EDUC 385/585: Elementary Curriculum and Methods for Global Classrooms (6 units) Section 1

Fall 2017

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COURSE DESCRIPTION

This course is designed to provide candidates with subject-matter curriculum and pedagogical knowledge and skills in the following areas: mathematics, science, history-social science, the visual and performing arts. In each major subject area candidates learn to use appropriate instructional strategies and materials, to plan and implement instruction that fosters student achievement of state-adopted academic content standards and assists students develop as globally competent citizens who possess knowledge of other world regions, cultures, and global issues. ***Universal Design for Learning (UDL), a philosophy that aims to eliminate learning barriers for all students.***

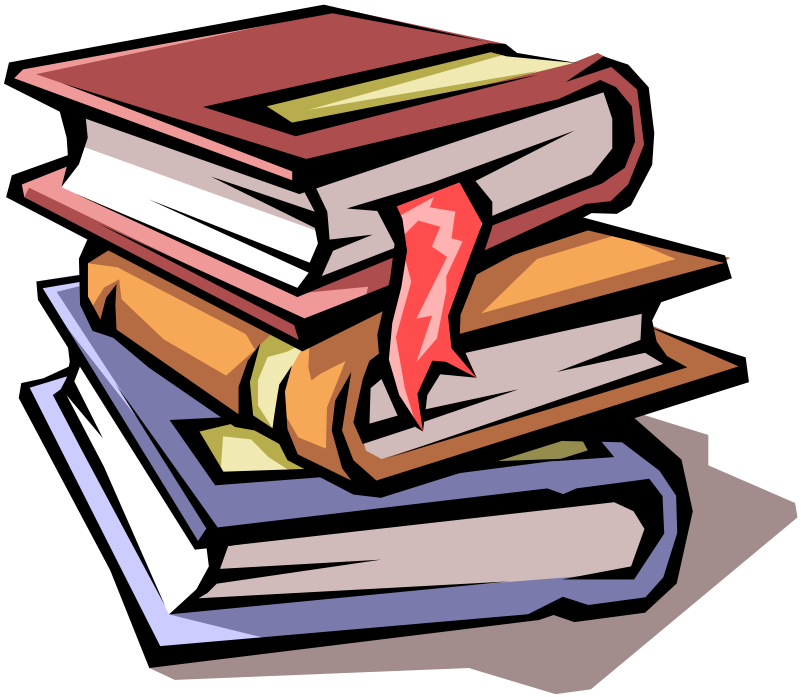
Practicum

Complete a practicum of on-site classroom observation.

- Observe and support instruction in the classroom of the cooperating teacher
- Teach two lessons and videotape one of them. These lessons are planned with the guidance of the cooperating teacher.
- Students are expected to draw connections between practicum observations, course readings and experiential activities with in-class reflective closure sheets.
- Students are expected to observe and reflect upon data demonstrating evidence of student learning.
- The cooperating teacher must complete a candidate evaluation. *Candidates cannot successfully complete EDUC 385-585 without a satisfactory practicum evaluation.*

Blended Learning Goals:

This course will model practices of *blended learning* (also known as hybrid learning) that allows students to integrate face-to-face learning with technology-based, digital instruction. Learning takes place in settings (or in a combination of settings) that include the classroom, home, or mobile environments and gives students an element of control over the time and the pace of their learning. In addition to having a portion of our own course content online, we will discuss the theory and practice of blended learning in the K-6 classroom.



TEXTBOOKS

Required:

1. California Department of Education. *California State Framework in Science.* Sacramento, CA: Author. (text or on-line /http://www.cde.ca.gov/be/st/fr/, http://www.cde.ca.gov/ci/cr/cf/allfwks.asp The Next Generation Science Standards, http://www.nextgenscience.org

2. California Department of Education. *California State Framework in History/Social Studies*. Sacramento, CA: Author. (text or on-line / http://www.cde.ca.gov/ci/cr/cf/allfwks.asp, and http://www.socialstudies.org/system/files/c3/C3-Framework-for-Social-Studies.pdf

3. California Department of Education. *California State Framework in Mathematics*. Sacramento, CA: Author. (text or on-line

http://www.cde.ca.gov/ci/cr/cf/allfwks.asp

4. California Department of Education. *California State Framework in Visual and Performing Arts.* Sacramento, CA: Author. (text or on-line http://www.cde.ca.gov/ci/cr/cf/allfwks.asp

5. Literature Book, The Sign of the Beaver by Elizabeth George Speare,

6. Packet of Readings to be purchased at the USD bookstore

7. Selected digital readings for group discussions

COURSE OBJECTIVES

USD Program Themes

Course objectives are linked to specific State of California's Teaching Performance Expectations (TPEs) and are organized around six outcomes. By the end of the semester, students will understand and be able to demonstrate the following outcomes:
Teaching Performance Expectations (TPEs)

TPE#1 Engaging and supporting students in learning

TPE #2 Creating and maintaining effective environments for student learning

TPE #3 Making subject matter comprehensible to students-

TPE #4 Planning instruction and designing learning experiences for students-

TPE #5 Assessing student learning

TPE #6 Developing as a Professional Educator

ACE Outcomes & Course Objectives
Academic Excellence & Critical Inquiry and Reflection

Teacher Candidates will demonstrate knowledge on how to represent content accurately and competently by applying strategies and techniques in their field of study. Engage in reflective activities, critically analyze their practice and apply higher order thinking skills to a wide array of investigative pursuits in order to become globally competent, intercultural peace and character education teachers.

