom? Join this session to learn how to leverage key mindsets and instructional strategies that can be integrated into classroom daily routines to increase amount of time spent daily on instruction.</p>	<p>Adding rigor to:</p> <ul style="list-style-type: none"> <li>• read alouds,</li> <li>• morning circle or calendar time</li> </ul> <p>Build social/emotional skills into routines and procedures</p> <p>Learn appropriate questioning to increase student talk</p>	<ul style="list-style-type: none"> <li>• Student engagement positively reflects the incorporation of clear objective and rigor in morning circle or calendar time</li> <li>• Instruction includes social/emotional skills</li> <li>• Student talk offers additional lifts in language use</li> </ul>

November	<p><b>Small Group/Individual Instruction</b></p> <p>Are you thinking about using small groups to maximize instruction or how to assess for student understanding in-the-moment of a small group and adjust course? Join this session to make the most of your small groups. This session will include how to effectively differentiate for students during small group instruction and how to meet the needs of your students by using different types of grouping.</p>	<p>Instruction:</p> <ul style="list-style-type: none"> <li>• keeping track of student learning</li> <li>• deciding what works for your students and for what subjects when you incorporate different types of grouping</li> <li>• maintaining effective differentiation in small groups with a focus on we do, you do portion of the lesson</li> </ul>	<p>A flexible approach to small groups and the grouping for different skills or subjects is reflecting in lesson plans and instruction.</p>
December	<p><b>Dealing with Disruptive Behavior</b></p> <p>Do you have students who always seem to disrupt lesson? Join this session, if your overall classroom management is good but you still have a few students that cause problems.</p>	<ul style="list-style-type: none"> <li>• Learn how class strategies to improve behavior</li> <li>• Learn what is developmentally appropriate and what signals a bigger problems</li> <li>• Learn about the function of behaviors.</li> <li>• Strategies for AD/HD and Autism</li> <li>• Behavior plans</li> </ul>	<ul style="list-style-type: none"> <li>• Invest students in improving their own behavior.</li> <li>• The whole class improves their social/emotional skills and learn to deal with others behavior.</li> <li>• Come away with concrete ideas to create individual behavior plans.</li> </ul>

# Upper Elementary: Math & Science

Rigor in the early childhood classroom looks different than older grades. It is not just about a faster pace or harder standards. It is intentional teaching methods integrated throughout the day. Join our fall upper elementary math and science sessions that are designed to support new teachers in developing key mindsets and instructional practices to increase success on topics like fact fluency, teaching conceptual math through games, and science literacy.

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom
September	<p><b>Power Up Your Fact Fluency Fast</b>            Don't let weak math fact fluency slow your students down from achieving deep conceptual understanding of your curriculum. Learn tips and tricks to keep all students motivated to become fact fluency masters.</p>	<p>Improving fact fluency by:</p> <ul style="list-style-type: none"> <li>• Developing daily/weekly routine for practice</li> <li>• Differentiating fact fluency practice for all students</li> <li>• Expanding fact fluency beyond 4 main operations</li> <li>• Easy to use trackers and motivators to keep kids excited</li> </ul>	<ul style="list-style-type: none"> <li>• Students engage with fact fluency in a new and exciting way</li> <li>• Results are tracked more clearly by teacher and students</li> <li>• Family investment increases</li> </ul>
October	<p><b>It's All a Game: Play your way to deeper math skills</b>            Do you want to improve your ability to teach math concepts? Do you want to increase student engagement? Join this session on leveraging math games in the classroom.</p>	<p>Games:</p> <ul style="list-style-type: none"> <li>• Discuss the power of games and what they can unlock in your classroom.</li> <li>• Compare and contrast teaching methods using games vs. more traditional methods</li> <li>• Explore how games reinforce your classroom culture and teach character</li> <li>• Involving families in math games</li> </ul>	<ul style="list-style-type: none"> <li>• Students are able to play games for a variety of key math concepts and explain their thinking about strategies for each.</li> <li>• Games can be used in a several different places in the lesson plan cycle (do now, DI, GP, and so on)</li> <li>• Content is more rigorous &amp; open ended so that students will be more independent</li> </ul>
November	<p><b>Foldable Jedi: Improving science instruction on the cheap</b>            Sure science instruction should include intricate experiments with tons of great supplies. Not all schools have those resources though. Join this session on science foldables to learn how simple sheets of paper can excite students while also improving their understanding of</p>	<p>Foldables:</p> <ul style="list-style-type: none"> <li>• What is a foldable?</li> <li>• How can a foldable support science instruction</li> <li>• What foldables go best for what learning experiences</li> <li>• Making sure foldables aren't just an activity, but a rigorous learning experience with evidence of mastery</li> </ul>	<ul style="list-style-type: none"> <li>• 5 foldables to use tomorrow and a secret trick for easy student construction.</li> <li>• Usable in any type of lesson and in many different points of the lesson cycle.</li> </ul>

	complicated science concepts.		
December	<p><b>Science Experiments</b> December is a great time to wow your students with amazing science experiments. During this session you'll learn the best experiments to make your students excited about science and the best ways for students to share their learning with you. Don't miss it.</p>	<p>Performance tasks:</p> <ul style="list-style-type: none"> <li>Identify experiments for key upper elementary science concepts</li> <li>Compare and contrast science experiments for rigor and application in the classroom</li> <li>Create mini-lessons for 1-2 science experiments shown during the session.</li> </ul>	<ul style="list-style-type: none"> <li>When session objectives are met observers to your classroom will see a variety of science experiments conducted using a specified lab format. Students will ask rigorous science questions using appropriate science vocabulary about each experiment conducted.</li> </ul>

## Upper Elementary: ELA

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom
September	<p><b>Setting Up Readers/Writers Workshop</b> It's the beginning of the year and it is time to start planning with the end in mind. During this session we will look at the key elements of any readers, or writers' workshop.</p>	<p>Setting Up Reading/Writers Workshop:</p> <ul style="list-style-type: none"> <li>Implementing clear systems and structures</li> <li>Creating essential mini lessons</li> <li>Planning for independent work</li> <li>Planning for small group instruction</li> </ul>	<ul style="list-style-type: none"> <li>Effective and efficient planning</li> </ul>
October	<p><b>Creating the Time with Workstations, Workshops, and Centers</b> Do you want to improve or add more center-based learning in one or more classroom components? Join this session to learn how introduce or improve stations/centers that can lead to increased rigor. Best practices as well tips and tricks for getting the most out of centers time will be discussed.</p>	<p>Centers:</p> <ul style="list-style-type: none"> <li>why do we use/need stations</li> <li>finding time for stations including adopting structures that allow for flexible grouping and frequent changes</li> <li>spend less time managing and more time teaching</li> <li>alternative approaches</li> <li>stations across the curriculum</li> </ul>	<ul style="list-style-type: none"> <li>Students are able to work independently at centers</li> <li>Instruction shifts from management of centers to small group and individuals</li> <li>The purpose behind all activities students are pursuing independently is clear</li> <li>Content is more rigorous &amp; open ended so that students will be more independent</li> </ul>
	<p><b>Responding to Reading Through Writing</b> Often times we begin thinking about reading</p>		

