Faculty Instructional Guide/Syllabus
EDU62340–Content Knowledge and Instructional Practice V: Math Pedagogy and 21st Century Approaches

University Mission Statement

Alliant International University prepares students for professional careers of service and leadership and promotes the discovery and application of knowledge to improve the lives of people in diverse cultures and communities around the world. Alliant is committed to excellence in four areas:

1. **Education for Professional Practice**: Alliant's educational programs are designed to give students the knowledge, skills and ethical values they need to serve and lead effectively in a variety of professional settings. Alliant graduates are expected to achieve mastery of a body of knowledge and be able to apply that knowledge in professional practice in order to achieve desired and beneficial outcomes.
2. **Scholarship**: Scholarship in the Alliant context includes the discovery of new knowledge; the discovery of new applications of knowledge to solve practical problems; the integration of knowledge in new ways; and innovation in teaching knowledge and professional competencies.
3. **Multicultural and International Competence**: Alliant is an inclusive institution committed to serving diverse populations around the world by preparing professionals to work effectively across cultural and national boundaries, by increasing the number of professionals working in underserved areas, and by understanding and responding to the needs of diverse communities.
4. **Community Engagement**: Alliant's faculty, students, alumni and staff are dedicated to making a positive difference in the world through professional education and practice. We measure the success of our university in part by the impact we have, both directly and indirectly, on the welfare of individuals, families, organizations and communities.

Teacher Education Program Objectives (PO)

- **PO1**: Integrate a research- and evidence-based theory of teaching and learning.
- **PO2:** Integrate multiple opportunities for teacher candidates to learn, apply, reflect and receive feedback on each Teaching Performance Expectations or applicable nationally recognized standards.
- **PO3:** Provide teacher candidates with multiple opportunities to learn through application of theory to practice through collaboration with school sites and master teachers.
- **PO4:** Assess teacher candidates progress towards mastering the Teaching Performance Expectations or applicable nationally recognized standards at multiple points.
- **PO5:** Provide teacher candidates with multiple formative opportunities to prepare for the Teaching Performance Assessment (TPA).
- **PO6:** Compile a professional development and growth plan for each teacher candidate.

The California School of Education (CSOE)

Alliant International University offers a full spectrum of credential, certificate and degree programs designed to address the educational needs of all learners in the 21st century, from infancy and entry into P-12 education system through adult life. Each program integrates significant, evidence-based, data-driven educational concepts into coursework, focusing on what is successful in education for diverse populations. The California School of

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Education's mission and vision statements reaffirm our values and commitment to collaboration, diversity, and service to candidates, shared leadership, and the continuous support of the education profession.

Mission: CSOE prepares competent, confident, and conscientious educational leaders who will promote and empower personal growth, academic success, and professional achievement for all in a global society.

Vision: To develop and promote transformative educational experiences that optimize human potential.

Goals: The California School of Education has a set of overarching goals that drive the direction of the School's programs and internal and external operations:

1. To provide the education and training of well-rounded professionals who will serve local, national and global schools and organizations.
2. To engage and partner with communities to translate professional practice and research to meet education needs.
3. To promote an academic culture of support to develop and apply transformative approaches to solve complex societal challenges.
4. To develop analytic skills and sound judgment as applied to content and professional issues.
5. To make warranted and thoughtful decisions about curriculum issues, student-related concerns and leadership that relate to the conduct of the school and the profession.
6. To provide professional educational opportunities for those who aspire to leadership in education settings.
7. To prepare candidates to meet the needs of all learners.

Unit Guiding Principles

CSOE's guiding principles are anchored in the belief that our mission is realized when our candidates are equipped with the skills to operationalize LEAD. LEAD stands for Leadership (L) Engagement (E) Application (A) and Dedication (D). As leaders, candidates demonstrate social responsibility, ethical action, and a commitment to be agents of change to improve the lives of their communities (L). We highlight for our candidates the value of authentic and collaborative engagement in advancing our communities (E). We train our candidates to be reflective professionals who incorporate theory into best practices; and utilize the knowledge, skills, dispositions, habits of inquiry, and technology that their preparation has honed (A). Courses and assignments are intentionally designed to engage experiences that promote the understanding of theories, concepts, principles, methodologies and approaches that candidates can readily utilize for practice. As candidates in both initial and advanced stages engage in observations, field experiences, and clinical practice, they provide service to their learners/clients, while simultaneously making instructional decisions that are grounded in educational research and/or theory (D).

L= Leadership: Innovation with Accountability
E= Engagement: Active Learning
A=Application: Theory to Practice
D=Dedication: Inclusive Excellence

Theoretical Framework

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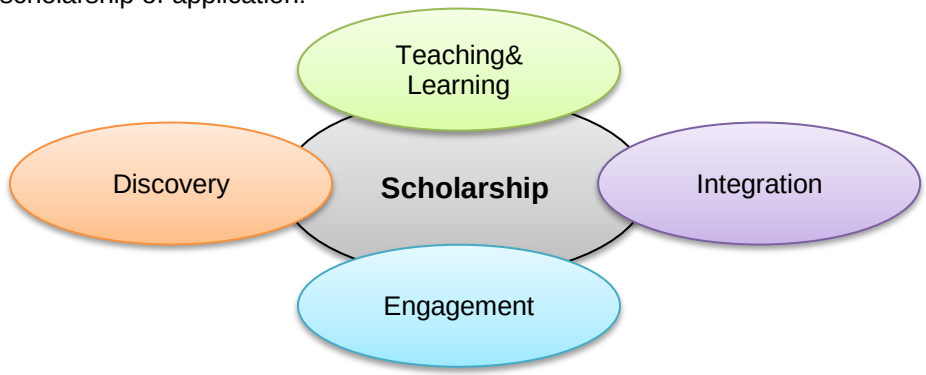
CSOE is based on two main theoretical frameworks: Boyer's applied scholarship of learning and constructivist theory.

CSOE utilizes Boyer's model of the scholarship of application:



Boyer (1990) asserted the need for all disciplines to move beyond traditional research to engage the full scope of academic work. He posits that in order to advance disciplines holistically and to obtain rewards for professional practice, research should encompass four critical areas:

Discovery - generating new and unique knowledge;
Teaching - Faculty and candidates creatively build bridges between their own understanding and their students' learning;
Application – Taking the new knowledge acquired and utilizing to solve society's problems; and
Integration – Using collaborative relationships to uncover new knowledge among disciplines (Boyer, 1990).

These four aspects of scholarship are of paramount importance to CSOE. Each of the four areas informs the guiding principles of LEAD for CSOE.

Scholarship of Discovery (L, E, A, D): We subscribe to the centrality of the need to advance inquiry that produces the disciplinary and professional knowledge that frames our candidate preparation and training (Boyer, 1990). We ensure that our candidates are prepared to foster an environment that supports inclusive excellence with the commitment and understanding necessary to be responsive to all learners (D). Candidates acquire the ability to collaborate successfully (E) with parents, families, school districts, community members, faculty and staff in order to gain and maintain this disposition.

Scholarship of Teaching (L, E, A, D): CSOE subscribes to Boyer's model that underscores the notion of the scholarship of teaching as inquiry that produces knowledge to facilitate the transfer of the science and art of teaching, counseling and leadership from expert to novice. Thus we are very intentional in stewarding our mentoring relationships between faculty, school district master teachers, school site supervisors and our advisory boards. We view these relationships as critical to the transfer of teaching knowledge.

Scholarship of Professional Practice (A): Professional practice in CSOE is comprised of all aspects of the delivery of education, counseling, and leadership. Competence in practice is determined in school setting practicums and internships. Professional Practice is also the mechanism through which CSOE provides the environment and skills by which knowledge in the profession is both advanced and applied. In this segment, we also include the mentoring of candidates and leadership roles in developing practice. In all of the above, we highlight the scholarship generated through practice.

Our Faculty and candidate professional certifications, degrees, and credentials and other specialty credentials demonstrate CSOE's attainments in this sphere.

Scholarship of Integration (L, E, A): In this sphere, faculty and candidates engage in the review and analysis of education policy, integrative models across disciplines, literature review and use all these to develop transdisciplinary educational programs and projects. Further, CSOE faculty are active and present at national and international conferences, serve on the leadership of professional organizations and contribute to journal articles. These are examples of how CSOE demonstrates the scholarship of integration. The guiding principles and candidate competencies are framed with the understanding that effective learning environments are social and collaborative in nature (Vygotsky, 1978).

The second theoretical underpinning for CSOE is constructivism. We concur with the assertion that our candidates and their students are active makers of meaning, rather than passive absorbers of knowledge (Dewey, 1944; Vygotsky, 1962; Brosio, 2000).

We expect our candidates to engage social constructivism by utilizing existing knowledge, interests, attitudes, and goals to select and interpret available information. Our faculty recognize the insider knowledge our candidates' bring to our courses and provide the environment for them to utilize their uniquely personal knowledge to create meaning as they integrate these knowledge bases with their diverse cultural, ethnic, social, and economic circumstances through analysis, reflection, and research.