1. Demonstrate knowledge of the state frameworks, standards and assessments related to the teaching of mathematics, science, history/social science, and visual and performing arts. (TPE 1, 5) (K)
2. Demonstrate uses of a variety of subject-specific pedagogical approaches to the teaching of mathematics, science, history/social science and the visual and performing arts. (TPE 1, 5) (S)
3. Demonstrate an understanding of lesson plan development, implementation and evaluation. (TPE 1, 2, 4, 6) (K, S)
4. Demonstrate awareness of and ability to evaluate the material and community resources available in the teaching of mathematics, science, history/social science, and the visual and performing arts. (TPE 1) (K, S)
5. Know and apply strategies for supporting reading in the content areas. (TPE 4) (K, S)
6. Apply knowledge of lesson plan development to an integrated unit of study.
   (TPE 4) (S)
7. Demonstrate an understanding of appropriate use of a variety of assessments, including norm referenced and criterion referenced tests and alternative measures such as formative and summative evaluations, works samples, observation, portfolios, and standards-based (TPE 5) (K, S)
8. Demonstrate ability to cultivate critical thinking and problem solving skills in students (TPE 1, 3) (S)
9. Design, administer and interpret a variety of assessments in content subject areas. (TPE 5) (S)
10. Demonstrate competence in the use of electronic teacher management resources (TPE 6) (S)

11. Demonstrate competence in examining and evaluating internet and software resources for mathematics, science, history/social science and the visual and performing arts. (TPE 1, 3) (S)
12. Demonstrate ability to engage in cycles of self-evaluation of planning and teaching practices, alone and in collaborative groups (TPE 4, 6) (S, D)
13. Demonstrate your ability to select, plan, implement and evaluate methodologies and resources for teaching international perspectives for K-6 students designed to help them develop as globally competent citizens. (TPE 4, 6) (S, D)
14. Demonstrate your ability to identify the similarities and differences between the social studies curriculum as traditionally taught and as taught with a global perspectives emphasis. (TPE 4, 6) (S, D)
15. Demonstrate your ability to use teaching strategies for challenging negative and distorted views of distant places. (TPE 4, 6) (S, D)

Community and Service

Teacher candidates will demonstrate the ability to create and support collaborative and caring learning communities in their professional fields of practice. They will bridge theory and practice by experiencing various dimensions of the diverse cultural communities through active service engagements that support world cultures through peace and character education traits.

16. Understand the purpose for establishing classroom meetings as a way of fostering a democratic classroom environment. (TPE 2 (K)
17. Know and apply strategies for creating a positive learning environment (TPE 2) (K, S)
18. Demonstrate your ability to use the pedagogy of service learning by creating opportunities for K-6 students to address global environmental or ecological problems and to contribute to possible solutions. (TPE 2) (K)
19. Demonstrate your ability to successfully use computer technology, including e-mail and the Internet, to teach students to participate in a global community.

Ethics, Values and Diversity

Teacher candidates will understand and adhere to the values and ethical codes of the university, of schools they work in, and of their professional organizations. They will create inclusive, unified, caring and democratic learning peace education communities that value individuals regardless of the global cultural background or ability, and equitably support their

learning and development.

20. Demonstrate an understanding of assessment techniques and tools appropriate for individuals with diverse backgrounds and varying language, communication and cognitive abilities. (TPE 4) (K, S)
21. Know and apply strategies for learning that meet the learning styles, interests and cognitive abilities of all students. (TPE 4) (K, S)
22. Demonstrate competence in the use of electronic research tools, internet resources and the ability to use technology to support the needs of diverse learners. (TPE 4) (K, S)
23. Demonstrate your ability to systematically acquire information from a variety of digital sources regarding international issues and global environmental problems. (TPE 4) (K, S)
24. Demonstrate your ability to use global geographical knowledge and understandings to lead K-6 students in becoming active and informed international citizens. (TPE 4) (K, S)

Course Assignments at a Glance

ASSIGNMENT	DATE
Science Lesson Due	**9/25**
Read Sign of the Beaver	**9/27**
STEAM Unit Due	**11/8**
Practicum Assignment Due	**11/29**
Online assignments	**Throughout course**
Portfolio Reflection Sheets Due/Individual Conference	**12/13**

Online-Blended Classes
October 9-Exploring Virtual Fieldtrips
October 30-Tech Plunge
November 13-The Power of the ARTS
November 20-Practicum Video Preparation

1 W-9/6 Introduction
***Big Idea*: HOW DO YOU WANT TO BE AS A TEACHER?**
What do you know about teaching and learning? What do you want to learn? What are you going to learn? Who? Why? How?