November	comprehension and writing in isolation. Unfortunately these both go hand and hand. In fact what research has found is that student responses in writing are directly correlated to their ability to understand text. In the session learn great strategies and activities to help scholars respond to text in writing in powerful ways.		
December	<b>Increasing rigor across the curriculum and the school day</b> Are you rethinking or working on strengthening your approach to rigor in an ECE classroom? Join this session to learn how to leverage key mindsets and instructional strategies that can be integrated into classroom daily routines to increase amount of time spent daily on instruction.	Adding rigor to: <ul style="list-style-type: none"> <li>• read alouds,</li> <li>• morning circle or calendar time</li> <li>• social/emotional skills including routines and procedures</li> <li>• appropriate questioning to increase student talk</li> </ul>	<ul style="list-style-type: none"> <li>• Student engagement positively reflects the incorporation of clear objective and rigor in morning circle or calendar time</li> <li>• Instruction includes social/emotional skills</li> <li>• Student talk offers additional lifts in language use</li> </ul>

## Humanities: Social Studies

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom
September	<b>Planning for Student Success</b> Do you want to plan lessons that will prepare your students for success? Do you want to create materials that are aligned, scaffolded and set up to meet the needs of your students? Take part in this self-guided module to learn more about designing lessons that will guide students towards academic success.	<ul style="list-style-type: none"> <li>• Making sure that all parts of a lesson plan are aligned</li> <li>• Scaffolding skills throughout the lesson plan</li> <li>• Gradually releasing responsibility to students over the course of a lesson</li> </ul>	<ul style="list-style-type: none"> <li>• Students are able to explain the purpose/objectives of the lesson.</li> <li>• Students can describe the steps they will take to reach the purpose and objectives.</li> <li>• Students are able to work independently because skills are scaffolded and responsibility is gradually released.</li> <li>• Students demonstrate higher mastery on exit tickets and assessment tasks.</li> </ul>

			<p><b>Teacher Outcome – Session</b> Revise a lesson plan to meet the following three criteria: -Aligned -Scaffolded -Gradually releases responsibility</p> <p><b>Teacher Outcome – Long Term</b> Teacher consistently creates lesson plans with an eye for alignment, scaffolding and gradual release. Teacher adjusts and edits lesson plans that do not meet these criteria.</p>
October	<p><b>Building Investment and Engagement in Social Studies</b> Do you want to get your students excited about Social Studies? Do you want to increase their engagement and participation in class? Complete this self-guided module to increase your students’ enthusiasm and excitement for Social Studies.</p>	<ul style="list-style-type: none"> <li>• Hooks that will draw students into the content of the lesson</li> <li>• Strategies that will actively involve students in the INM</li> <li>• Engaging and feasible practice activities that will connect to student experiences and pique content interest</li> </ul>	<ul style="list-style-type: none"> <li>• Higher student participation in the form of asking and answering questions, actively taking notes</li> <li>• Students focused and on task throughout the lesson</li> <li>• Higher comprehension due to active student engagement and participation</li> </ul> <p><b>Teacher Outcome – Session</b> Revise a lesson plan to include at least two of the following: -an engaging hook -one activity the students can do during the INM -a high interest portion of a practice activity</p> <p><b>Teacher Outcome – Long Term</b> Students are drawn into the lesson with a compelling hook, actively participating while the INM takes place and intrigued by the practice activity through a relevant connection or interest point.</p>
November	<p><b>Making Checks for understanding a Part of your Classroom Culture</b> Do you want to determine if students are mastering material throughout the lesson? Do you want to hold students accountable and push them to think in rigorous ways? Join this</p>	<ul style="list-style-type: none"> <li>• Components of strong CFUs</li> <li>• Examples of effective CFUs</li> <li>• Implementation of four Teach Like a Champion CFU strategies – cold calling, no opt out, right is right and</li> </ul>	<ul style="list-style-type: none"> <li>• More frequent and purposeful CFUs incorporated into lessons</li> <li>• Students held accountable through TLAC strategies</li> <li>• Students challenged to back up their answers with evidence</li> <li>• Students provide additional</li> </ul>

	self-guided module that will introduce a variety of strong CFUs as well as tips for how to implement them effectively in the classroom.	stretch it	<p>details/examples to support their answers</p> <p><b>Teacher Outcome – Session</b></p> <ul style="list-style-type: none"> <li>• Incorporate at least three checks for understanding into an upcoming lesson</li> <li>• Script one of the following strategies for at least one of the CFUs: <ul style="list-style-type: none"> <li>○ Cold Calling, No Opt Out, Right is Right or Stretch It</li> </ul> </li> </ul> <p><b>Teacher Outcome – Long Term</b></p> <ul style="list-style-type: none"> <li>• Teachers incorporate meaningful checks for understanding and hold students accountable for responding</li> </ul>
December	<p><b>Using Primary Sources</b> Are you struggling to use primary sources in class? Are you met with student resistance whenever you introduce a primary source? Join this self-guided module which shows how to make primary sources an active and integral part of your classroom.</p>	<ul style="list-style-type: none"> <li>• Examples of primary sources</li> <li>• How to deconstruct complex primary sources using the SOAPs method and scaffolded questions</li> <li>• If time - Ways to build student interest in primary sources</li> </ul>	<ul style="list-style-type: none"> <li>• Increased use of primary sources in the classroom</li> <li>• Student discussion and writing which frequently incorporates primary sources</li> </ul> <p><b>Teacher Outcome – Session</b> Teachers create a model SOAPs outline or at least five questions related to a primary source</p> <p><b>Teacher Outcome – Long Term</b> Teachers use the SOAPs method and scaffolded questions in their lesson planning, in order to analyze challenging primary sources</p>

## Humanities: ELA

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom
September	<b>The nitty-gritty of breaking down a standard</b>	Teachers will break down a CCSS and make a plan with a specific strategy to teach that standard in their classroom.	Teachers who may be struggling to break down standards to teach in a daily lesson.
October	<b>Building relationships through reading, writing,</b>	How do we build relationships with students using surveys,	Any teacher wanting to build meaningful and positive

	<b>and discussion</b>	thoughtful questions, and discussion topics that are meaningful to students. In this session, we'll take a step back to think about what's meaningful for our students, and make plans from those interests. Or make plans to better learn and understand those interests.	relationships with students, grounded in their ELA vision.
November	<b>We're reading and writing now how do we get students talking?</b>	Teachers will explore discussion strategies and topics to begin putting ownership and voice in our students.	Any teacher who wants to build the art and practice of discussion into their classrooms.
December	<b>Student ownership through reflection</b>	Teachers will create ways to build reflective habits in our students when they read, write, and discuss.	Teachers who want students to have more ownership and in the classroom.