We model a humanistic learning environment that encourages critical inquiry to connect learners with one another (Rodgers, 2002; Greene, 2000; Palmer, 1998; Sergiovanni, 1999). Faculty members create caring environments where candidates are encouraged and supported to reach beyond themselves and to engage various points of view, diversity of ideas and practices.

National Interstate New Teacher Assessment and Support Consortium (InTASC) Standards

- **Standard 1**: Learner Development
- **Standard 2**: Learning Differences
- **Standard 3**: Learning Environments
- **Standard 4**: Content Knowledge
- **Standard 5**: Application of Content
- **Standard 6**: Assessment
- **Standard 7**: Planning for Instruction
- **Standard 8**: Instructional Strategies
- **Standard 9**: Professional Learning and Ethical Practices
- **Standard 10**: Leadership and Collaboration

Retrieved from https://ccsso.org/sites/default/files/2017-12/2013_INTASC_Learning_Progressions_for_Teachers.pdf

International Society for Technology in Education (ISTE) Standards for Teachers

- **Standard 1**: Facilitate and inspire student learning and creativity
- **Standard 2**: Design and develop digital age learning experiences and assessments
- **Standard 3**: Model digital age work and learning
- **Standard 4**: Promote and model digital citizenship and responsibility
- **Standard 5**: Engage in professional growth and leadership

Retrieved from https://id.iste.org/docs/pdfs/20-14_ISTE_Standards-T_PDF.pdf

California Teaching Performance Expectations (TPEs)

- **TPE 1**: Engaging and Supporting All Students in Learning
- **TPE 2**: Creating and Maintaining Effective Environments for Student Learning
- **TPE 3**: Understanding and Organizing Subject Matter for Student Learning
- **TPE 4**: Planning Instruction and Designing Learning Experiences for All Students
- **TPE 5**: Assessing Student Learning
- **TPE 6**: Developing as a Professional Educator

Retrieved from https: https://www.ctc.ca.gov/docs/default-source/educator-prep/standards/education-specialist-standards-pdf.pdf?sfvrsn=729750b1_26

Course Description

This course will provide the construct for how K-12 students think about and learn mathematics. You will explore research-based mathematics pedagogy which develop students' ability to think critically and demonstrate computational thinking and problem-solving skills in math. Developmentally appropriate strategies and supports for designing instruction for all learners to provide access and equity in your math practice will be analyzed. You will learn how to effectively integrate technology and content standards across the curriculum to support students' conceptual understanding and procedural fluency in mathematics.

Professional Standards Alignment

California School of Education (CSOE)				
CLO	Program Outcome	InTASC	ISTE	TPE's
CLO1: Determine how to strategically apply the Standards for Mathematical Practice.	PO1	Standards 4 & 5	Standard 2	TPE3
CLO2: Analyze the role and function of technology in designing math instruction based on Universal Design for Learning principles and Technology Integration Frameworks.	PO1	Standards 7 & 8	Standard 2	TPE4

CLO3: Evaluate how math instruction is facilitated, and students acquire mathematical knowledge in relation to the Standards for Mathematical practice.	PO1	Standards 4 & 5	Standard 2	TPE3
CLO4: Integrate the principles of differentiation and UDL to promote student conceptual understanding of mathematical concepts in lesson planning.	PO1	Standards 7 & 8	Standard 2	TPE4
CLO5: Integrate mathematics standards across the content areas including ELD and ELA standards with a focus on academic language, and differentiation for diverse classroom learners including students with exceptionalities and English Language learners in lesson planning.	PO1	Standards 7 & 8	Standard 2	TPE4

Student Expectations

Respectful Speech and Actions: As an institution of higher education, Alliant International University has the obligation to combat racism, sexism, and other forms of bias and to provide an equal educational opportunity. Professional codes of ethics and the academic code shall be the guiding principles in dealing with speech or actions that, when considered objectively, are abusive and insulting.

Professional Behavior: This program is a graduate-level professional program, and each member of the program, both students and faculty, are expected to engage in professional behavior and conduct. Students should always display empathy, self-control, friendliness, generosity, cooperation, helpfulness, and respect in all of their interactions with other students, staff, and faculty. Students will strive to exemplify professional behavior in all aspects of their participation in this program, to be on time in all engagements, to thoughtfully and diligently complete activities and assignments, and to treat all other program members with respect and dignity.

Required Course Materials

Dickenson, P., & Coddington L. (2019). *Teaching outside the box: Technology infused math instruction*. Dubuque, IA: Kendall Hunt Publishing.

ISBN: 9781524970321

Note. The electronic version of this book is only available for purchase from the publisher: https://he.kendallhunt.com/product/teaching-outside-box-technology-infused-math-instruction.

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). Washington, DC.

ISBN: 9781433832161

Common Core Math Quick Links: http://commoncore.tcoe.org/math/math-quicklinks

CA Department of Education: CA Common Core State Standards for English Language Arts and Literacy in History/Social Sciences, Sciences, and Technical Subjects: http://www.cde.ca.gov/be/st/ss/documents/finalelaccssstandards.pdf

CA Department of Education: CA Common Core State Standards for Mathematics: http://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf

CA Department of Education: K12 Specific Content Areas--Standards and Frameworks: http://www.cde.ca.gov/be/st/

CA Department of Education: CCSS Resources: http://www.cde.ca.gov/re/cc/

Common Core State Standards Initiatives: Mathematics Practice Standards: http://www.corestandards.org/Math/Practice/

Achieve the Core: Progressions Documents for the Common Core State Standards for Mathematics: http://achievethecore.org/page/254/progressions-documents-for-the-common-core-state-standards-for-mathematics-detail-pg

Stanford Graduate School of Education: Understanding Language: Supporting ELL's in Mathematics: http://ell.stanford.edu/teaching_resources/math

The University of Arizona: Institute for Mathematics and Education Progressions Documents for the Common Core Math Standards: http://ime.math.arizona.edu/progressions/

Instructor Policies

Late Assignments
Late assignments submitted after the assigned due date are subject to a grade of zero or point deductions. Assignments will receive a 10% deduction each day until the 3rd day, then the assignment will receive a grade of zero. Be sure to stay in constant communication with your course instructor, review assignments at the beginning and throughout the course, in addition to asking clarifying questions prior to the week(s) of the assignment to minimize point deductions.

The submission of duplicate or previously submitted assignments will result in a grade of zero.

Further supports and directions will be provided within the Course Announcements on Canvas, you are responsible for checking the course announcements on a regular basis.

Feedback
Each week, I will provide grades/scores and comments on assignments within 4 days of the last day of the week unless I notify you otherwise.

Syllabus/Schedule
This syllabus does not constitute a contract between the instructor and the students in the course. While every effort will be made to present the material as described the instructor retains the right to alter the syllabus for any reason at any time. When such changes are made every effort will be made to provide students with both adequate notification of the changes and to provide them with sufficient time to meet any changes in the course requirements. The weekly schedule for this course may be viewed online.

University Administrative Policies & Student Resources

You are held responsible for understanding and adhering to all policies contained within the University's Catalog located at http://catalog.alliant.edu. However, some of those policies have been selected to be highlighted in this document.

Academic Code of Conduct and Ethics
The University is committed to principles of scholastic honesty. Its members are expected to abide by ethical standards both in their conduct and in their exercise of responsibility towards other members of the community. Each student's conduct is expected to be in accordance with the standards of the University. The complete Academic Code, which covers acts of misconduct including assistance during examination, fabrication of da ta, plagiarism, unauthorized collaboration, and assisting other students in acts of misconduct, among others, may be found in the University Catalog.

An act of plagiarism (defined in the University catalog as "Any passing off of another's ideas, words, or work as one's own") is considered to be a violation of the *University's Student Code of Conduct and Ethics: Academic* and will be addressed using the Policies and Procedures outlined in the University's Catalog located at http://catalog.alliant.edu. The instructor in this course reserves the right to use computerized detection systems to help prevent plagiarism.

Disability Accommodations Request
The University provides reasonable access to facilities and services and to programs for which students are otherwise qualified without unlawful discrimination based upon qualified disability. The University will provide reasonable accommodations to individuals who currently have a disabling condition, either physical or mental, that is severe enough to substantially limit a major life activity.

Students with disabilities may obtain details about applying for services from the Office of Accessibility at each campus. Students must provide documentation from a qualified professional to establish their disability, along with suggested reasonable and necessary accommodations. Students should request accommodations at the start of each semester. For more information, visit the Office of Accessibility Services at your campus or go to http://www.alliant.edu/about-alliant/consumer-information-heoa/disability-services/index.php.

Policy on Religious/Cultural/Spiritual Observance by Students, Staff and Faculty
In keeping with the institution's commitment to respect and affirm cultural, religious, and spiritual diversity, the University supports the rights of students, staff, and faculty to observe religious/cultural/spiritual obligations that conflict with the University's schedule. Faculty instructors and staff/administrative supervisory personnel are expected to make reasonable accommodations when a student or an employee is absent from class or work because of religious/cultural/spiritual observance.

Attendance
If you miss more than the allowed absences in a course in consecutive or non-consecutive weeks, you may be withdrawn from the course and not eligible to earn a grade. Sending assignments to me by email, fax, mail or other means does not make up for missed attendance and I cannot excuse absences.