- 21st Century Skills and digital learning environment
- CA Common Core Standards State and National NGSS Standards
- CalTPA
- Designing your classroom to facilitate a global learning community
- Becoming a Changemaker
- Equity and Access so that ALL students may learn
- Co-teaching pedagogies

- Classroom Management and creating a positive classroom community and social support for students

Going Digital

Video: 21st Century Skills

https://www.youtube.com/watch?v=qMG5dvhEzyo

Co-teaching videos:

1. http://www.youtube.com/watch?v=hadT55umZU0
2. https://www.teachingchannel.org/videos/mid-lesson-teacher-collaboration-nsf

2 **M 9/11- Best Practices in Science Teaching and Learning: Next Generation Science Standards (NGSS)**

- STEM and STE(A)M
- Constructivist Teaching Practices in Science
- Examining Global Issues in Science
- Teaching science to special populations
- Classroom Management for Science: Using spaces and materials for learning
- Planning and Implementing Instruction in Science Using State-adopted Standards, Textbooks, Digital Resources, Community Resources

Going Digital

- **Explore website(s)**
  - Understanding of the content, intent and vision of the Next Generation Science Standards. http://www.nextgenscience.org
  - California Department of Education. *California State Framework in Science.* / http://www.cde.ca.gov/be/st/fr/
  - San Diego County Office of Education
    https://ngss.sdcoe.net
- **Video: The Case for NGSS**
- **https://www.teachingchannel.org/videos/next-generation-science-standards-achieve**
- **http://www.lawrencehallofscience.org/services_and_expertise/ngss**

Supplementary Videos to give you background for 3 Dimensions of NGSS

https://www.teachingchannel.org/videos/next-generation-science-standards-achieve

1. Disciplinary Core Ideas (DCI) https://www.teachingchannel.org/videos/disciplinary-core-ideas-achieve

2. Science and Engineering Practices
   https://www.teachingchannel.org/videos/science-engineering-practices-achieve
3. Crosscutting Concepts
   https://www.teachingchannel.org/videos/crosscutting-concepts-achieve

3 W 9/13 Explorations in Life, Earth and Physical Science:
Next Generation Science Standards (DCIs and CCCs)
Crosscutting Concepts (CCC)

- Providing students opportunities to use science concepts and investigation skills to make sense of a real world phenomenon.
- Teaching the Content of Science

Physical Science, Life Science, Earth and Space Sciences

- Science Note booking

Claim/Evidence/Reasoning (CER)

1. *Patterns.* Observed patterns of forms and events guide organization and classification, and they prompt questions about relationships and the factors that influence them.
2. *Cause and effect: Mechanism and explanation*. Events have causes, sometimes simple, sometimes multifaceted. A major activity of science is investigating and explaining causal relationships and the mechanisms by which they are mediated. Such mechanisms can then be tested across given contexts and used to predict and explain events in new contexts.
3. *Scale, proportion, and quantity.* In considering phenomena, it is critical to recognize what is relevant at different measures of size, time, and energy and to recognize how changes in scale, proportion, or quantity affect a system's structure or performance.
4. *Systems and system models.* Defining the system under study—specifying its boundaries and making explicit a model of that system—provides tools for understanding and testing ideas that are applicable throughout science and engineering.
5. *Energy and matter: Flows, cycles, and conservation.* Tracking fluxes of energy and matter into, out of, and within systems helps one understand the systems' possibilities and limitations.
6. *Structure and function.* The way in which an object or living thing is shaped and its substructure determine many of its properties and functions.
7. *Stability and change.* For natural and built systems alike, conditions of stability and determinants of rates of change or evolution of a system are critical elements of study.

Read:

- https://www.teachingchannel.org/videos/claims-evidence-science-lesson-achieve (investigation)

4 M-9/18 Phenomenon-based Science

Students as Scientists/ Higher Order Thinking

Science and Engineering Practices (SEP)

The eight practices of science and engineering that the *Framework* identifies as essential for all students to learn and describes in detail are listed below:

1. **Asking questions (for science) and defining problems (for engineering)**
2. **Developing and using models**
3. **Planning and carrying out investigations**
4. **Analyzing and interpreting data**
5. **Using mathematics and computational thinking**
6. **Constructing explanations (for science) and designing solutions (for engineering)**
7. **Engaging in argument from evidence**
8. **Obtaining, evaluating, and communicating information**

Observing/ Comparing/ Classifying/ Inferring Hypothesizing/ Drawing Conclusions/ Communicating

- Investigating Global Environmental Problems
- Science Inquiry
- Science and the Common Core Literacy Standards -Reading information texts

Going Digital

http://www.ngssphenomena.com

5 W 9/20 Planning Curriculum for Students' Learning Needs

- **Universal Design for Learning**
  - Planning using content standards
    - Unit Planning
    - Lesson plan development, implementation and evaluation
    - Evidence-based Teaching Strategies:

Going Digital

1. Lesson-Plans-and-Unit-Plans: The-Basis-for-Instruction
http://www.ascd.org/publications/books/109051/chapters/Lesson-Plans-and-Unit-Plans@-The-Basis-for-Instruction.aspx
This excellent article provides an overview and in-depth explanation for the different components of a lesson plan and a unit plan.

2. Lesson planning site: a repository of lesson plans by grade/subject.
http://teachers.net/lessons/posts/4763.html

6 M 9/25 Micro-teaching #1: Inquiry Science (Self and Peer-Mediated Reflections)
Pick one area (Life, Physical, or Earth and Space Science)

- Identify specific CA –NGSS Standards that apply to this lesson.
- Lesson should use one or more Science and Engineering Practices (SEP)
  1. Asking questions (for science) and defining problems (for engineering)
  2. Developing and using models
  3. Planning and carrying out investigations
  4. Analyzing and interpreting data
  5. Using mathematics and computational thinking
  6. Constructing explanations (for science) and designing solutions (for engineering)
  7. Engaging in argument from evidence
  8. Obtain, evaluate and communicate information

  Lesson should be aimed at a specific grade level K-6

- Bring all materials to class for lesson.