## Languages: World Languages (K-12)

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom
September	<b>Planning for Instruction</b> Good instruction can't happen without good planning. This session will help you develop a balanced plan for helping students reach specific objectives. We will begin by exploring the national standards for world language learning. Using Wiggins' and McTighe's planning framework, Understanding by Design, we'll begin with our goals and plan backward to ensure that all class activities support those end goals.	<ul style="list-style-type: none"> <li>National standards for world language learning</li> <li>Modes of communication</li> <li>Backward planning</li> <li>Goal setting</li> <li>Choosing and designing effective instructional activities</li> <li>Choosing balanced instructional activities</li> </ul>	<p><b>Student Outcomes:</b></p> <ul style="list-style-type: none"> <li>Students will self-assess end goals in the form of Can Do Statements at beginning and end of unit</li> </ul> <p><b>Teacher Outcomes:</b></p> <ul style="list-style-type: none"> <li>Teacher will take a learner-centered approach in plotting end goals for student learning</li> <li>Teacher will become judicious in choosing activities to support end goals</li> <li>Teacher will create balanced instruction to maximize learning across all modes</li> </ul>
October	<b>Teaching with TPRS and Comprehensible Input</b> We'll discuss the popular and effective teaching strategy, Teaching Proficiency through Reading and Storytelling (TPRS) and other Comprehensible Input	<ul style="list-style-type: none"> <li>TPRS/CI methodology</li> <li>TPRS/CI techniques</li> <li>Lowering students' affective filter</li> <li>Teaching grammar in context</li> </ul>	<p><b>Student Outcomes:</b></p> <ul style="list-style-type: none"> <li>Student learning is focused on function over form (or communication over grammar)</li> <li>Students learn strategies for staying in the target language</li> </ul>

	(CI) teaching practices. Get coached on practical day-to-day techniques you could be implementing to boost student performance. If you're considering implementing TPRS/CI techniques, this session will be good for you to listen to other teachers experienced with using it.	<ul style="list-style-type: none"> <li>• How to create effective TPRS stories</li> </ul>	<p><b>Teacher Outcomes:</b></p> <ul style="list-style-type: none"> <li>• Teacher learns strategies for engaging students</li> <li>• Teacher learns strategies for staying in the target language</li> </ul>
November	<p><b>Assessing Learning</b> One of the most challenging tasks for language instructors is finding effective ways to determine what and how much their students are learning. Instructors need to think carefully about their instructional goals and what kinds of assessments support these goals. This session will equip you with effective assessment tools so you can modify and focus instruction on what students need to know and be able to do in the target language in order to achieve communicative competence.</p>	<ul style="list-style-type: none"> <li>• Review Modes of Communication</li> <li>• Formative and Summative Assessment</li> <li>• Re-examine end goals and re-assess what is worthy</li> <li>• Create balanced assessments so all three modes of communication are leveraged</li> </ul>	<p><b>Student Outcomes:</b></p> <ul style="list-style-type: none"> <li>• Student learning is measured holistically</li> </ul> <p><b>Teacher Outcomes:</b></p> <ul style="list-style-type: none"> <li>• Teachers will learn how to create assessments to measure all focus skills within the 3 modes of communication</li> <li>• Teachers use formative assessment to inform instruction</li> <li>• Teachers use summative assessment to evaluate students and teacher effectiveness</li> </ul>
December	<p><b>Interpretive Mode: Developing Listening and Reading Skills</b> We will begin by defining interpretive communication and examining the various processes, reader- and text-based factors involved in reading and listening. We will also look at what readers and listeners are able to do and the types of written and spoken texts they are able to interpret at different ACTFL proficiency levels and sublevels. After exploring process-oriented approaches to reading and listening, you will find authentic written and spoken texts and use them to develop activities for your learners. We will also consider how to promote effective reading and listening strategies, as well as using technology to help develop interpretive communication skills.</p>	<ul style="list-style-type: none"> <li>• Review proficiency levels</li> <li>• Authentic resources</li> <li>• Where to find authentic resources</li> <li>• Designing tasks to build interpretive listening and reading</li> <li>• Strategies for effective interpretive communication</li> <li>• Assessing interpretive mode communication</li> </ul>	<p><b>Student Outcomes:</b></p> <ul style="list-style-type: none"> <li>• Students develop skills for listening comprehension</li> <li>• Students develop skills for reading comprehension</li> </ul> <p><b>Teacher Outcomes:</b></p> <ul style="list-style-type: none"> <li>• Teacher will better understand proficiency levels and capabilities of students operating at those levels</li> <li>• Teacher learns how to select appropriate authentic resources for students to practice interpretive listening and interpretive reading</li> <li>• Teacher learns how to develop tasks for leveraging interpretive mode of communication</li> </ul>

# Culturally and Linguistically Diverse Students (ELL)

Date	Title & Description	Topics Addressed	Immediate application in the classroom
September	Intro to CLD: Who Are Our Culturally & Linguistically Diverse?	<ul style="list-style-type: none"> <li>• TFA endorsed vocabulary considering our population</li> <li>• Getting to know your CLD students</li> <li>• Stages of Language Acquisition &amp; Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Identify strategies to put their personal commitments from Institute into action to get to know their students and respond to their needs.</li> </ul>
October	The SIOP Model: Meeting Content AND Language Needs (Creating and Implementing Content and Language Objectives) <i>SIOP Features: 1, 2, 3, 5, 6, 17</i>	<ul style="list-style-type: none"> <li>• General Introduction to SIOP model</li> <li>• SIOP model Content and Language Objectives:               <ul style="list-style-type: none"> <li>○ what are they,</li> <li>○ how to create them,</li> <li>○ how to use &amp; adapt them</li> <li>○ what grouping configurations that support them</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Introduce, model, and create content and language objectives.</li> <li>• Demonstrate clarity and targeted instruction in their teaching rising in both confidence and expectations met by their students!</li> </ul>
November	The SIOP Model: Before the Lesson (Building Background & Comprehensible Input) <i>SIOP Features 7, 8, 10, 11, 12</i>	<ul style="list-style-type: none"> <li>• Appropriate speech</li> <li>• Clear explanation of academic tasks</li> <li>• A variety of techniques used</li> </ul>	<ul style="list-style-type: none"> <li>• Identify techniques for connecting student personal experiences and past learning to lesson concepts.</li> <li>• Explore techniques for presenting content info in ways that students can comprehend.</li> </ul>
December	The SIOP Model: They Talk, You Listen (Interaction-Practice/Application) <i>SIOP Features 16, 21, 22</i>	<ul style="list-style-type: none"> <li>• Frequent interaction opportunities</li> <li>• Sufficient Wait Time</li> <li>• Integration of All Language Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and utilize techniques that reduce teacher talk and increase opportunity for students to interact with material through as many possible language skills</li> </ul>

## Diverse Learners: Special Education

Special Education is a vast field that encompasses countless teaching situations, navigating IEPs, and understanding how to best meet the needs of each individual student. The self-directed learning modules allow busy Special Educators access content and create their own path of professional development at a time that best fits their schedule. They are designed for regional professional development use, particularly in regions with fewer special education resources. These modules will offer a variety of resources that Special Educators can use to build

a toolkit of educational strategies and knowledge. There will be six modules in the fall and each one will focus on a unique topic that is important to beginning teachers in the field of Special Education.