Length of Course	Absences Allowed	Absences Resulting in Drop
1-4 weeks	0	1
5-9 weeks	1	2

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10+ weeks 2 3

Note. Academically related activities are used to calculate a student's official last date of attendance with the institution. To be in attendance for the week, you must submit a graded assignment. An "assignment" is defined as anything that is worth points in the course and can include Discussion and Engagement posts.

Technology Requirements and Support
Canvas Technical Support is available by calling 1-844-527-0334, or by using the Live Chat option. Answers to the most common issues are found in the Canvas Guides which are accessible by clicking Help link located in the bottom left-hand side of the canvas course Web Page.

Course Overview

RISE Model for Online Discussions

The Discussions in this course are designed for us all to learn from each other, and to explore diverse viewpoints. I want you to think very critically about the important issues in our course, and to challenge me and your classmates to develop and substantiate our opinions. Or, you may even get us to change our opinions, which is okay, too! We are all here to learn from each other.

Each week you will participate in the Discussions at least three times.

1. Respond to the initial question. Your response must be substantive, and reflect not only your own experience and opinion, but also cite expert opinions, either from our course readings or other cited sources.
2. Comment, question, or debate a classmate's response. However you respond, you must meet the standards of the RISE model. Responses that do not adhere to the RISE model earn 0 points.
3. Answer or comment further on a question to your original response.

You may contribute to the Discussion as freely and frequently as you wish, but three entries each week are a minimum.

Signature Assignment: Lesson Plan Series

Design instruction for the math content standard you will unpack in Week One. The instruction you design should be a lesson series of two or more lesson plans that will develop student mastery of the standard.

Refer to the Learning Progressions Part II assignment from Week 4 and the resources provided for that assignment to help you design your instruction.

Ensure your design is based on developmentally appropriate strategies and practices introduced each week of this course.

Utilize the CSOE Lesson Plan Template to create your lesson plan.

Review the CSOE Lesson Plan Instructions document for detailed instructions on how to complete the template.

Note. In Week 7 of our course you will teach one math strategy from your lesson plans.

Submit your completed Lesson Plans by Sunday of Week 6.

Signature Assignment Rubric

	Exceeds Requirements 100%	Meets Requirements 88%	Approaches Requirements 75%	Below Requirements 68%

Opening 10 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students.	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation.
Intro to New Material 20 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students.	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation.
Guided Practice 30 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students.	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation.
Independent Practice 30 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students.	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation.
Closing & Homework	Timing is realistic; Clearly describes action of teacher	Timing needs to be broken down into smaller time chunks; Clearly	Clearly describes action of teacher and student; Strategies are not	More details needed to understand what is happening at

20 points	and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for Diverse students; Clearly states whether homework will be assigned or not; Clear progression from lesson described; Realistic and age appropriate.	describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students; Clearly states whether homework will be assigned or not; Clear progression from lesson described.	clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students; Clearly states whether homework will be assigned or not; Unclear of the connection between lesson and homework.	each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation; Does not explain whether or not homework will be assigned.
		Meets Requirements 100%	**Approaches Requirements 75%**	**Below Requirements 68%**
Context 5 points	[redacted]	Provides context to the lesson plan describing the grade, content and class setting.	More details needed to understand the class setting.	Does not provide a context to lesson plan.
Application of Theory 10 points		Clearly describes with clear and specific language how theory is applied in the lesson.	Adequately describes how theory is applied in the lesson.	Cursory description of how theory is applied in the lesson.
Objective 5 points		Clear, specific, measurable and achievable objectives; Written in student friendly language; Aligned to ISTE, State or common core standards; Related to lesson.	More specificity needed; Loosely aligned to ISTE, State or common core standards Seems unachievable in one lesson; Wordy or vague.	Objectives are not aligned to ISTE, State or common core standards; Objective is not related to lesson described.
Assessment 15 points		Clearly indicates the way(s) student progress will be monitored during and after lesson.	More specific details needed to understand how student progress will be monitored.	Does not describe a method of how students will be monitored.
ISTE, State or Common Core, & TPE Standards 15 points		Identified standards for the correct grade and content area; Standards related to lesson described.	Connection between standards and lesson is unclear.	Does not provide the correct standards for the grade and content area.
Differentiation 15 points		Teaching mode is varied: verbal, visual, and practical. Tasks are designed to support varied intelligence preferences. Allows students to show what they know in different ways.	Teaching mode contains two of the following: verbal, visual, and practical. Tasks are designed to support two or less intelligence preferences. Allows students to	Teaching mode is not varied. Tasks are designed for one type of learner. Does not allow students to show what they know in different ways.

			show what they know in different ways.	
Diverse Learners (Mixed Abilities) 15 points		Instruction supports a diversity of learners including students with disabilities, English learners, advanced learners, and at-risk students. Strategies identified are specific for each type of learner.	Instruction supports only three of the following learners: students with disabilities, English learners, advanced learners, and at-risk students. Strategies identified are appropriate for that type of learner.	Instruction supports less than three of the following learners: students with disabilities, English learners, advanced learners, and at-risk students. Strategies identified are not specific for each type of learner.
Classroom Management 10 points		Clearly explains how you will welcome all students, use routines and procedures to maximize student engagement, and foster independent and collaborative learning. Principles of positive behavior intervention and support processes are used effectively to maintain a supportive and safe learning environment. Clearly explains how you will establish a climate of learning.	Adequately explains how you will welcome all students, use routines and procedures to maximize student engagement, and foster independent and collaborative learning. Principles of positive behavior intervention and support processes are used adequately to maintain a supportive and safe learning environment. Adequately explains how you will establish a climate of learning.	Explanation for how you will welcome all students, use routines and procedures to maximize student engagement, and foster independent and collaborative learning is vague. Principles of positive behavior intervention and support processes are not used to maintain a supportive and safe learning environment. Explanation for how you will establish a climate of learning is vague.
Materials 5 points		Thorough list of materials required for the lesson described; Includes quantities and any prep required.	Some keys items described in lesson are listed.	Does not provide a list of materials for lesson.
References 5 points		The student has thoroughly researched the strategies used and provides a comprehensive reference section with minimal to no errors.	The student has researched the strategies, may cite sources in the lesson plan, provides a general reference section.	Limited evidence that the student has researched beyond the textbook, few or no sources are cited in the lesson plan.
PO1: Integrate a research- and evidence-based theory of teaching and learning.	This level is achieved if the student earns a 93% or higher on the assessment.	This level is achieved if the student earns between 92% and 80% on the assessment.	This level is achieved if the student earns between 79% and 73% on the assessment.	This level is achieved if the student earns a 72% or less on the assessment.
Specialty Standards: Teacher Performance Expectations (TPEs)				
TPE3: Understanding and Organizing Subject	This level is achieved if the student earns a 93% or higher on the assessment.	This level is achieved if the student earns between 92% and 80% on the assessment.	This level is achieved if the student earns between 79% and 73% on the assessment.	This level is achieved if the student earns a 72% or less on the assessment.

Matter for Student Learning *(InTASC Standards 4 & 5)*				
TPE4: Planning Instruction and Designing Learning Experiences for All Students *(InTASC Standards 7 & 8)*	This level is achieved if the student earns a 93% or higher on the assessment.	This level is achieved if the student earns between 92% and 80% on the assessment.	This level is achieved if the student earns between 79% and 73% on the assessment.	This level is achieved if the student earns a 72% or less on the assessment.

Course Grading

Grading is in accordance with the academic policies of Alliant International University.

Percentage	Letter Grade
94-100	A
90-93	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
61-63	D-
< 61%	F

Final grades will be determined as follows based on the points obtained in the following categories:

Assignment Categories	% of Grade
Discussion	20
Skill Activity	15
Learning Progressions	20
Field Work	15
Signature Assignment	30

Course Assessments

Assessment	Due	Assignment Category	Point Value
Week 1			
Discussion: Experiences Learning Math		Discussion	40
Assignment: Unpacking the Math Standards		Learning Progressions	20
Assignment: Math All Around Us Presentation		Skill Activity	25
Week 2			
Discussion: Role of Learning Progressions		Discussion	40
Assignment: Learning Progressions Part I		Learning Progressions	30
Assignment: Skill Lesson		Skill Activity	25

Week 3		
Discussion: Connections Across the Grades	Discussion	40
Discussion: Student Solutions	Discussion	40
Assignment: Number Talk	Skill Activity	25
Week 4		
Discussion: Number Talk Share	Discussion	40
Assignment: Blended Learning Programs Evaluation	Skill Activity	25
Assignment: Learning Progressions Part II	Learning Progressions	40
Week 5		
Discussion: Open-Ended Math Task	Discussion	40
Assignment: Field Work–Observation	Field Work	40
Assignment: Three-Tiered Activity	Skill Activity	25
Week 6		
Discussion: Three-Tiered Activity	Discussion	40
Discussion: Math Literacy	Discussion	40
Assignment: Lesson Plan Series	Signature Assignment	200
Week 7		
Discussion: Supporting the ELL Standards in Math	Discussion	40
Assignment: Teach Your Math Strategy	Skill Activity	25
Assignment: Digital Lesson Plan	Skill Activity	25
Week 8		
Discussion: Reflection on Teaching Experience	Discussion	40
Discussion: Vision of Math Classroom	Discussion	40
Assignment: Interview a Teacher	Field Work	30
Assignment: Digital Assessment	Skill Activity	25
Total Points		**1000**

***Note**. Late assignments submitted after the assigned due date are subject to a grade of zero or point deductions. Assignments will receive a 10% deduction each day until the 3rd day, then the assignment will receive a grade of zero. Be sure to stay in constant communication with your course instructor, review assignments at the beginning and throughout the course, in addition to asking clarifying questions prior to the week(s) of the assignment to minimize point deductions.