As a group, discuss ways each lesson may be differentiated for UNIVERSAL ACCESS for all students

7 W/ 9/27 Part I. Best Practices-History-Social Studies
Planning and Implementing Instruction in History-Social Science: Using State-adopted Standards, Textbooks, Electronic Planning and Research Tools, and Community Resources

Part II. Teaching Social Studies through Children's Literature

- Picture Books
- Chapter books (Read: Sign of the Beaver for Class)
- Webquest Sign of the Beaver Web quest http://questgarden.com/84/77/7/091007063349

8 M 10/2 Field Trip: Birch Aquarium at Scripps

https://aquarium.ucsd.edu/teachers/professional-development/teacher-appreciation-night

9 **W 10/4**

Common Core Literacy Skills in Social Studies

- Instructional strategies that make difficult text easier for students to read and understand.
- Close reading
- Text Dependent Questions
- Claim/Evidence/Reasoning CER

Read

(1) Information text http://www.ascd.org/publications/educational-leadership/nov13/vol71/num03/Points-of-Entry.aspx

(2) Close Reading: http://www.ascd.org/publications/educational-leadership/dec12/vol70/num04/Closing-in-on-Close-Reading.aspx

Supplemental Videos:

- Text talk time –https://www.teachingchannel.org/videos/analyzing-text-lesson?resume=0

10 M 10/9 Online Class **Virtual Field Trips**

Explore the following Virtual Field Trips:

- **The San Diego Zoo-(educator resources) http://zoo.sandiegozoo.org/content/overview**
- **Reuben H. Fleet Science Center-(with science lessonplans)http://www.rhfleet.org/learn/school-programs-professional-development**
- **San Francisco Exploratorium http://www.exploratorium.edu**
- **Lawrence Hall of Science- http://www.lawrencehallofscience.org**
- **Virtual Museum Tours website.**
- **Smithsonian Institution website and investigate their various virtual exhibits.**
- **The Kennedy Center website including resources for educators and the multimedia finder.**
- **The British Museum and explore their online collection.**

- **House of Anne Frank**
  http://www.annefrank.org/en/Subsites/Home/Enter-the-3D-house/#/house/start/
- **Solar System**
  http://www.nineplanets.org
- **Lincoln Memorial Lin**http://www.nps.gov/featurecontent/ncr/linc/interactive/deploy/index.htm#/introduction
- **Ellis Island** http://teacher.scholastic.com/activities/immigration/tour/
- **White House**
  http://www.whitehouse.gov/about/inside-white-house/interactive-tour
- **Hershey PA**
  http://www.thehersheycompany.com/about-hershey/our-story/making-our-chocolate.aspx
- **The Louvre, Paris**
  http://www.louvre.fr/en/visites-en-ligne?nrppage=10

Discussion prompt:
Write a brief description of at least 5 sites that you believe are noteworthy. How do you believe virtual field trips may enhance your classroom teaching/learning environment?

11 W 10/11 Project-based Learning (PBL)
Blended Learning- Before Class:
1. Read one article and watch one video about PBL in each web portal

- **George Lucas Foundation/Edutopia, http://www.edutopia.org/**
- **Buck Institute for Education http://www.bie.org**

Essential Questions
What is Project based Learning (PBL)?
How does it connect to 21st Century skills?
How does PBL connect to changemaking and becoming socially aware?
How does PBL connect to STEAM?
STEM and Engineering Practices for Elementary Students

- **Bridge Building Engineering Project**

Going Digital

K-6 science units with an engineering problem to solve

https://www.pltw.org/pltw-launch-curriculum

- **Video http://www.eie.org/eie-curriculum/resources/what-research-says**
- **Read: Engineering Articles: http://www.nytimes.com/2010/06/14/education/14engineering.html?pagewanted=all&_r=0**
- **Explore site: http://www.eie.org**

Engineering Investigation-Getting to the Other Side: Designing Bridges

http://www.eie.org/eie-curriculum/curriculum-units/get-other-side-designing-bridges

- **Background information on types of bridges-**

http://www.pbs.org/wgbh/nova/tech/build-bridge-p3.html

Supplemental
Additional Engineering Projects
https://www.teachingchannel.org/engineering-curriculum-boeing

12 M 10/16 Teaching for Social Justice and Global Understanding through Changemaking

- Exploration of digital technologies and videos that could be employed with service learning, character education, social justice and understanding what is required of citizens in a democracy.