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom
September	<p><b>Diverse Learners: A Toolkit of Strategies for All Learners</b> Get acquainted with diverse learner profiles and orient yourself with various disability labels. Build a toolkit of best practices that benefit learners in all special education settings.</p> <p>Significance and Session Outcomes Special Education teachers need to be able to:</p> <ul style="list-style-type: none"> <li>• Identify the complex needs of their students</li> <li>• Understand the terms relating to disabilities</li> <li>• Differentiate all aspects of the classroom to meet the needs of diverse learners</li> </ul> <p>Following this session, teachers should be able to identify the needs of each of the students in their special education classroom and develop a plan of individualized adaptations to help each student learn best.</p>	<ul style="list-style-type: none"> <li>• High and Low Incidence Disabilities</li> <li>• Accommodations and Modifications</li> <li>• Strategies to best meet the needs of students diagnosed with: Autism, Behavior Disabilities, ADHD, Hearing and Vision Impairments, Speech and Language Impairment, and Specific Learning Disabilities</li> </ul>	You'll receive: strategies for meeting the needs of students with distinct disability diagnoses.
October	<p><b>Collaborative Problem Solving: Part 1</b> Information, tools, and strategies to aid you in the process of behavior mapping and replacement behaviors.</p> <p>Special Education teachers need to be able to:</p> <ul style="list-style-type: none"> <li>• Identify and target problematic behaviors in their classroom</li> <li>• Build a solid plan for classroom management</li> <li>• Track behaviors to share with the IEP team, as needed</li> </ul> <p>Following this session, teachers should be able to observe and correctly map the antecedent, behavior and consequence and begin making a plan for implementing replacement behaviors.</p>	<ul style="list-style-type: none"> <li>• Behavior mapping</li> <li>• ABCs of Behavior</li> <li>• Ideal and actual replacement behaviors</li> </ul>	You'll receive: behavior mapping tools and a list of replacement behaviors to aid in classroom management.
	<p><b>Collaborative Problem Solving: Part 2</b> Part 2 of this series focuses on behavior de-escalation strategies and the process of collaborative problem</p>	<ul style="list-style-type: none"> <li>• Classroom tools for assessing and tracking behavior</li> <li>• Presentation on De-</li> </ul>	You'll receive: classroom tools for assessing and tracking behavior, a toolkit of de-escalation strategies,

<p>November</p>	<p>solving.</p> <p>Special Education teachers need to be able to:</p> <ul style="list-style-type: none"> <li>• Implement thoughtful and productive classroom management strategies</li> <li>• Teach students appropriate behaviors and strategies for calming down</li> <li>• Hold meaningful conversations with students regarding behavior</li> </ul> <p>Following this session, teachers should be able to assess and track behaviors in the classroom and implement de-escalation strategies to promote positive classroom interactions. Additionally, teachers should be able to use the strategies of collaborative problem solving as a behavior management tool.</p>	<p>Escalation Strategies and Collaborative Problem Solving</p> <ul style="list-style-type: none"> <li>• A video of Collaborative Problem Solving in action</li> <li>• Discussion Questions</li> <li>• Case studies and practice</li> <li>• Additional Behavior</li> <li>• Management resources</li> </ul>	<p>and a guide to using collaborative problem solving in the classroom.</p>
<p>December</p>	<p><b>Rigorous and Well-Written IEP Goals</b></p> <p>Well-written IEP goals are the cornerstone to a strong education plan for SPED students. Learn the components and process for writing great goals in this module!</p> <p>Special Education teachers need to be able to:</p> <ul style="list-style-type: none"> <li>• Read and interpret IEP goals</li> <li>• Track progress of IEP goals</li> <li>• Write meaningful and targeted goals that will further students' achievement</li> </ul> <p>Following this session, teachers should be able to write rigorous and meaningful IEP goals for students on their caseload.</p>	<ul style="list-style-type: none"> <li>• IEP goal checklist</li> <li>• Good, better, best IEP goals</li> <li>• How to identify well-written IEP goals</li> </ul>	<p>You'll receive: an IEP goal checklist, along with resources and goal banks for writing IEP goals.</p>

<p>January</p>	<p><b>Adapting Curriculum Across Grade Levels</b> Learn 9 strategies for adapting any assignment to meet the needs of students in your classroom.</p> <p>Special Education teachers need to be able to:</p> <ul style="list-style-type: none"> <li>• Adapt lesson plans, assignments and environments to meet the needs of their students</li> <li>• Understand the different types of accommodations and modifications that can be made in the classroom</li> </ul> <p>Following this session, teachers will be able to plan for and adapt classroom settings, assignments, and resources to best meet the needs of their students.</p>	<ul style="list-style-type: none"> <li>• Examples of how to adapt size, time, space, input, output within assignments</li> <li>• Real life examples of adaptations</li> <li>• Adaptations at the elementary and secondary level</li> </ul>	<p>You'll receive: 9 strategies to use in your classroom, a planning guide for adaptations, and resources for common accommodations.</p>
<p>February</p>	<p><b>Universal Design for Learning in the Special Education Setting</b> Learn to use the principles of UDL to engage all students in the special education setting with a series of case studies and planning tools.</p> <p>Special Education teachers need to be able to:</p> <ul style="list-style-type: none"> <li>• Understand the concept of Universal Design for learning.</li> <li>• Develop lesson plans and assignments that are rich in variation and take into account a wide range of learning styles</li> </ul> <p>Following this session, teachers should be able to write and implement a lesson within the UDL framework.</p>	<ul style="list-style-type: none"> <li>• The principles of Universal Design for Learning</li> <li>• Special Education considerations in UDL</li> <li>• Case studies</li> </ul>	<p>You'll receive: a lesson planning guide to help you consider components of a UDL lesson as well as templates and other classroom resources.</p>