The submission of duplicate or previously submitted assignments will result in a grade of zero.

Further supports and directions will be provided within the Course Announcements on Canvas, you are responsible for checking the course announcements on a regular basis.

Week 1: Math in Today's Classrooms

Learning Objectives

1.1 Interpret a Common Core math standard.	CLO1
1.2 Analyze the role of growth mindset in learning mathematics.	CLO1
1.3 Determine the relationship between math and our lives to form connections between math concepts and the content standards.	CLO1

Activities and Resources

Readings	1.1, 1.2, 1.3

Teaching Outside the Box

- Ch. 1: The Case for Technology in the Mathematics Classroom
- Ch. 2: The Foundations and Principles of CCSS

Online Resources

Key Shifts in Mathematics from the Common Core State Standards Initiative.

California Common Core State Standards Mathematics Electronic Edition adopted by the California State Board of Education August 2010 and modified January 2013.

Anderson, R. K., Boaler, J., & Dieckmann, J. A. (2018). Achieving Elusive Teacher Change through Challenging Myths about Learning: A Blended Approach. *Education Sciences*, 8.

Stanford University Medical Center. (2018, January 24). Positive attitude toward math predicts math achievement in kids. *ScienceDaily*.

YouTube

View the following videos:

- "Jo Boaler Low Floor High Ceiling" [20:38]
- "How to Unpack a Math Standard" [5:57]

Preparation: Learning Progressions Group Project Part I	1.1, 1.2, 1.3

". . .the California Common Core State Standards Mathematics (CA CCSSM) are organized by grade level and then by domains (clusters of standards that address "big ideas" and support connections of topics across the grades), clusters (groups of related standards inside domains), and finally by the standards (what students should understand and be able to do)." CA CCSSM Electronic Edition, pp. 3.

This assignment is split into two parts. In Part I, due Week 2, you will be unpacking a cluster of standards; in Part II, due Week 4, you will be building a toolkit of activities and technologies. The goal of this assignment is to provide you with an opportunity to understand how the clusters within a domain progress across the K-12 grade span and to build a repository of resources that supports instruction.

Unpack a cluster within the math domain assigned to your group. For example, if you are assigned the Geometry domain you might unpack the 'reason with shapes and their attributes' cluster:

- K.G.A.2
- 1.G.A.2
- 2.G.A.2
- 3.G.A.2
- 4.G.A.2

Provide the following for each standard:

- Visual images for each standard to demonstrate how the concept develops across the grade span.
- Audio or text narration, in the notes section, to expand upon ways to connect concepts from previous grade levels.

Include a minimum of two references such as the Achieve the Core documents and the CACCSSM.

Schedule a time to meet with your group to:

- Determine which standards you will unpack within a cluster.
- Identify which standard each group member will be responsible for unpacking.

Utilize the Learning Progressions Assignment template to complete this assignment. Refer the Learning Progressions Assignment Example presentation for a sample.

Note. Your group assignment will be posted by your course instructor in the Announcements by Thursday of this week. It may be beneficial to use Google Drive to collaborate on this assignment. One person can upload the template to Google Drive and then share a link to the file with everyone in the group.

Prepare to submit Part I at the end of Week 2.

Faculty Notes.

Assign heterogenous groups of at least four across the grade span for Week Two's assignment of Standard Progressions.

Determine the number of groups and the learning progression they will work on based on the number of students in the course and their grade level. Students will share their content area and grade level in the Experiences Learning Math discussion forum in Week 1.

Consider the following domain suggestions:

- Group 1: Counting and Cardinality (K), Number and Operations in Base Ten (K-5), Ratio & Proportional Thinking (6-7)
- Group 2: Number and Operations Fractions (3-5), The Number System (6-7), Number and Quantity (HS)
- Group 3: Operations and Algebraic Thinking (K-5), Expressions and Equations (6-8), Algebra (HS)
- Group 4: Geometry (K-12)
- Group 5: Measurement and Data (K-5), Statistics and Probability (6-12)
- Group 6: Operations and Algebraic Thinking (K-5), Expression and Equations (6-8), Functions (HS)

Recommend that each group assign the following roles to keep the group work on track:

- **Facilitator**: Ensures the group stays on task and is focused
- **Process Analyst**: Ensures everyone is in the conversation and guides consensus building
- **Recorder**: Keeps a record of decisions and task assignments
- **Quality Control**: Checks work before assignment is finalized for submission

Post the domains and groups members by Thursday.

Create the groups in Canvas, once they are identified, so students can coordinate schedules:

- Groups Overview: https://community.canvaslms.com/videos/1113-groups-overview-instructors
- Canvas table of contents for guides about groups: https://community.canvaslms.com/docs/DOC-10460-canvas-instructor-guide-table-of-contents#jive_content_id_Groups

Consider tying the groups to Week 2 and 4 assignments so that you can grade everyone in the group at once, instead of one at a time. The links above provide information on how to set this up in Canvas.

Assignments

Discussion: Experiences Learning Math	1.2

Respond to the following prompts in the Experiences Learning Math discussion forum by Wednesday:

- Introduce yourself to the class: What content area and grade level(s) you will teach? Why you chose that area of education?
- What was your experience as a student learning math?
- How do you feel your past experiences shape your attitude and belief about learning math?
- In looking back, how did the mindset, i.e. approach to teaching math and assessment, of your instructor impact your ability to learn math?

Reply to two classmate's posts, applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Assignment: Unpacking the Math Standards	1.1

Select one of the math standards for a grade level you would like to teach.

Unpack your selected standard using the Template for Unpacking the Standard.

Write a brief response to the following in the reflection section of the template:

- How would you integrate technology to support diverse class learners?
- Would you be able to teach this standard in one lesson? Provide rationale.
- Based on the articles and resources from this week's readings, how would you approach teaching this standard? Provide rationale for your approach.

Ensure you include intext citations and references to support your rationale.

Format your reflection consistent with APA style guidelines.

Submit the completed template by Sunday.

Assignment: Math All Around Us Presentation	1.3

Create a slide show of at least 10 photos where you see math all around you. For example, a picture of a bookshelf or windowpane could be used to associate a multiplication array of two rows and three columns (2x3).

Utilize Google Slides or PowerPoint to share your photos.

Ensure you identify the following for each photo:

- How you might connect the photo to the math in students' lives.
- The corresponding Common Core math standard your photo represents.

Refer to the Math All Around Us_MakingMathConnections for a sample presentation.

Submit your slide show as a file or a link by Sunday.

Week 2: Math Content Knowledge and Connections

Learning Objectives

2.1 Analyze how math concepts are connected and developed across the grade span.	CLO1, CLO3
2.2 Explain the importance of teacher content knowledge in mathematics and how mathematics knowledge is acquired.	CLO1, CLO3
2.3 Apply the principles of Universal Design for Learning and the Concrete Representational Abstract model.	CLO4

Activities and Resources

Readings	2.1, 2.2, 2.3
Teaching Outside the Box **Review** Ch. 2: The Foundations and Principles of CCSS **Read** Ch. 3: Understanding Design	
Online Resources Progressions Documents for the Common Core State Standards for Mathematics from Achieve the Core. Concrete-Representational-Abstract Instructional Approach from The Access Center: Improving Outcomes for All Students K-8. Concrete – Representational – Abstract: An Instructional Strategy for Math from Learning Disabilities Association of Ontario. **View** the "Graham Fletcher Progressions" video series. This is a series of five videos that total about 36 minutes: • The Progression of Early Number & Counting • The Progression of Addition and Subtraction • The Progression of Multiplication • The Progression of Division • The Progression of Fractions Meaning Equivalence & Compression	

Listen to the "Making Math Relevant with Dr. Natalie Pough" podcast from Teacher Prep Tech.

Assignments

Discussion: Role of Learning Progressions	2.1, 2.2

Review the Graham Fletcher videos and the documents available for download on Achieve the Core from this week's readings.

Locate the math domain you are working on in your group project in the Accessing Core Curriculum Units through the SFUSD Math Portals from the San Francisco Unified School District (SFUSD) Mathematics Department.

Respond to the following prompts in the Role of Learning Progressions discussion forum by Wednesday:

- How does SFUSD articulate the standards within your selected domain across the grade span?
- How do you see SFUSD designing instruction for all learners?
- What is the role of the learning progression in the application of designing instruction?
- How is technology being used to support students in developing understanding of concepts and fluency of mathematics procedures?