Read article: How to Integrate Social and Emotional Learning into the Common Core
http://greatergood.berkeley.edu/article/item/how_to_integrate_social_emotional_learning_into_common_core

Explore website(s) https://www.teachingchannel.org/blog/2014/01/09/honoring-mlk-day/?utm_source=newsletter20160116/
Video(s)

Watch video of Julian Elementary School, 2010 National School of Character to see what can happen when a whole school decides to focus on Character Education

http://www.youtube.com/watch?v=qaaZTprxg8Y#t=11

Watch video of Service Learning and see one school's efforts to connect service projects with content standards so that students not only participate in improving the community, they also strengthen skills in literacy, mathematics, science and social studies.

https://www.youtube.com/watch?v=6zecR0oSROE

2. Explore E-Pals, (http://www.epals.com) a global digital community of connected classrooms sponsored by National Geographic

13 W 10/18 Guest Speaker
The Music of Inclusive Education
(Johnson Fellows Event)

14 M 10/23 The Many Faces of Geographic Literacy

Geography is more than places on a map. It's global connections. People and cultures. Economics and environments. Our young people need to know geography in order to understand today's world—and succeed in tomorrow's.

- How does geography impact the lives of people around the world?
- Develop an Awareness of Place
- Develop Locational Skills and Understanding
- Using Children's Literature to Teach International Perspectives

Going Digital

Explore website:

1. **National Geographic http://education.nationalgeographic.com/education/teaching-resources/?ar_a=1**
2. **Pinterest**

https://www.pinterest.com/Cre8iveCre8tion/teaching-geography/

Video:

1. **Jay leno video http://www.youtube.com/watch?v=7_pw8duzGUg**

Why geography video http://www.youtube.com/watch?v=CGpas-GPjvQ

15 W 10/25 Using Assessments to Drive Instruction

How do you want to be as a teacher? The Power and Responsibility of Assessing Students

- Formative (Informal) and Summative (Formal) Assessment
- Data driven decision making using student work samples
- Issues of Equity in Assessing ALL Students

Going Digital

- **Read:** Formative Assessment: one of the following articles and discuss both articles with partner

  1. **http://www.ascd.org/publications/educational-leadership/mar14/vol71/num06/The-Bridge-Between-Today's-Lesson-and-Tomorrow's.aspx**

  2. http://www.edutopia.org/blog/dipsticks-to-check-for-understanding-todd-finley

Supplemental

Video - Travel Journals as Student Portfolios

1. http://www.edutopia.org/practice/creating-travel-journals-assess-learning
2. Self reflection: student led conferences

http://www.edutopia.org/practice/student-led-conferences-empowerment-and-ownership

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16 M 10/30 Online Class-Tech Plunge

- **Learn about Web 2.0 tools that can be utilized for collaboration, networking, and learning.**
- **Understand the process of creating a digital-rich classroom from concept to implementation.**
- **Focus on strategies for engaging students of all abilities.**

Surf technology resources on LiveBinder at both sites

(1) general tech sites http://www.livebinders.com/play/play?id=112855

(2) ipod-touch and ipad apps- http://www.livebinders.com/play/play?id=36989

Discussion Prompt:

Create an annotated list of at least 8 of your favorite digital resources and how you might use them in your classroom to ensure student engagement and learning for ALL.

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17 W 11/1 Mathematics-Examining the Common Core

CCSS in Mathematics
Counting and Cardinality (K) Number & Operations in Base Ten Number & Operations-Fractions
Operations and Algebraic Thinking
Measurement and Data
Geometry
Eight Mathematical Practices-

- ☐ 1. Make sense of problems and persevere in solving them.
- ☐ 2. Reason abstractly and quantitatively.
- ☐ 3. Construct viable arguments and critique the reasoning of others.
- ☐ 4. Model with mathematics.
- ☐ 5. Use appropriate tools strategically.
- ☐ 6. Attend to precision.
- ☐ 7. Look for and make use of structure.
- ☐ 8. Look for and express regularity in repeated reasoning.

Common Core Mathematics

- **Counting and Cardinality (K)**
- **Number & Operations in Base Ten**

Assist students to develop conceptual understanding and skills, use math vocabulary as they talk about their mathematical thinking, and connect big ideas to meaningful independent exploration and practice.

Going Digital:

Websites to build number sense

http://list.ly/list/1uC-elementary-math-websites-to-build-number-sense

- **Explore website(s)**

http://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf

Supplemental Videos:

1. **Number Sense-Grade 3 patterns, skip counting by 200s-**

https://www.teachingchannel.org/videos/teaching-number-patterns?fd=1

2. **Number Sense 3-5 multiplication and division-**

https://www.teachingchannel.org/videos/multiplication-division-in-the-core **Connection to theory in classroom applications**
18 **M 11/6 Geometry** Domains A, C, D, E Geometry and Spatial Reasoning Measuring: Time/ Length/ Volume/ Weight/ Distance **Going Digital** Grade 6: Perimeter and area: 22 at a table https://www.teachingchannel.org/videos/real-world-geometry-lesson?fd=1 **Connection to theory in classroom applications** **Why Geometry? Live Binders- Geometry** **Grade 6 22 perimeter and area 22 at a table https://www.teachingchannel.org/videos/real-world-geometry-lesson?fd=1**
19 W 11/8 Unit DUE **Micro teaching #2-Share your Unit with your home team.** **A SURPRISE EXPERIENCE!**
20 M 11/13 Online Class –The Power of the ARTS **Going Digital** **http://www.livebinders.com/play/play?id=68904** http://www.livebinders.com/play/play?id=946980 Identify 10 resources in the ARTS that you would like to use in your future classroom.
21 W 11/ 15 **Mathematics** Problem Solving, Reasoning & Eight Mathematical Practices • More in-depth explanation of 8 practices http://www.corestandards.org/Math/Practice/ **Teaching mathematics from a problem solving perspective** • math computation in story context (i.e. story problems) • Authentic mathematical problem solving