# Math: High School Math

Date	Title & Description	Topics Addressed
September	<p><b>Clarifying Your Vision</b>            Imagine the last day of school before summer break. What do you want students to say about learning math because of your class? That's vision. No matter if you are a vision setting extraordinaire or a first-timer this course will guide you through some tried-and-true activities that will support your work towards a clear &amp; authentic vision.</p>	<ul style="list-style-type: none"> <li>• What's your math history and how does that carry into your classroom vision?</li> <li>• What core values set the tone for your classroom culture? How will your students live out the core values?</li> <li>• What's your classroom vision? Why do you believe this vision will transform your students' math education?</li> </ul>
October	<p><b>Plan for the Just-Right Checks for Understanding</b>            Crafting checks for understanding requires us to know what type of student thinking we want to hear as a response. This session is for you if you want to ask the just-right checks for understanding questions. Analyze the key parts to structuring and scaffolding CFUs in order to maximize student learning and reduce the anxiety of responding. Expect to sharpen your approach to crafting CFUs for all types of math problems and for each level of student understanding.</p>	<ul style="list-style-type: none"> <li>• What goes into crafting <i>just-right</i> checks for understanding?</li> <li>• How do I plan CFUs around one concept for students that are below grade level, at grade level and above grade level?</li> <li>• How do other teachers ask CFUs during a lesson and how does that compare with what I'm doing?</li> </ul>
November	<p><b>Watch &amp; Wonder: Observation Protocols</b>            One of the most powerful ways to develop your craft is through observations of other educators. An observation allows us to broaden our perspective on what it means to teach and can bring out our curiosity for teacher best practices, content knowledge or classroom culture. Our observation protocol is simple: observe without judgment, notice what's happening (or not) and set in motion what adds value to your classroom.</p>	<ul style="list-style-type: none"> <li>• Deepen ones understanding of what you want to see and feel in the classroom.</li> <li>• Reflect on how your instructional decisions draw on the core components of math instruction and the standards for math practice.</li> <li>• Walk away with new instructional or engagement strategies based on what you observe in the video clip.</li> </ul>

December	<p><b>Rigor</b></p> <ul style="list-style-type: none"> <li>• Be empowered to seek out opportunities for rigor so that all students can feel their brain twisting and turning with new mathematical knowledge. Plan for rich and meaningful learning to happen at any point in the lesson cycle. Walk away with the tools and strategies necessary amp up rigor during instruction and student practice.</li> </ul>	<ul style="list-style-type: none"> <li>• How does rigor show up in the classroom? What can it look like?</li> <li>• Why is rigor in instruction and student practice tough to amp up? How can I get started?</li> <li>• What tools and strategies will help me build up my understanding of rigor and then make it happen in the classroom?</li> </ul>
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## Math: Middle School Math

A strong mathematics program at the middle level depends on a curriculum and resources that are aligned with NCTM's standards, appropriate grouping of students, and solid instructional leadership. The desire is for students to make connections, preserve and develop critical thinking skills.

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom
September	<p><b>Going Beyond the Exit Ticket</b>            What's all this talk about assessments? Is it really that important? What is the difference between formative and summative assessments? If you want to know how to assess students and provide instant feedback, that will help you track student progress and mastery Join this session to learn how to use a variety of assessment strategies to gauge student mastery.</p>	<p>Assessment Mastery:</p> <ul style="list-style-type: none"> <li>• Formative assessments</li> <li>• Summative assessments</li> <li>• How to use a variety of assessment strategies</li> </ul>	<ul style="list-style-type: none"> <li>• A variety of assessments strategies that provide immediate feedback</li> <li>• Increased student engagement</li> </ul>
October	<p><b>Going from Good to Great</b>            Rigor is a buzz word associated with common core. Having rigor in your classroom is simple to achieve and it assists students in their academic growth. Join this session to learn how to use WICOR strategies that you can use to guide students to comprehend</p>	<p>Creating Rigor:</p> <ul style="list-style-type: none"> <li>• What is WICOR?</li> <li>• Inquiry Math Lesson</li> <li>• Using Cornell Notes</li> </ul>	<ul style="list-style-type: none"> <li>• Students are able to use Cornell notes to</li> <li>• Varying strategies that enable rigor to be present in the classroom</li> </ul>

	materials and concepts, and articulate ideas, at increasingly complex levels.		
November	<p><b>All Kids are Welcome at the Table</b>  Are you looking for ways to build engagement through differentiated instruction? No two students enter a classroom with identical abilities, experiences, and needs. Learning style, language proficiency, background knowledge, readiness to learn, and other factors can vary widely within a single class group. Join this session to learn how to use differentiated instruction to enhance your lesson.</p>	<p>Differentiation:</p> <ul style="list-style-type: none"> <li>• What is differentiation?</li> <li>• Assessing student needs</li> <li>• Differentiating a sample lesson</li> </ul>	<ul style="list-style-type: none"> <li>• Students are more engaged because the lessons are catered to their specific needs.</li> <li>• A lesson plan that demonstrates differentiation.</li> </ul>
December	<p><b>Math has the “Right” Stuff</b>  Writing is a critical piece of any curriculum. However, how does writing fit into the math classroom? Join this session to get ideas on how and why to write in the math classroom. In this session we will discuss ways to make sure students are writing in the math class.</p>	<p>Instruction:</p> <ul style="list-style-type: none"> <li>• Using Rafts</li> <li>• Math Journals</li> <li>• Using Social Media and blogs when appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• An different approach on how to include writing in the classroom</li> </ul>

# Science: Chemistry

Becoming a great chemistry teacher takes patience, perseverance, practice and reflection. The Chemistry Virtual Professional Development Experiences are an excellent way to grow as a chemistry teacher. Please [join us](#) this fall for a series of both self-paced and live sessions listed below.