Reply to two classmate's posts, applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Assignment: Learning Progressions Part I	2.1, 2.2

". . .the California Common Core State Standards Mathematics (CA CCSSM) are organized by grade level and then by domains (clusters of standards that address "big ideas" and support connections of topics across the grades), clusters (groups of related standards inside domains), and finally by the standards (what students should understand and be able to do)." CA CCSSM Electronic Edition, pp. 3.

This assignment is split into two parts. In Part I you will be unpacking a cluster of standards; in Part II you will be building a toolkit of activities and technologies. The goal of this assignment is to provide you with an opportunity to understand how the clusters within a domain progress across the K-12 grade span and to build a repository of resources that supports instruction.

Unpack a cluster within the math domain assigned to your group. For example, if you are assigned the Geometry domain you might unpack the 'reason with shapes and their attributes' cluster:

- K.G.A.2

- 1.G.A.2
- 2.G.A.2
- 3.G.A.2
- 4.G.A.2

Recall from Week 1 that unpacking a standard includes identifying the following:

- Goal
- Conceptual Knowledge
- Procedural Fluency
- Essential Question
- Prior Knowledge
- Common misconceptions or errors

Provide the following for each standard:

- Visual images for each standard to demonstrate how the concept develops across the grade span.
- Audio or text narration, in the notes section, to expand upon ways to connect concepts from previous grade levels.

Utilize the Learning Progressions Assignment template to complete this assignment. Refer the Learning Progressions Assignment Example presentation for a sample.

Include a minimum of two references such as the Achieve the Core documents and the CACCSSM.

Note. You should have meet with your group already to determine which standards everyone will unpack.

Consider meeting with your group to ensure everyone's work is correctly placed into one file for submission.

Submit Part I by Sunday.

Assignment: Skill Lesson	2.3

Select one skill within a math content standard.

Create a flipped video, no longer than five minutes, demonstrating how to solve a problem with either concrete or virtual manipulatives.

View the following as examples for your video:

- "Division with Virtual Manipulatives" [5:00]
- "Division strategies: Concrete Representational" [3:02]
- "Part 1: Division with Egg Cartons: Beginning Division" [3:18]

Write a 200-to 300-word reflection sharing what you learned about this strategy. Consider how this approach would support all learners in developing conceptual understanding and proficiency in mathematics.

Cite evidence from our course readings.

Submit a link to your video and your reflection as a Word document by Sunday.

Week 3: Developing Daily Routines for Computational Fluency

Learning Objectives

3.1 Analyze how math knowledge builds and connects to prior knowledge.	CLO1, CLO3
3.2 Analyze various strategies that support computational fluency based on common core math standards.	CLO1, CLO3

Activities and Resources

Readings	3.1, 3.2
Teaching Outside the Box Ch. 4: Developing Daily Routines in Your Mathematics Practice	
Alliant Library Codding, R. S., Burns, M. K., & Lukito, G. (2011). Meta-Analysis of Mathematic Basic-Fact Fluency Interventions: A Component Analysis. *Learning Disabilities Research & Practice (Wiley-Blackwell)*, 26(1), 36–47. https://doi.org/10.1111/j.1540-5826.2010.00323.x	
Online Resources Tech Tools from TeacherPrepTech.com **View** the "Five Principles of Extraordinary Math Teaching | Dan Finkel | TEDxRainier" video [14:41] from YouTube. Number Talk Images hosted by Weebly. Number Strings created by Kara Imm and Rachel Lambert. 5 Fun Ways to Go Digital with Number Talks from Teacher Prep Tech. **Listen** to the "Fact Fluency & Running Records with Ann Elise Record" podcast from Teacher Prep Tech.	
YouTube **View** the following videos on Number Talk:	

- "First Grade Number Talks Example" [3:05]
- "6th Grade Math- Number Talk- Curtin" [14:45]
- "3rd Grade Number Talks - 95th Street" [13:55]
- "Number Talks in Grade 8" [5:35]

Preparation: Blended Learning Programs Evaluation	3.1, 3.2

Select two blended learning programs to evaluate from the list of blended learning programs in the Google Sheet on the Tech Tools webpage from TeacherPrepTech.com.

Determine the following in your evaluation:

- If the programs meet the needs of all learners, including students with exceptionalities and English language learners.
- The benefits and limitations of the program in connection to the UDL principles.
- The benefits and limitations of the program in connection to the CRA Model.

Write a five-to seven-page report evaluating the two programs.

Include a minimum of three in-text citations from the resources provided in the course.

Format your paper consistent with APA style guidelines.

Note. The evaluation will be due in Week 4.

Assignments

Discussion: Connections Across the Grades	3.1, 3.2

Respond to the following prompts in the Connections Across the Grades discussion forum by Wednesday:

- Share a link to the Learning Progressions Part I assignment you created with your colleagues in Week 2.
- What did you learn about how math content knowledge is developed across the grade span?
- What role might technology play in supporting students to develop conceptual understanding and procedural fluency?

Include references to course readings and articles in your response.

Reply to two classmate's posts, applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.
Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Discussion: Student Solutions	3.2

Respond to the following prompts in the Student Solutions discussion forum by Friday:

- After viewing the videos on Number Talk, what did you observe about the structure of a number talk?
- What is the role of the student in a number talk? The teacher?
- How does the number talk support students in developing computational fluency?
- How does the number talk encourage positive math talk? How does it support differentiated instruction?

Reply to two classmate's posts, applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Assignment: Number Talk	3.1, 3.2

Select a number talk for a grade level you would like to teach.

Complete the number talk planning guide from page 80 of *Teaching Outside the Box*.

Use either Padlet, Flip Grid or Google Jamboard to create a digital representation of your number talk.

Note. You will share your number talk for your colleagues to respond to in Week 4.

Include the following in the Notes section of your planning guide:

- Hyperlink to your Number Talk
- Explanation for how your number talk will show evidence of the Standards for Mathematical Practice.

Submit your completed planning guide by Sunday.

Week 4: Diversity in Math Instruction

Learning Objectives

4.1 Analyze digital resources for designing math instruction for diverse learners.	CLO2, CLO5
4.2 Demonstrate understanding of best practices for supporting English language learners and students with exceptionalities in math instruction.	CLO2, CLO5
4.3 Assess the effectiveness of various Blended Learning programs for supporting mathematics.	CLO2, CLO5

Activities and Resources

Readings	4.1, 4.2, 4.3
Teaching Outside the Box Ch. 9: Putting It All Together	
Alliant Library Rittle-Johnson, B., Schneider, M., & Star, J. (2015). Not a One-Way Street: Bidirectional Relations Between Procedural and Conceptual Knowledge of Mathematics. *Educational Psychology Review*, 27(4), 587–597. https://doi.org/10.1007/s10648-015-9302-x Jayanthi, M., Gersten, R., Baker, S., & Center on Instruction. (2008). Mathematics Instruction for Students with Learning Disabilities or Difficulty Learning Mathematics: A Guide for Teachers. *Center on Instruction*.	
Online Resources • Math Instruction for English Language Learners by Kristina Robertson from Colorín Colorado. • CAST (2018). Universal Design for Learning Guidelines version 2.2. Retrieved from http://udlguidelines.cast.org **View** the "Video: What Dyscalculia Means" [2:48] by The Understood Team.	

Preparation: Field Work–Observation	CLO3

Locate a site to conduct a field work observation of a math lesson in a K–12 public school in your state. Either before or after the observation, speak to the instructor to find out:

- Student population
- Standards
- Class demographics
- Lesson objective

Use the Engaging in the Mathematical Practices document during your observation to record what you see happening during the lesson and include any anecdotal information.

Write a two-to three-page reflection of your observation:

- Highlight the 8 mathematical practices as noted on the observation form.
- Explicitly share how the teacher:
    - Creates a safe and positive learning space.
    - Set clear expectations and connected students' prior knowledge.
    - Engaged students in higher-order thinking.
    - Monitored and assessed student learning.
- What routines were used.
- Type of task the teacher provided students, such as open or close ended
- How the lesson did or did not support all learners.
- Recommendations to improve the lesson based on the UDL Guidelines Checklist.

Submit the completed Engaging in the Mathematical Practices document and your reflection as a Word document by Sunday of Week 5.

Faculty Note.

Locate one or two videos from one of the following websites, if the class is being offered during the summer and your students are unable to conduct a live observation:

- Unedited Clips of Teachers Implementing HLPs from High-Leverage Practices in Special Education
- Video Library – Math from Engage NY

Assignments

Discussion: Number Talk Share	4.2

Respond to the following prompts in the Number Talk Share discussion forum by Wednesday:

- Share a link to the number talk you created in Week 3.
- Identify the grade level and content standard for your number talk.
- How would you support students with exceptionalities and English language learners in accessing the number talk without revealing the answer?

Reply to two classmate's posts by completing their number talk and providing feedback applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Assignment: Blended Learning Programs Evaluation	4.3

Select two blended learning programs to evaluate from the list of blended learning programs in the Google Sheet on the Tech Tools webpage from TeacherPrepTech.com.