- Solving logic problems

Going Digital

Read: Solving Word Problems

- **Read-You can't do that with a worksheet.**

http://www.ascd.org/ascd-express/vol8/824-livers.aspx

Supplemental Videos:

- Choose 3 ways

https://www.teachingchannel.org/videos/problem-solving-math

- Perseverance 3-5

https://www.teachingchannel.org/videos/math-practice-standard-perseverance

- https://www.teachingchannel.org/videos/persist-through-challenges-perts

22 **M 11/20 Online Class-Video Editing**

Wednesday 11/22 No Class due to USD Thanksgiving Holiday

23 M 11/27 Operations and Algebraic Thinking

Algebraic Thinking-Develop techniques to help students:

- **recognize, construct, extend, create, analyze, generalize, and describe patterns**
- **use pattern-based thinking to understand and represent mathematical and real-world phenomena**
- **determine mathematical rules and develop an understanding of functional relationships**

Measurement and Data

- **formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;**
- **select and use appropriate statistical methods to analyze data;**
- **develop and evaluate inferences and predictions that are based on data;**

Web-based links:

1. **Graph Your Favorite….**

http://www.1.minn.net:80/~schubert/Graph.html

2. **National Center for Educational Statistics**

http://nces.ed.gov/nceskids

3. **Math teaching strategies**

https://mathteachingstrategies.wordpress.com/2008/11/24/data-analysis/ **Supplemental Video:** https://www.teachingchannel.org/videos/3rd-grade-graphing-lesson?fd=1
24-W 11/29 Practicum Assignment Due **Share video tapes and reflections** **Guest Speakers-Panel of 1st year teachers who are USD alums**
25 M 12/ 4 Math Micro teaching Micro-teaching #3: Mathematics Domains A, B, C, D, E Self and Peer-Mediated Reflections Micro Teaching –Mathematics: A Jigsaw teaching strategy Gallery sharing
26 W 12/6 Content Synthesis-Science, Social Studies, Mathematics ***Big Idea*: HOW DO YOU WANT TO BE AS A TEACHER?** **Becoming a Professional Learner** • How are you going to provide for Equity and Access for ALL students? • How are you going to prepare your students to be world-minded citizens? **How are you going to help your students become aware of issues that affect the planet** and their responsibility to contribute their talents to making it better?
27 M 12/11 Mock Interviews Putting it all together: What did we learn? **Closure**
28 W 12/13 **Individual student conferences with instructors**

Course Assignments and Grading

I. STE(A)M Curriculum Unit (TPEs 1, 2, 3, 4, 5)

Each class member will prepare an interdisciplinary STEAM (Science, Technology, Engineering, Arts and Mathematics) unit of study that will advance **K-6 students' understanding of the sciences**. The lessons in this unit will meet the ***California Common Core State Literacy Standards for Science, NGSS-Practices*** and ***The California Common Core State Standards: Mathematics (CA CCSSM) and Language Arts*** while addressing **Universal Access for All Students**. The Unit will also advance **K-6 students' understanding of other nations, cultures and/or global ecological issues.**

GUIDELINES

1) Title of STE(A)M Unit and Grade level (K-6)

2) Introduction Letter to Parents (Address why STE(A)M understanding is important for students in the 21st century how the unit addresses key STE(A)M understanding.) List California Standards and any additional goals for students.

3) 10 individual lessons on a TK-6 grade level science topic:

Within the science-based unit include the following:

- **Evidence that you have included the 3 areas of Universal Design for Learning (UDL)-multiple means of engagement, multiple means of representation, and multiple means of expression. More information on UDL will be provided in class.**
- **1 lesson that incorporates CA-CCSS in mathematics (graphing, problem solving, measurement, statistics)**
- **1 lesson that incorporates CA-CCSS in literacy focusing on *close reading* strategies using *information text***
- **1 lesson that incorporates a NGSS engineering activity**
- **1 lesson that incorporates drama, art, movement or music**
- **1 lesson that incorporates student use of digital technologies**
- **1 lesson that incorporates global-international content and/or diverse cultural perspectives**
- **1 Changemaking project* that will provide opportunities for TK-6 students to engage in both problem-finding and problem-solving at the local or global level**

*** Changemakers: a global community of leading elementary, middle and high schools that prioritize empathy, teamwork, leadership, problem-solving and changemaking as student outcomes. These schools are leading a transformation in education that supports children as changemakers – individuals with the skill set and connection to purpose that enable them to generate ideas and take initiative to effectively solve problems and drive positive change.**

4) A Summative Assessment for the entire unit that is Performance or Portfolio based and includes a Scoring Rubric allowing students to show some depth of understanding with respect to the standards/objectives.

SCORING RUBRIC FOR THEMATIC UNITS

3. Above Standard

Meets all of the criteria for the (2) score and goes beyond in at least 3 of the following ways:

A. A wide variety of evidence-based instructional strategies (ex. Graphic organizers, simulations, inquiry, technology-enhanced, problem-based) are included in unit

B. The integration of the 3 areas of UDL (multiple means of engagement, multiple means of representation, and multiple means of expression) are evident throughout the unit.