Date	Title & Description	Topics addressed	Immediate Application in the Classroom
<i>September Self-paced module only</i>	<p><b>Time-management in a Science Classroom</b> How do you promote learning chemistry through inquiry and investigation without running out of class time? In this session, we will explore time management practices that are particularly helpful in the science classroom.</p>	<ul style="list-style-type: none"> <li>• Time management practices that can be used in your science classroom on a daily basis</li> <li>• The relationship between high expectations and time management</li> </ul>	<p>Teachers will:</p> <ul style="list-style-type: none"> <li>• Learn how to divide your instructional period into timed sections</li> <li>• Learn how to plan student actions for each of the lesson's sections</li> <li>• Learn how to use CHAMP expectations for independent, partner and group work</li> </ul>
<i>September</i>	<p><b>Vision Setting and Culture in the Lab</b> How do you live out your vision and culture, not only in daily lessons, but also in the lab? In this session, we will investigate how to promote your vision and culture in all aspects of the lab: from setting up, to modeling expectations, to assigning groups, to monitoring implementation, to analyzing results and discussing findings. We will use a lab on Matter and the Atom to guide our session.</p>	<ul style="list-style-type: none"> <li>• Implementation of your vision and culture in all part of a lab</li> <li>• Selection of labs based on their challenging quality and push for citing experimental evidence</li> </ul>	<p>Teachers will:</p> <ul style="list-style-type: none"> <li>• Learn how to construct practices, routines and skills that reinforce your vision and culture for your chemistry class.</li> <li>• Learn how to select labs that promote challenging investigation and require students to justify their conclusions based on evidence from the lab and prior content knowledge.</li> </ul>
	<p><b>Using Data and Project-based Learning to Invest Students</b> It's October and in Teacher Language, that</p>	<ul style="list-style-type: none"> <li>• Data-tracking at individual and class levels to measure mastery</li> <li>• Data-tracking using a Big Goal and reflection</li> </ul>	<p>Teachers will:</p> <ul style="list-style-type: none"> <li>• Learn how both you and your students can track data throughout the unit as</li> </ul>

<i>October</i>	means it's a month where students struggle with investment and motivation. This session will help to re-invest students through data-tracking a project-based unit on Chemical Bonding and Molecular Structure.	<ul style="list-style-type: none"> <li>• Project-based learning on Chemical Bonding and Molecular Structure</li> </ul>	<p>a means to both measure student mastery and invest students in that mastery</p> <ul style="list-style-type: none"> <li>• Learn how to create a project-based unit that invests students in chemistry</li> </ul>
<i>November</i>	<p><b>Using Rubrics to Guide Student Work in the Lab</b></p> <p>How do students know what quality work in the lab looks like? This session explores how to create a rubric that is student-centered and pushes for rigorous learning in the lab.</p>	<ul style="list-style-type: none"> <li>• Rubrics as a tool to guide student learning and performance in the lab</li> <li>• Lab performance that includes: lab participation, safety, skills and reporting</li> </ul>	<p>Teachers will:</p> <ul style="list-style-type: none"> <li>• Learn how to create a rubric that is student-centered and guides students on how to perform high-quality work in four areas of the lab: participation, skills, safety and reporting.</li> </ul>
<i>December</i>	<p><b>Using Technology Tools to Assess Learning</b></p> <p>How can you use technology tools in your classroom to assess learning? This course will highlight technology tools that can be used to facilitate assessment of learning, promote instant feedback between teacher and students and increase efficiency of grading.</p>	<ul style="list-style-type: none"> <li>• Selecting and using technology tools that facilitate assessment of learning, promote instant feedback between teacher and students and increase teacher efficiency</li> <li>• Integrating technology tools into your lesson planning</li> <li>• Monitoring student use of technology tools in the classroom</li> </ul>	<p>Teachers will:</p> <ul style="list-style-type: none"> <li>• Learn how to select and use technology tools that best promote assessment of learning and teacher efficiency in your classroom</li> <li>• Learn how to integrate technology tools into your lesson planning</li> <li>• Learn how to monitor student use of technology tools in the classroom setting</li> </ul>

# Science: Physics

Teaching high school physics is an *art*. The magic of engaging a group of students during a lesson and watching connections being made and misconceptions corrected is like nothing else! Please [join us](#) this school year for a series of modules which will include both self-guided and live virtual learning experiences (VLEs). These VLEs are based on the Science Core Components of Instruction, and the Investigation Cycle Approach to Teaching Science.

Date	Title & Description	Topics Addressed	Immediate Application
September	<p><b>Laying the framework</b> Your students will think like physicists this year. This module will guide you to design your teaching vision so that both you and your students know exactly where you are headed: Success.</p>	<p>Focus on:</p> <ul style="list-style-type: none"> <li>• Vision of Excellence in Science Instruction</li> <li>• Science Core Components of Instruction: Inclusion and Identity</li> <li>• First weeks of school</li> <li>• What is your teaching vision?</li> </ul>	<p>Teacher will:</p> <ul style="list-style-type: none"> <li>• Reflect upon their personal teaching vision in a step-by-step manner with the goal.</li> <li>• Create 3 final documents that will guide their teaching for the remainder of the year.</li> </ul>
October	<p><b>Create engaging lessons every day!</b> Each day when students enter your classroom, they <i>know</i> that something surprising, challenging, or exciting will happen. They <i>expect</i> to learn and push themselves every day.</p>	<p>Focus on:</p> <ul style="list-style-type: none"> <li>• Science Core Components of Instruction: Investigation through Multiple Modes of Inquiry (focus on Learning Builds)<b>Part 1</b> of lesson planning: “The Hook”</li> <li>• Types of lesson hooks</li> </ul>	<p>Teacher will:</p> <ul style="list-style-type: none"> <li>• Write the opening 5 minutes of a lesson plan that truly engages students and opens their minds to learn a new idea or correct misconceptions they may have.</li> </ul>
November	<p><b>Planning the heart of a physics lesson</b> Moving beyond the beginning hook of a lesson, let’s get into the meat of how to make use of multiple modes of discourse to allow students to form correct conceptions in physics.</p>	<p>Focus on:</p> <ul style="list-style-type: none"> <li>• Science Core Components of Instruction: Investigation through Multiple Modes of Inquiry (focus on Discourse)<b>Part 2</b> of lesson planning: Discourse</li> <li>• Teacher and student “talk”</li> </ul>	<p>Teacher will:</p> <ul style="list-style-type: none"> <li>• Create an effective lesson plan which focuses on oral discourse with students.</li> </ul>
December (Self-paced only)	<p><b>Planning the heart of a physics lesson- Part II</b> Adding on to our module last month with a focus on <u>discourse</u>, we will shift our focus from oral discourse to improving lessons with visual and written discourse</p>	<p>Focus on:</p> <ul style="list-style-type: none"> <li>• Science Core Components of Instruction: Investigation through Multiple Modes of Inquiry (focus on Learning Builds)</li> </ul>	<p>Teacher will:</p> <ul style="list-style-type: none"> <li>• Revisit the lesson which was created last month and analyze the results.</li> <li>• Create a fresh lesson plan which focuses on a new type of discourse with</li> </ul>

	in your classroom.	<ul style="list-style-type: none"> <li>• <b>Part 2</b> of lesson planning: Discourse</li> <li>• Visual experiences (models) and written expression</li> </ul>	students
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## Science: Middle School Science

The vision of the middle school science community is to empower teachers to be resourceful leaders that think critically about their teaching, support the emotional, physical, social and cognitive development of their adolescent students and use best practices and strategies that are aligned with NGSS, so middle school students do not fall short in achieving their absolute potential in science and are inspired and equipped to think critically about science in rigorous high school science programs and in life.