Determine the following in your evaluation:

- If the programs meet the needs of all learners, including students with exceptionalities and English language learners.
- The benefits and limitations of the program in connection to the UDL principles.
- The benefits and limitations of the program in connection to the CRA Model.

Write a five-to seven-page report evaluating the two programs.

Include a minimum of three in-text citations from the resources provided in the course.

Format your paper consistent with APA style guidelines.

Submit your evaluation as a Word document by Sunday.

Assignment: Learning Progressions Part II	4.1

This week you will complete Part II of the Learning Progressions assignment. When completed you will have a collection of math resources, activities and digital tools that you can use throughout your teaching career.
Review the following resources for ideas on activities and assessments for your toolkit:

- Accessing Core Curriculum Units through the SFUSD Math Portals from the SFUSD Mathematics Department
- Mathematics Curriculum from Engage NY
- Real-world lessons from Mathalicious

Complete Part II: Building a Toolkit, utilizing the Learning Progressions Part I template you started in Week 2.

Identify the following for the standard you unpacked in Week 2:

- Which of the Big 5 Math Pedagogies from Teaching Outside the Box best addresses the standard.
- An activity that would help students learn the goal of the standard. You may create your own or adapt an activity from one of the resources listed above.
- Academic language needed to understand the goal.
- Possible assessment that will demonstrate students have synthesized the goal. You may create your own or adapt one from the resources listed above.
- Blended learning resources, online games, virtual manipulatives, or other digital resources that will support the learning goal.

Consider meeting with your group to ensure everyone's work is correctly placed into one file for submission.

Submit Part II by Sunday.

Week 5: Math in Practice–Creating Challenge for All Learners

Learning Objectives

5.1 Analyze how math instruction is facilitated and how students acquire mathematical knowledge.	CLO3
5.2 Determine how open-ended math tasks support all learners' abilities in the math classroom.	CLO1, CLO4

Activities and Resources

Readings	5.1, 5.2
Teaching Outside the Box Ch. 5: Open-Ended Tasks	
Alliant Library Viseu, F., & Oliveira, I. B. (2012). Open-ended Tasks in the Promotion of Classroom Communication in Mathematics. *International Electronic Journal of Elementary Education*, 4(2), 287–300.	
Online Resources **Explore** the following websites: • Illustrative Mathematics Provides illustrative tasks and other resources for content standards. • Performance Assessment Tasks from Inside Mathematics Provides grade-level formative performance assessment tasks aligned to the CCSSM. **Review** the Engaging in the Mathematical Practices document. Provides a checklist for what to look for in classroom observations.	

Assignments

Discussion: Open-Ended Math Task	5.2
Review several close-ended math tasks. **Select** one of the math tasks, within the grade range you will teach, to re-write as an open-ended task.	

Use the Backwards Approach or Adaptive Approach from Ch. 5 of *Teaching Outside the Box* to re-write the task.

Post the re-written task in the Open-Ended Math Task discussion forum by Wednesday.

Rename the title of the post with the grade level of the task and your name, i.e. Grade 6 Student Name.

Reply to two classmate's posts, in a different grade range than yours, and provide feedback applying the evaluation criteria on pp. 129 of *Teaching Outside the Box*, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Assignment: Field Work–Observation	5.1

Conduct a field work observation of a math lesson in a K–12 public school in your state. Either before or after the observation, speak to the instructor to find out:

- Student population
- Standards
- Class demographics
- Lesson objective

Use the Engaging in the Mathematical Practices document during your observation to record what you see happening during the lesson and include any anecdotal information.

Write a two-to three-page reflection of your observation:

- Highlight the 8 mathematical practices as noted on the observation form.
- Explicitly share how the teacher:
    - Creates a safe and positive learning space.
    - Set clear expectations and connected students' prior knowledge.
    - Engaged students in higher-order thinking.
    - Monitored and assessed student learning.
- What routines were used.
- Type of task the teacher provided students, such as open or close ended
- How the lesson did or did not support all learners.

- Recommendations to improve the lesson based on the UDL Guidelines Checklist.

Submit the completed Engaging in the Mathematical Practices document and your reflection as a Word document by Sunday.

Assignment: Three-Tiered Activity	5.2

Select one math standard within a Common Core Math Strand.

Develop a three-tiered activity for the selected standard that is open-ended and focused on one skill.

Ensure your activity:

- Is conceptually based and engaging.
- Includes multiple entry points at differing levels.
- Includes three tasks at increased levels of cognitive demand.

Create a Flip Grid for your activity. Review the following Flip Grid for an example.

Note. In Week 6, you will share your Flip Grid with your colleagues.

Write a one-to two-page paper with the following information:

- Math content standard unpacked, refer to Week 1 for the unpacking template.
- Link to your Flip Grid, be sure it is set to public.
- Rational for each task, based on the criteria for tiered activities on page 129 of *Teaching Outside the Box*.

Submit your paper as a Word document by Sunday.

Week 6: Designing Instruction

Learning Objectives

6.1 Integrate research-based math strategies effectively to support all learners in math lesson plans.	CLO1, CLO2, CLO3, CLO4, CLO5
6.2 Integrate technology strategically in the teaching and learning of mathematics.	CLO4
6.3 Analyze effective math teaching practices to develop math literacy and mastery of skills in your students.	CLO3

Activities and Resources

Reading	6.1, 6.2, 6.3
Teaching Outside the Box Ch. 3: Understanding Design **Review** the Supporting Inclusive Practice section of Ch. 9: Putting It All Together.	
National Council of Teachers of Mathematics (NCTM) • A Teacher's Guide to Reasoning and Sense Making • Principles to Actions Executive Summary • Thinking about Instructional Routines in Mathematics Teaching and Learning, 2018 by Robert Q. Berry III, NCTM President • Strategic Use of Technology in Teaching and Learning Mathematics: A Position of the National Council of Teachers of Mathematics	
Videos **View** the following: • "Sal Khan | Let's teach for mastery — not test scores" video [10:49] from TED Talks Live. • "The Role of Technology in Math Education" video [4:22] from YouTube.	

Preparation: Interview a Teacher	

Arrange to interview a math teacher in a grade level you would like to teach about their assessment practices in mathematics:

Use the following questions as a guide for your interview:

- What role does assessment have in your planning and teaching of mathematics?
- How are assessment results used? By whom?
- What kinds of math assessments do you use to provide information on what students know and don't know?
- How do you use math assessment results to find out where they need to go next?
- How can students use assessment as a learning tool and teachers use it as a support for learning?
- Do you use student self-assessment to monitor progress toward the targets, goals, and objectives? If so how?
- What method do you use to look at the big picture of your assessment data and make decisions? i.e. graph, charts, grouping
- Do you provide multiple assessment formats from which students may choose? If so, how do you do this?
- How do you create a wide range of questions with varying degrees of difficulty in your math assessment?
- Do you allow retakes for assessment? Why or why not?
- What role does technology play in the assessment of students? What tools do you use?

Write a two-to three-page paper analyzing the interview for how well the teacher follows research-based practices in their daily teaching practice.

Support your analysis by citing sources.

Format your analysis consistent with APA style guidelines.

Submit your paper as a Word document by Sunday of Week 8.

Assignments

Discussion: Three-Tiered Activity	6.2, 6.3

Share a link to your Flip Grid in the Three-Tiered Activity discussion forum by Wednesday.

Complete a Flip Grid activity posted by one of your classmate's.

Provide feedback on the activity that includes:

- Areas of strength and improvement.
- Additional support or challenge that could meet the needs of all learners.

Apply the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Discussion: Math Literacy	6.1

Respond to the following prompts in the Math Literacy discussion forum by Friday:

- What are effective math practices that you would like to incorporate into your daily math practice?
- How will you support your students in developing math literacy and mastery of skills and concepts in your classroom through experiences and instructional routines?

Reply to two classmate's posts, applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Assignment: Lesson Plan Series	6.1

Design instruction for the math content standard you unpacked in Week One. The instruction you design should be a lesson series of two or more lesson plans that will develop student mastery of the standard.

Refer to the Learning Progressions Part II assignment from Week 4 and the resources provided for that assignment to help you design your instruction.

Ensure your design is based on developmentally appropriate strategies and practices introduced each week of this course.

Utilize the CSOE Lesson Plan Template to create your lesson plan.

Review the CSOE Lesson Plan Instructions document for detailed instructions on how to complete the template.

Note. In Week 7 of our course you will teach one math strategy from your lesson plans.

Submit your completed Lesson Plans by Sunday.

Week 7: Discourse & Interdisciplinary Design in Math

Learning Objectives

7.1 Analyze the role and function of discourse in math learning.	CLO3
7.2 Determine best practices to support English Language Learners in mathematics.	CLO5
7.3 Integrate cross-curriculum content standards in authentic interdisciplinary math tasks.	CLO5

Activities and Resources

Readings	7.1, 7.2, 7.3

Teaching Outside the Box

- Ch. 7: Problem-Based Learning
- Ch. 8: Math Centers

Online Resources

- How Your English Learner Student Will Learn English: The California English Language Development (CA ELD) Standards Kindergarten–Grade 12
- California English Language Development Standards Electronic Edition adopted by the California State Board of Education November 2012.
- English Language Arts Standards from the Common Core State Standards Initiative.
- Student Recording Sheets from 3-Act Tasks by Graham Fletcher.