D. Digital technologies are present throughout the unit.

E. Multiple global/international connections are present in unit

E. Changemaking Project objectives and activities are extremely thorough

2. At Standard

A. Curriculum Integration-There is representation of interdisciplinary curriculum in lesson.

B. Standards-based-The unit is fully aligned to specific Science, Math and Literacy standards.

C. Lesson Clarity-Each lesson is written clearly and follows the format of the lesson design taught in class.

D. Differentiated Learning Strategies for learners with identified needs are present in every lesson

E. Assessment-Each lesson has a **Formative** (ongoing and more informal) and a **Summative** (at the end and more formal) assessment.

1. Below Standard

A. Curriculum Integration- Not all required subject areas are present in the thematic unit

B. Goals and Standards-Unit's does not have goal statement and/or unit is missing standards alignment
C. Lesson Clarity- Lesson plans are sketchy or difficult to understand.

II. Practicum Assignment- LESSON ANALYSIS AND SYNTHESIS

Complete a practicum of on-site classroom observation.

- Observe and support instruction in the classroom of the cooperating teacher
- Teach two lessons and videotape one of them. These lessons should be planned with the guidance of the cooperating teacher.
- Students are expected to observe and reflect upon data demonstrating evidence of student learning.
- Students are expected to draw connections between practicum observations, course readings and experiential activities with in-class reflective blogs.

Procedures:

- Design and plan 2 lesson plans for your classroom according to the model taught in class.
- Video tape one lesson while your Implement it in your practicum
- Write a reflection of your videotaped lesson according to the protocol below.
- Select 5-7 min. clip to be shared with 1-2 other students during class.

Your lesson reflection should include the following elements. You are strongly encouraged to respond to *all* of the questions below.

- **Content Learning Objective – What did you want students to know and be able to do at the end of this lesson? What *content* does this lesson address? (Include standards from the Common Core/NGSS.)**
- **Academic language demands: Text(s)-- Describe the academic language demands of the text(s) that will be used in this lesson. What words or phrases were challenging for students? How did you address that in your teaching?**
- **Anticipatory Set – Discuss how your introduction attempted to engage students' curiosity and/or drew on their prior learning.**

- **Instruction –Discuss your use of modeling in the lesson. What evidence-based teaching strategies did you use? How did you use elements of UDL and/or differentiated instruction so that all students would have access to the lesson?**
- **Assessment-What did do to assess students' learning during the instruction (formative) and at the end of the lesson (summative)? Were there any misunderstandings that continued to exist after the lesson?**
- **Reflection**
    - **Lesson revision –If you could go back and teach this lesson again to the same group of students, what would you do differently? How would the changes improve the student learning and/or outcomes for specific sub groups of students.**
    - **Theories: Discuss educational models, theorists, and research support for the strategies used in this lesson? References to specific readings are highly encouraged.**
    - **What did you learn from this lesson about yourself as a teacher? How will this learning inform future lessons?**

SCORING RUBRIC FOR LESSON ANALYSIS AND SYNTHESIS

3 Above Standard: Analysis and synthesis are extremely insightful and provide many details and/or examples.

2 At Standard: Student has fully addressed all of the components of the lesson analysis.

1 Below Standard: Student has not fully addressed the components of the lesson analysis and/or the reflection is cursory.

III. Final Synthesis of Subject Specific Pedagogical Knowledge

Throughout the semester you will be engaged in learning tasks that exemplify best practices in standards-based instruction in science, mathematics, and social studies with the goal of gaining competence in (1) knowing and presenting accurate content of each discipline, (2) using subject specific pedagogical processes, (3) using *best practice* instructional strategies and elements of universal design for learning (UDL), (4) using formative and summative assessment strategies to support content and learning outcomes, and (5) selecting appropriate digital and other resources to enhance the learning goals for all students. You will compile your analysis of these tasks into a course portfolio with 8 entries. Models of this assignment will be given in class.

Portfolio Reflection Sheet

Activity:
Address at least one of the following questions: Why did you select this entry for your portfolio? What does it demonstrate about your learning? What insights did you have about the teaching/learning process? (**Note: Do not include a description of the activity)**

Web-based Learning Connection(s) (TPE 14)
List digital app or internet site that could support teachers and/or students in learning the content and give a one sentence description.
App or url:

Description:

Connection to Global/International Ideas
Does this entry have a connection to Global/International Topic? If so, briefly explain.

Theory into Practice
To show evidence of critical thinking apply what you learned by doing this task and relate to theory (frameworks, textbook, readings, lectures, videos, etc.) and to practice via your practicum.

Prompt: This activity is supported by course readings (or videos) as evidenced by….. (discuss specific articles or videos and how they relate to the activity) and demonstrates principles of good practice….. (discuss any practicum experiences that relate to activity.)

SCORING RUBRIC FOR COURSE PORTFOLIO

4. EXCEPTIONAL
A. must meet all the criteria for a score of 3
B. All writing is correct, scholarly, linked to readings, and shows that candidate has been extremely insightful regarding learnings in class.

3. ABOVE STANDARD
A. must meet all the criteria for a score of 2
B. Each piece of writing is detailed and routinely cites at least 2 specific pieces of information found in the readings, framework & standards documents, videos and classroom lectures.