In order to achieve this, teachers will need to demonstrate knowledge of what it looks like to “do” science and provide opportunity for students to apply investigation skills and practices into their learning. Teachers will also need to be able to support students in reading and writing and think about how to differentiate and scaffold tasks, such as writing lab reports and completing inquiry activities, so that all students can progress and achieve success.

Date	Title & Description	Topics Addressed	Immediate Application in the Classroom	What teachers should be able to demonstrate/identify after participating in the training
September	<p><b>Introducing TFA’s “Investigation Cycle” as a guide to planning a strong science curriculum</b></p> <p>In this session, we will go through all of the steps of the investigation cycle using a lesson on genetics.</p> <p>This session will set up the next 4 sessions which will focus on each individual part of the investigation cycle.</p> <p>This session is intended to introduce the structure and language of the investigation cycle and get teachers excited about trying</p>	<ul style="list-style-type: none"> <li>• See the investigation cycle in action and how it can facilitate deeper thinking and understanding for your students</li> <li>• A careful look at the investigation cycle and how it differs from the 5E lesson cycle or other planning templates</li> <li>• Best practices for presenting and teaching science content</li> <li>• Strategies that engage students in their learning</li> <li>• Strategies that help teachers develop strong content lessons</li> <li>• A common language/method for teaching</li> </ul>	<ul style="list-style-type: none"> <li>• Walk away with a unit plan/ lesson plan on genetics and sexual reproduction</li> <li>• Walk away with classroom strategies that you can immediately use in your classroom</li> <li>• Walk away with best practices for teaching science content (the investigation cycle)</li> <li>• Change of mindset around how to develop lessons and what areas to focus with students</li> <li>• Change from science that is presented to students in the form of a lecture to science where students are asked to “do” something so show their understanding.</li> </ul>	<ul style="list-style-type: none"> <li>• A new understanding of the investigation cycle and how to possibly use it or parts of it in their unit and lesson planning</li> <li>• Explicit planning of a big idea, a puzzling phenomenon, modeling and collecting evidence</li> <li>• Using language that pertains to modeling, building evidence and comprehension</li> <li>• Teachers are asking students to “do” science not just learn about it</li> </ul> <p><b>Tracking:</b></p> <ul style="list-style-type: none"> <li>• Do teachers have a different mindset about how they can plan their teaching of science?</li> <li>• Are teachers using the language of the investigation cycle, such as modeling, collecting evidence and phenomenon to identify</li> </ul>

	<p>this way of planning as well as start the change in mind-set about how to design lessons.</p>	<p>science that will be used throughout the sessions</p>		<p>where students are working in the investigation cycle loop?</p> <ul style="list-style-type: none"> <li>• Are teachers applying their lessons to the “Big Idea” or thinking about how a “Big Idea” would help to structure the learning?</li> </ul>
<p>October</p>	<p><b>How constructing the “Big Idea” guides teacher planning, engages students in their learning and supports the “Investigation Cycle”</b>  In this training we will be looking more closely on strategies to help teachers to construct the “Big Idea” as well as provide examples and how they were generated</p>	<ul style="list-style-type: none"> <li>• Research about why teachers need to invest in a “Big Idea”</li> <li>• Characteristics of “Big Ideas”</li> <li>• 4 concrete steps to develop solid Big Ideas for science</li> <li>• How to support “Big Ideas” with corresponding scientific phenomenon</li> </ul>	<ul style="list-style-type: none"> <li>• Walk away with concrete tips and strategies on how to construct big ideas and engage your students in their own learning</li> <li>• Start the process of developing your own “Big Idea” for a lesson or unit in content area</li> <li>• Walk away with 2-3 solid “Big Ideas” and corresponding puzzling phenomenon that are already developed that can be implemented into the year’s course curriculum</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher poses puzzling phenomenon, essential questions, or real world problem focused on the “Big Idea” for the next unit or lesson</li> <li>• Teachers create an engaging method of presenting a puzzling phenomenon that captures the attention of students</li> </ul> <p><b>Tracking:</b></p> <ul style="list-style-type: none"> <li>• Can teachers and students identify the “Big Idea” that is leading the learning?</li> <li>• Can students demonstrate understanding of the “Big Idea” through explaining the puzzling phenomenon?</li> <li>• Have teachers presented a puzzling scientific phenomenon to students in an engaging way that makes them curious about the content?</li> </ul>
<p>November</p>	<p><b>Looking at multiple ways to support students in collecting evidence</b>  This training looks at the structure of different levels of inquiry that could be implemented in the classroom. It also includes templates for planning and tips for scaffolding inquiry for students.</p>	<ul style="list-style-type: none"> <li>• The 4 levels of inquiry- guided to open</li> <li>• When to use each level of inquiry</li> <li>• How to incorporate a guided or open inquiry into curriculum</li> <li>• Tips for supporting inquiry in the classroom</li> <li>• How inquiry fits</li> </ul>	<ul style="list-style-type: none"> <li>• Walk away with templates for planning a solid guided or open inquiry</li> <li>• Walk away with inquiry lesson plans for life science, earth science and physical science</li> <li>• Strategies to tweak lessons to include more inquiry</li> <li>• Graphing rubric</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher sequences learning activities, including investigation, <u>through multiples modes of inquiry</u> and knowledge and skill building workshops.</li> <li>• Teachers are asking students to gather information and evidence about puzzling phenomenon</li> <li>• Teacher presents engaging inquiry/learning</li> </ul>

		<p>into the cycle of investigation</p> <ul style="list-style-type: none"> <li>• Scaffolding strategies for inquiry</li> <li>• Lab group support roles</li> </ul>		<p>activities</p> <p><b>Tracking</b></p> <ul style="list-style-type: none"> <li>• Are teachers asking student develop their own investigation and collect evidence to prove their thoughts on the reason for a particular question?</li> <li>• Are students analyzing data/evidence to support a conclusion?</li> <li>• Are students asked to build and apply science skills in order to develop greater understanding of concept?</li> <li>• Are teachers supporting students by asking questions and making checks at key points in the process of inquiry?</li> </ul>
December	<p><b>Why asking students to represent their thinking through models helps students making meaning of the content</b></p> <p>This training helps develop strategies on how to use modeling as part of the investigation cycle so that students can <u>explain and predict phenomena</u> and show their thinking throughout the process</p>	<ul style="list-style-type: none"> <li>• Identify different ways models are used in teaching science</li> <li>• How to use a modeling template to explain phenomenon associated with the “Big Idea”</li> <li>• 5 qualities of a strong models</li> </ul>	<ul style="list-style-type: none"> <li>• Walk away with examples of lessons that ask students to create a “visual representation/model” of their thinking</li> <li>• Walk away with a lesson/demo that teaches students about using and revising models to represent their thinking</li> <li>• Tips for incorporating models and revising models into you classroom</li> <li>• Different templates for supporting students in their development and revision of models</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher elicits ideas that students already have about the topic of study</li> <li>• Provides opportunity for students to make their thinking visible by writing, drawing or building visual representations of their ideas</li> <li>• Teacher ask students to make visual models for their thinking</li> <li>• Teachers ask students to defend models and make revisions based on evidence acquired</li> </ul> <p><b>Tracking:</b></p> <ul style="list-style-type: none"> <li>• Are teachers allowing time for students to represent their thinking in a visual way</li> <li>• Are teachers allowing time for students to revise models based on new information they collect</li> <li>• Are students engaging in argumentation based on evidence and revising models to</li> </ul>

				support their argumentation?
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# Science: Biology and Life Sciences