YouTube

View the following videos:

- "Math Generation: Kinder 3 Act Task - Batey ES" [9:04]
- "Math Generation: 3 Act Task - Kennedy ES" [14:15]
- "How to Schedule Zoom for Your Students by a Student" [3:03]
- "How to Use Google Hangouts" [4:04]

Assignments

Discussion: Supporting the ELL Standards in Math	7.2

Math discourse is a critical component of student learning and this is especially true for students with exceptionalities and English Language Learners.

Respond to the following prompts in the Supporting the ELL Standards in Math discussion forum by Wednesday:

- How does the structure of a Three Act Math Task support students in developing the language skills as well as problem solving skills that are critical for mathematics?
- Which ELL standards, from the California State Board of Education or the Common Core State Standards Initiative, do Three Act Math Tasks support?

Reply to two classmate's posts, applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Assignment: Teach Your Math Strategy	7.1

Teach one math strategy from your Week 6 lesson plans to your Learning Progressions group from Weeks 2 & 4.

Utilize an online meeting tool with recording capabilities such as Zoom or Google Hangouts.

Create a separate recording with a unique link when each person takes their turn teaching.

Note. Your recording will be graded using the Engaging in the Mathematical Practices checklist from the Field Work–Observation assignment in Week 5.

Submit the link for your recording by Sunday.

Assignment: Digital Lesson Plan	7.3

In Chapters 7 & 8 of *Teaching Outside the Box*, the authors' stress the importance of creating engaging math tasks that connects to students' lives and challenge students to express their mathematical thinking in multiple ways. Creating authentic tasks that are rooted in students' lives and allow students to make connections between their informal and formal math strategies are critical components of an effective math task.

Select a Common Core math standard and create a digital lesson that connects mathematics standards across other content areas. You must consider your students' assets and funds of knowledge when designing a lesson with technology.

Refer to the Learning Progressions Part II assignment from Week 4 and the resources provided for that assignment to help you design your instruction.

Utilize Google Slides to create your digital lesson. You can be creative and integrate digital tools in your slide deck that allow students to play, construct, create and synthesize their understanding of math concepts while building both procedural fluency and conceptual understanding.

Include the following in your Google Slide deck:

- Content standards and skills of the problem or project.
- Three activities that support the skills within the math standard.
- One activity that connects to standards from another content area in a meaningful way.

Ensure the digital lesson is developmentally appropriate for all learners and provides access for students with exceptionalities and English language learners.

Review the following Google Slide deck examples:

- 5th Grade–Camping Trip
- 6th Grade–Design a Box

Submit a link to your digital lesson plan by Sunday.

Week 8: Assessment & Reflection

Learning Objectives

8.1 Analyze how you may continually grow your teaching practice.	CLO2. CLO4. CLO5
8.2 Determine how math is commonly assessed in the K-12 classroom.	CLO3
8.3 Determine how to use digital tools to support formative and summative assessment.	CLO2, CLO3

Activities and Resources

Readings	8.1, 8.2, 8.3
Online Resources • Standards for preparing Teachers of Mathematics from the Association of Mathematics Teacher Educators (AMTE). • E-Examples From Principles and Standards for School Mathematics from Illuminations and NCTM.	
YouTube **View** the following videos: • "Math class needs a makeover - Dan Meyer" [11:39]. • "Google Forms for Math Assessment" [10:00]. • "Hyperdocs for Math" [9:27].	

Assignments

Discussion: Reflection on Teaching Experience	8.1
In Week 7 of the course you had the opportunity to teach part of your lesson to your peers. This week reflect on what went well and what you learned about delivering math instruction. **Respond** to the following prompts in the Reflection on Teaching Experience discussion forum by Wednesday:	

- What would you do next to advance the learning of the math strategy?
- Do you need to reteach any part of the lesson? Explain why.
- Based on what your students learned about the content you were teaching, what will you teach next?
- If you were to teach this lesson again, what would you do the same? What would you differently? Provide rationale for your response.

Note. The above questions are similar to the CALTPA/EDTPA reflection step.

Reply to two classmate's posts, applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Discussion: Vision of Math Classroom	8.1

Respond to the following prompts in the Vision of Math Classroom discussion forum by Friday:

- What is your vision of the math classroom you want your students to be in? How will you emphasize the Big 5 pedagogies in your math teaching practice?
- How are textbooks, technology and tools being used? What is the structure of the class and the tasks that students are engaged in?
- Consider including an illustration or a photo of your classroom as well.
- Review the Standards for Preparing Teachers of Mathematics, what is one area will you need to continue to grow as a teacher of Mathematics?

Reply to two classmate's posts, applying the RISE Model for Meaningful Feedback, by Sunday. If possible, respond to posts that have not yet received feedback from a classmate.

Check into this discussion periodically to help guide students and to provide your own thoughts or insights. Mimic for them how you would like them to engage with each other beyond stating, 'Good post! or I agree!'

Assignment: Interview a Teacher	8.2, 8.3

Interview a math teacher in a grade level you would like to teach about their assessment practices in mathematics:

Use the following questions as a guide for your interview:

- What role does assessment have in your planning and teaching of mathematics?
- How are assessment results used? By whom?

- What kinds of math assessments do you use to provide information on what students know and don't know?
- How do you use math assessment results to find out where they need to go next?
- How can students use assessment as a learning tool and teachers use it as a support for learning?
- Do you use student self-assessment to monitor progress toward the targets, goals, and objectives? If so how?
- What method do you use to look at the big picture of your assessment data and make decisions? i.e. graph, charts, grouping
- Do you provide multiple assessment formats from which students may choose? If so, how do you do this?
- How do you create a wide range of questions with varying degrees of difficulty in your math assessment?
- Do you allow retakes for assessment? Why or why not?
- What role does technology play in the assessment of students? What tools do you use?

Write a two-to three-page paper analyzing the interview for how well the teacher follows research-based practices in their daily teaching practice.

Support your analysis by citing sources.

Format your analysis consistent with APA style guidelines.

Submit your paper as a Word document by Sunday.

Assignment: Digital Assessment	8.3

Design an 8-to 15-question digital assessment for one of your lesson plans from Week 6. Your assessment should be based on the learning goals of the lesson plan. It could be summative, formative, informal, formal, or performance based.

Determine accommodations, scaffolding, or supports you will use to for the following:

- Student with an IEP
- An English Language Learner
- Student with a social emotional need

Access the Equations & Expressions google document for an example of a digital assessment.

Review the Tech Tools from TeacherPrepTech.com for a list of digital assessment tools you can use to create your assessment.

Create your digital assessment using one of the tools from Teacher Prep Tech or one with which you are familiar. Be sure your assessment is public and available to view.

Write a one-to two-page rationale for your assessment based on the learning goals of the lesson plan.

Consider the following:

- Lesson objectives and standards
- Type of assessment: summative, formative, informal, formal, or performance based
- How the assessments results will be used

Include a link to, and screenshot of, your assessment in your rationale.

Submit your rationale as a Word document by Sunday.

Rubrics

Discussion Rubric

	Exceeds Requirements 100%	Meets Requirements 88%	Approaches Requirements 75%	Below Requirements 68%
Initial Response to the Forum Topic 30 points	Topic is addressed thoughtfully, supported by citations to experts and personal experience.	Topic is addressed thoughtfully, supported by citations to personal experience.	Topic is addressed thoughtfully, but not thoroughly supported by citations to experts, personal experience.	Topic is addressed superficially and without evidence.
Feedback to Peer's Response to the Forum Topic 10 points	Thoughtful feedback included all levels of the RISE model and will result in a substantive improvement in the work if implemented and builds on prior posts.	Thoughtful feedback missed one or two levels of the RISE model. Will result in an improvement in the work if implemented and builds on prior posts.	Feedback was thoughtful but did not include specific suggestions for improvement or build on prior posts.	Feedback was superficial and did not cover all levels of the RISE model.

Assignment Rubric–25 Points

	Exceeds Requirements 100%	Meets Requirements 88%	Approaches Requirements 75%	Below Requirements 68%
Elements 5 points	Demonstrates an above average level of knowledge of the required elements.	Knowledge of the required elements is proficient.	Knowledge of the required elements is not yet proficient.	Knowledge of the required elements is introductory.
Application 15 points	Demonstrates an above average level of knowledge of the connection between research and practice.	Knowledge of the connection between research and practice is proficient.	Knowledge of the connection between research and practice is not yet proficient.	Knowledge of the connection between research and practice is introductory.
References 5 points	The student has thoroughly researched the strategies used and provides citations and references when appropriate, with no errors.	The student has researched the strategies used and provides citations and references when appropriate, with minimal to no errors.	The student has researched the strategies, may cite sources in the assignment, provides a general reference section.	Limited evidence that the student has researched beyond the textbook, few or no sources are cited.