2. AT STANDARD
A. Portfolio is complete and has 10 required assignments.
B. Each piece of writing cites at least one specific piece of information found in the readings, framework & standards documents, videos and classroom lectures.
C. Student has solid attendance record.

1. BELOW STANDARD
A. Portfolio is missing assignments
B. Reflections are cursory and do not indicate whether or not student has read the required materials or has learned the required information.

COURSE GRADE SHEET
EDUC 385/585

Area		Total Possible Points	Your Points
I.	STEAM Unit	3	
II.	Lesson Analysis and Synthesis	3	
III.	Portfolio Assessment and Conference	4	

Late unit or portfolio -1 pt. for each.

TOTAL POINTS_____ FINAL GRADE_____

10 =A 7=B
9 =A- 6=B-
8 =B+ 5=C

BELOW 5 = Consultation with instructor-may result in D, F or I

More than 1 unexcused absence will result in one or more points deducted from total score. All absences, excused or unexcused will need to do a make-up reflection. Please discuss with your instructor any situations that occur that will cause you to miss class.

Requests for Accommodation

Reasonable accommodations in accordance with the Americans with Disabilities Act will be made for course participants with disabilities who require specific instructional and testing modifications. Students with such requirements must identify themselves to the University of San Diego Disability Services Office (619.260.4655) before the beginning of the course. Every effort will be made to accommodate students' needs, however, performance standards for the course will not be modified in considering specific accommodations.

Grade of Incomplete:
The grade of Incomplete ("I") may be recorded to indicate (1) that the requirements of a course have been substantially completed but, for a legitimate reason, a small fraction of the work remains to be completed, and, (2) that the record of the student in the course justifies the expectation that he or she will complete the work and obtain the passing grade by the deadline. It is the student's responsibility to explain to the instructor the reasons for non-completion of work and to request an incomplete grade prior to the posting of final grades. Students who receive a grade of incomplete must submit all missing work no later than the end of the tenth week of the next regular semester; otherwise the "I" grade will become a permanent "F."

A Petition for a grade of incomplete must accompany all requests for an incomplete at the end of the course term. Criteria for changing a grade of incomplete to a letter grade must be negotiated with the instructor before the final class. The criteria must be outlined on the signed Incomplete Request Form. A completed form with both the instructor and student signature must be turned in by the last session of the class. Without a student signed form the registrar requires assignment of a grade of F. A student must complete an incomplete by the 10th week of the next session or a grade of F is permanently calculated in the overall grade point average. Any attempts to complete an incomplete after the 10-week deadline requires the approval of the Associate Dean of the School of Education.

SOLES On-line Course Evaluation
Student evaluations in SOLES are collected via an on-line system that maintains student anonymity. SOLES uses these evaluations for continuous improvement of course content and instruction and as a component of its regular performance review of faculty members, so please take them seriously. Course evaluations are available to students in their MySanDiego accounts via the Active

Registration link on the One-Stop Services tab. Your instructor will provide you with instructions on how to access the evaluations once they are activated near the scheduled conclusion of your course.

Statement on Plagiarism
The complete plagiarism policy is available for your review at:
http://www.sandiego.edu/associatedstudents/branches/vice_president/academics/honor_council/integrity_policy.php

All members of the University community share the responsibility for maintaining an environment of academic integrity since academic dishonesty is a threat to the University.

Acts of academic dishonesty include: a) unauthorized assistance on an examination; b) falsification or invention of data; c) unauthorized collaboration on an academic exercise; d) plagiarism; e) misappropriation of resource materials; f) any unauthorized access of an instructor's files or computer account; or g) any other serious violation of academic integrity as established by the instructor.

It is the responsibility of the instructor to determine whether a violation has occurred. An act of academic dishonesty may be either a serious violation, or, if unintentional, an infraction (a non-serious violation of course rules). If the instructor determines that an infraction (as opposed to a serious violation) has occurred, the instructor can impose penalties that may include: a) reduction in grade; b) withdrawal from the course; c) requirement that all or part of the course be retaken; and d) a requirement that additional work be undertaken in connection with the course or exercise. Students may formally challenge the instructor's determination of infraction (see below).

Instructors shall report all violations, whether, infractions or serious violations, both to the Dean's office and the student using the Academic Integrity Violation Preliminary Worksheet. The Associate Dean will contact the student and ensure she or he is aware of the Academic Integrity policy. The Associate Dean will appoint a hearing committee only when: 1) the instructor reports that a serious violation occurred, or 2) the instructor reports that an infraction occurred and the student wishes to appeal the determination of infraction.

The hearing committee will include, in addition to the Associate Dean, a faculty member and two students from the School of

Leadership and Education Sciences, and a faculty member from outside the School of Leadership and Education Sciences. If the hearing committee determines that a serious violation has occurred it also will determine sanctions to be applied which may include: a) expulsion from the University; b) suspension from the University for up to one year; c) a letter of censure; and d) imposition of a period of probation. If the hearing committee determines an infraction has occurred the penalty imposed by the faculty member will be upheld. If the hearing committee determines that no serious violation or infraction has occurred, it will request the instructor to take action consistent with that determination. If the hearing committee determines that expulsion is the appropriate sanction the student may appeal to the Provost.