Biology and Life Science teachers foster students' **curiosity and creativity** within the classroom using all available tools to engage and inspire high school students in biology and the life sciences. Biology and Life Science teachers are **continuous learners** who work relentlessly to provide students with a transformational education by participating in valuable discussions and coaching in order to gain content knowledge, implement effective instructional strategies, and continuously **reflect and adapt instruction** to create a classroom environment where students are **inspired to learn and achieve** in science on the path to college and career readiness.

## Corps Member Goals:

1. create a solid, comprehensive and inspiring vision for the year that supports the work they do in the classroom
2. understand inquiry as an approach to teaching science and use it effectively in the classroom
3. create unit and lesson plans that support a rigorous and engaging curriculum
4. utilize the community often for feedback and reflection on unit plans, lesson plans, learning tools, student materials and assessments
5. share experiences, questions, challenges and successes teaching Biology in order to support reflection and growth
6. share best practices in teaching secondary science with an emphasis on empowering students to take ownership of their learning
7. feel confident, capable, resourceful and empowered to cultivate science student learning
8. **promote curiosity and creativity within the classroom using all available tools to engage and inspire high school students in biology and life sciences**

Date	Title and Description	Topics Addressed	Immediate Application in the Classroom
September	<p><b>Comparing Approaches to Hands-On Science: The Science Inquiry Framework</b></p> <p>Do you want to enable your students to perform scientific inquiry, but aren't sure where to start? In this VLE, we will explore the Inquiry Framework for teaching and doing science and will compare three different methods for teaching hands-on science using inquiry.</p>	<ul style="list-style-type: none"> <li>• Introduction to the Science Inquiry Framework.</li> <li>• Teachers will explore and compare three different hands-on methods of teaching science</li> <li>• Teachers will learn that various hands-on approaches can be quite different from each other and can support entirely different learning objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Teachers will be able to design and implement lessons following the Science Inquiry Framework</li> <li>• Students will engage in inquiry learning ranging from more teacher involvement to more student directed</li> </ul>
	<p><b>Introducing Inquiry - Constructing the Big Idea, Forming Initial Models,</b></p>	<ul style="list-style-type: none"> <li>• This VLE covers strategies for constructing big ideas in order to teach science lessons in the</li> </ul>	<ul style="list-style-type: none"> <li>• Teachers teach lessons in context by posing a puzzling phenomenon,</li> </ul>

<p>October</p>	<p><b>and Identifying Possible Misconceptions</b> Do you have trouble connecting your science lessons to the bigger picture? In this VLE, we will learn to construct overarching big ideas in order to ground science lessons in relevant and engaging real world problems. We will also discover how allowing students to form initial models to explain the Big Idea can help teachers identify and prevent misconceptions.</p>	<p>context of problems relevant and interesting to students</p> <ul style="list-style-type: none"> <li>• Creating Big ideas include puzzling phenomena, essential questions, or real world problems tied to the content being taught and offer context to student learning</li> <li>• Teachers will learn what it looks like for students to create initial models and will find value in these models for identifying misconceptions</li> </ul>	<p>essential question, or real world problem</p> <ul style="list-style-type: none"> <li>• Teachers elicit ideas students already have about the Big Idea</li> <li>• Students make their thinking visible through talking, writing, and drawing out their ideas.</li> <li>• Teachers identify misconceptions from student models and take steps to correct them</li> </ul>
<p>November</p>	<p><b>Process Skills for Inquiry</b> Certain process skills help students to think scientifically and successfully perform inquiry. As teachers, it is essential that we understand these process skills and how to foster their development in our students. In this VLE, teachers examine their own understanding of the process skills of science and share ways to help their students develop these skills.</p>	<ul style="list-style-type: none"> <li>• How to construct a more complete and accurate understanding of the process skills of science and the central role these skills play in the learning of science concepts.</li> <li>• This VLE will further teachers' abilities to identify the developmental levels of the process skills and to redesign science activities in ways that will promote students' continuing development of these skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Teachers will be able to identify student process skills levels</li> <li>• Teachers will design lessons which give increasing responsibility for inquiry to students</li> <li>• Students will be better supported to exercise their inquiry process skills during classroom activities</li> </ul>
<p>December</p>	<p><b>Subtle Shifts: Adapting Activities for Inquiry</b> Do you find that you are more responsible for the inquiry process skills in learning activities than your students? Would you to improve your students' ability to perform inquiry without reinventing your science labs and lessons? This VLE offers strategies to develop student inquiry</p>	<ul style="list-style-type: none"> <li>• To help learners develop the abilities to do scientific inquiry, teachers need to give students responsibility for using the process skills of science.</li> <li>• Teachers can make small shifts in existing activities to help learners strengthen the process skills needed for scientific inquiry.</li> <li>• Lessons can be modified in specific ways to achieve</li> </ul>	<ul style="list-style-type: none"> <li>• Students take more responsibility for the process skills needed to perform inquiry.</li> <li>• Teachers will successfully shift lessons towards increased inquiry with minor changes to existing lessons.</li> </ul>

	process skills by making subtle shifts to existing lessons.	particular purposes.	
January	<p><b>Project-Based Learning – Not the same as doing projects</b></p> <p>Have you heard of project-based learning, but aren't sure how to implement it in your own classroom? This VLE invites teachers to compare projects with PBL and explains easy ways to integrate PBL in your classroom with maximum benefits for students!</p>	<ul style="list-style-type: none"> <li>• Differentiate between a project and project-based learning.</li> <li>• Identify which components of the Science Investigation Cycle are used in a typical project vs. a PBL project.</li> <li>• Explain the components of an exemplar PBL project.</li> <li>• Explore how student-identified “Knows” and “Need to Knows” can drive instruction.</li> </ul>	<ul style="list-style-type: none"> <li>• Teachers create a Big Idea to drive instruction in their classroom in the form of a project</li> <li>• Students drive learning by identifying what they need to know to complete the project</li> <li>• Teachers facilitate learning and students participate in hands-on science</li> </ul>