Assignment Rubric–30 Points

	Exceeds Requirements 100%	Meets Requirements 88%	Approaches Requirements 75%	Below Requirements 68%

Elements 5 points	Demonstrates an above average level of knowledge of the required elements.	Knowledge of the required elements is proficient.	Knowledge of the required elements is not yet proficient.	Knowledge of the required elements is introductory.
Application 15 points	Demonstrates an above average level of knowledge of the connection between research and practice.	Knowledge of the connection between research and practice is proficient.	Knowledge of the connection between research and practice is not yet proficient.	Knowledge of the connection between research and practice is introductory.
References 10 points	The student has thoroughly researched the strategies used and provides citations and references when appropriate, with no errors.	The student has researched the strategies used and provides citations and references when appropriate, with minimal to no errors.	The student has researched the strategies, may cite sources in the assignment, provides a general reference section.	Limited evidence that the student has researched beyond the textbook, few or no sources are cited.

Assignment Rubric–40 Points

	Exceeds Requirements 100%	**Meets Requirements 88%**	**Approaches Requirements 75%**	**Below Requirements 68%**
Elements 5 points	Demonstrates an above average level of knowledge of the required elements.	Knowledge of the required elements is proficient.	Knowledge of the required elements is not yet proficient.	Knowledge of the required elements is introductory.
Application 20 points	Demonstrates an above average level of knowledge of the connection between research and practice.	Knowledge of the connection between research and practice is proficient.	Knowledge of the connection between research and practice is not yet proficient.	Knowledge of the connection between research and practice is introductory.
References 15 points	The student has thoroughly researched the strategies used and provides citations and references when appropriate, with no errors.	The student has researched the strategies used and provides citations and references when appropriate, with minimal to no errors.	The student has researched the strategies, may cite sources in the assignment, provides a general reference section.	Limited evidence that the student has researched beyond the textbook, few or no sources are cited.

Digital Assessment Rubric

	Exceeds Requirements 100%	**Meets Requirements 88%**	**Approaches Requirements 75%**	**Below Requirements 68%**
Curricular Expectations 5 points	Clear evidence of links to curricular expectations at the lesson level.	Links to curricular expectations at the lesson level are clear.	Links to curricular expectations at the lesson level are vague.	There are no links to curricular expectations at the lesson level.
Comprehensiveness 15 points	Provides ample opportunity for students to consider the totality of the unit's content, making	Provides an opportunity for students to consider the totality of the unit's content, making	Provides limited opportunity for students to consider the totality of the unit's content, making	Does not provide an opportunity for students to consider the totality of the unit's

	broad connections, demonstrating synthesized skills, and exploring deeper concepts that drive the lesson's ideas and content.	broad connections, demonstrating synthesized skills, and exploring deeper concepts that drive the lesson's ideas and content.	broad connections, demonstrating synthesized skills, or exploring deeper concepts that drive the lesson's ideas and content.	content, making broad connections, demonstrating synthesized skills, and exploring deeper concepts that drive the lesson's ideas and content.
References 5 points	The student has thoroughly researched the strategies used and provides a comprehensive reference section with no errors.	The student has researched the strategies used and provides a reference section with minimal to no errors.	The student has researched the strategies, may cite sources in the reflection, provides a general reference section.	Limited evidence that the student has researched beyond the textbook, few or no sources are cited in the reflection.

Signature Assignment Rubric

	Exceeds Requirements 100%	**Meets Requirements 88%**	**Approaches Requirements 75%**	**Below Requirements 68%**
Opening 10 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students.	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation.
Intro to New Material 20 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students.	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation.
Guided Practice 30 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific,	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific,	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific,	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details

	appropriate examples of how to differentiate instruction for diverse students.	appropriate examples of how to differentiate instruction for diverse students.	appropriate examples of how to differentiate instruction for diverse students.	needed to address questions related to prompt; diverse strategies are not adequate or need more explanation.
Independent Practice 30 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students.	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students.	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation.
Closing & Homework 20 points	Timing is realistic; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for Diverse students; Clearly states whether homework will be assigned or not; Clear progression from lesson described; Realistic and age appropriate.	Timing needs to be broken down into smaller time chunks; Clearly describes action of teacher and student; Appropriate strategies are cited; Responds to question prompts, as appropriate; Specific, appropriate examples of how to differentiate instruction for diverse students; Clearly states whether homework will be assigned or not; Clear progression from lesson described.	Clearly describes action of teacher and student; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; Specific, appropriate examples of how to differentiate instruction for diverse students; Clearly states whether homework will be assigned or not; Unclear of the connection between lesson and homework.	More details needed to understand what is happening at each step in the lesson; Strategies are not clearly indicated or are not a good fit for class setting; More details needed to address questions related to prompt; diverse strategies are not adequate or need more explanation; Does not explain whether or not homework will be assigned.
		Meets Requirements 100%	**Approaches Requirements 75%**	**Below Requirements 68%**
Context 5 points	[redacted]	Provides context to the lesson plan describing the grade, content and class setting.	More details needed to understand the class setting.	Does not provide a context to lesson plan.
Application of Theory 10 points		Clearly describes with clear and specific language how theory is applied in the lesson.	Adequately describes how theory is applied in the lesson.	Cursory description of how theory is applied in the lesson.
Objective 5 points		Clear, specific, measurable and achievable objectives; Written in student friendly language; Aligned	More specificity needed; Loosely aligned to ISTE, State or common core standards Seems	Objectives are not aligned to ISTE, State or common core standards; Objective is not related to lesson described.

	[redacted]	to ISTE, State or common core standards; Related to lesson.	unachievable in one lesson; Wordy or vague.	
Assessment 15 points		Clearly indicates the way(s) student progress will be monitored during and after lesson.	More specific details needed to understand how student progress will be monitored.	Does not describe a method of how students will be monitored.
ISTE, State or Common Core, & TPE Standards 15 points		Identified standards for the correct grade and content area; Standards related to lesson described.	Connection between standards and lesson is unclear.	Does not provide the correct standards for the grade and content area.
Differentiation 15 points		Teaching mode is varied: verbal, visual, and practical. Tasks are designed to support varied intelligence preferences. Allows students to show what they know in different ways.	Teaching mode contains two of the following: verbal, visual, and practical. Tasks are designed to support two or less intelligence preferences. Allows students to show what they know in different ways.	Teaching mode is not varied. Tasks are designed for one type of learner. Does not allow students to show what they know in different ways.
Diverse Learners (Mixed Abilities) 15 points		Instruction supports a diversity of learners including students with disabilities, English learners, advanced learners, and at-risk students. Strategies identified are specific for each type of learner.	Instruction supports only three of the following learners: students with disabilities, English learners, advanced learners, and at-risk students. Strategies identified are appropriate for that type of learner.	Instruction supports less than three of the following learners: students with disabilities, English learners, advanced learners, and at-risk students. Strategies identified are not specific for each type of learner.
Classroom Management 10 points		Clearly explains how you will welcome all students, use routines and procedures to maximize student engagement, and foster independent and collaborative learning. Principles of positive behavior intervention and support processes are used effectively to maintain a supportive and safe learning environment. Clearly explains how you will establish a climate of learning.	Adequately explains how you will welcome all students, use routines and procedures to maximize student engagement, and foster independent and collaborative learning. Principles of positive behavior intervention and support processes are used adequately to maintain a supportive and safe learning environment. Adequately explains how you will establish a climate of learning.	Explanation for how you will welcome all students, use routines and procedures to maximize student engagement, and foster independent and collaborative learning is vague. Principles of positive behavior intervention and support processes are not used to maintain a supportive and safe learning environment. Explanation for how you will establish a climate of learning is vague.

Materials 5 points		Thorough list of materials required for the lesson described; Includes quantities and any prep required.	Some keys items described in lesson are listed.	Does not provide a list of materials for lesson.
References 5 points		The student has thoroughly researched the strategies used and provides a comprehensive reference section with minimal to no errors.	The student has researched the strategies, may cite sources in the lesson plan, provides a general reference section.	Limited evidence that the student has researched beyond the textbook, few or no sources are cited in the lesson plan.
PO1: Integrate a research- and evidence-based theory of teaching and learning.	This level is achieved if the student earns a 93% or higher on the assessment.	This level is achieved if the student earns between 92% and 80% on the assessment.	This level is achieved if the student earns between 79% and 73% on the assessment.	This level is achieved if the student earns a 72% or less on the assessment.
Specialty Standards: Teacher Performance Expectations (TPEs)				
TPE3: Understanding and Organizing Subject Matter for Student Learning *(InTASC Standards 4 & 5)*	This level is achieved if the student earns a 93% or higher on the assessment.	This level is achieved if the student earns between 92% and 80% on the assessment.	This level is achieved if the student earns between 79% and 73% on the assessment.	This level is achieved if the student earns a 72% or less on the assessment.
TPE4: Planning Instruction and Designing Learning Experiences for All Students *(InTASC Standards 7 & 8)*	This level is achieved if the student earns a 93% or higher on the assessment.	This level is achieved if the student earns between 92% and 80% on the assessment.	This level is achieved if the student earns between 79% and 73% on the assessment.	This level is achieved if the student earns a 72% or less on the assessment.