Fall 2024 EDEL

Department of Curriculum and Instruction
EDEL 4180- Curriculum and Teaching of Elementary Science (3 units)

*This living document syllabus is subject to change

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Class Location: Zoom ID: 824 6057 8754
Passcode: Science
Link: https://lausd.zoom.us/j/82460578754?pwd=RG90ZFVUckFBTExUd3luZzFHaml5QT09
Phone/Office: None: Online Course
Day/Time: Thursdays 7:25 – 10:10 pm
Office Hours: Scheduled by Request: Weekends (6-8 PM) or Weekdays (6-8 PM)

I check email regularly, though most commonly early morning, evenings, and weekends. I endeavor to respond to all emails within 24 hours.

Course Readings

All readings will be articles or resources provided as free PDF downloads in this syllabus and/or inside your CANVAS course. Materials needed for investigations will be made available for pick-up a week in advance and some common household items will be used. Information for materials pick-up will be made available on first class and via email reminder.

Catalog Description

EDEL 4180: Analysis, application, evaluation of strategies for transformative teaching of elementary school science in urban classrooms. Instructional strategies and curricular themes in science taught in elementary schools. A professional course intended for prospective elementary teachers of science. Analysis and evaluation of current methods and trends in the teaching of science in the urban setting: includes current science education research, instructional materials, community resources, and media methods.

Professional Statements

A. Theme and Conceptual Framework for Professional Preparation

The faculty members of the Charter College of Education have adopted the organizing theme of "Preparing Educators to Serve the Culturally and Linguistically Diverse Population of Urban Schools and Related Institutions of the 21st Century" for all programs for professional educators at California State University, Los Angeles. This theme is reflected in this course by course content and performance standards; lecture topics; suggested readings; and rubrics described in this syllabus. The diagram at the end of the syllabus provides the conceptual framework for the theme and supports the preparation of professional educators by the members of the Cal State LA Charter College of Education faculty.

B. Statement of Reasonable Accommodation
The Charter College of Education faculty members fully support the Americans with Disabilities Act (ADA). The members of the faculty will provide reasonable accommodation to any student with a disability who is registered with the Office of Students with Disabilities (OSD) who needs and requests accommodation. The faculty member may wish to contact the OSD to verify the presence of a disability and confirm that accommodation is necessary. The OSD will arrange and provide for the accommodation. Reasonable accommodation may involve allowing a student to use an interpreter, note taker, or reader; accommodation may be needed during class sessions and for administration of examinations. The intent of the ADA in requiring reasonable accommodation is not to give a particular student an unfair advantage over other students, but simply to allow a student with a disability to have an equal opportunity to be successful.

OSD is located on the first floor of the Administration Bldg. Room 127 (near Financial Aid and Registrar). The office can be contacted at OSD@calstatela.edu or (323)343-3140.

Special Note: *If you have a disability that may impact your learning in this course, you are encouraged to make an appointment with me as soon as possible so that we can discuss your needs and accommodations. I am available to meet throughout the semester as needed in order to support reasonable accommodations.*
Other student supports on the Cal State L.A. Campus:

- Student Health Services: http://www.calstatela.edu/studenthealthcenter
- Food Pantry: University Student Union Room 308
- CalFresh Outreach Center: http://www.calstatela.edu/studentservices/calfresh
- Graduate Writing Support Program: http://www.calstatela.edu/graduateresourcecenter/graduate-writing-support-program
- Glazer Family Dreamers' Resource Center: http://www.calstatela.edu/ab540

All Gender Restrooms:

- La Kretz Hall, Floors 1, 2, and 3
- Library Palmer Wing, LPW 1065 and LPW 1067 Salazar Hall, Applied
- Gerontology, SH 107 and SH 108 Simpson Tower, ST 821 and ST 822
- Student Union, Second Floor
- Theater Arts, TA 126

Lactation Rooms (Please contact the Title IX Coordinator at 323.343.3041 to request access):

- Administration, ADM 304
- King Hall, KH 154A
- Salazar Hall, SH 129A
- University Student Union, USU 206

C. Student Conduct
Student conduct is viewed as a serious matter by the faculty members in the Charter College of Education. The Charter School faculty members assume that all students will

conduct themselves as mature citizens of the campus community and will conduct themselves in a manner congruent with university policies and regulations. Inappropriate conduct is subject to discipline as provided for in Title 5, California Code of Regulations (see Student Conduct: Rights and Responsibilities, and Student Discipline, Cal State LA eCatalog). Academic honesty is expected of all students in the Charter College, in accordance with University policy. There are established university reporting procedures if a student is suspected of committing an academically dishonest act. ****Please read relevant sections of the APA manual regarding plagiarism and academic scholarship****

D. Technology
Courses in the Charter College of Education require a high level of technological literacy along with access to current technology in order to assure student success. In all undergraduate, credential, certificate and graduate courses, students in the CCOE are expected to:

1. Have access to an internet accessible device that will meet the technology requirements of the course in which the student is enrolled.
2. Have sufficient working knowledge of this device, its applications and operating system to use it for their classes, as well as how to keep its operating system and applications up to date.
3. Use a Cal State LA email account for all course and university-related communication.
4. Access the current campus learning management system (e.g., Canvas) on a regular basis as required by the course in which they are enrolled.
5. Use campus technology resources including the Cal State LA portal, Open Access labs and ITS Help Desk as needed.

Students should anticipate that their use of these skills will be integrated into courses within their programs. Students who are unable to meet any of the above expectations are strongly advised to take an introductory technology course or ITS workshop upon enrollment in the Charter College of Education.

Note: Given the strong focus on supporting the use of technology to enhance learning experiences in our course and in preparation for teaching and collaborating with other teachers in our future classrooms, (e.g. CANVAS, online discussion postings, sharing of lesson plans, etc...) it is imperative that students have access and are able to use technology such as CANVAS, Google Drive and Dropbox.

Statement on “email as an official form of communication at CSULA”
Cal State L.A. 's “official” means of communicating with students is through electronic mail (e-mail) using students’ Cal State L.A. assigned email address. E-mail provides an environmentally sensitive, timely, and cost-effective means of communicating University business and academic information. Students are expected to access their Cal State L.A. email account on a regular basis so that official university, college, department and course communications are delivered and received in a timely manner, and students do not miss important communications. Students are considered to have been “officially notified” when information is sent to their Cal State L.A. email address. If you wish, you may forward your Cal State L.A. emails to another account. This is easily done by

following the instructions that may be found at the following link: http://www.calstatela.edu/its/docs/pdf/forwarding_emails.pdf

Dr. Ynigo's Electronic Policy: I highly encourage and welcome emails from students! This means that if you have questions, feel confused, need extra assistance on assignments or just don't know what's going on in class (as this sometimes happens to all of us) please email me at my CALSTATELA email as soon as possible. This is: jynigo2@calstatela.edu ***Transparency is key!*** I have found over the course of teaching college level courses, students are either uncomfortable asking questions during class/online, and/or rely heavily on peers who may also have their own unanswered questions. Please do not wait until the last minute to ask important questions--especially sending emails to CANVAS about assignments at the last minute-- which may then take away from meaningful experiences for **ALL** of us. Although I understand we all have responsibilities and are busy people outside the confines of our classroom spaces, and now especially online, a community can only be built when we are willing to ask questions, be present and engaged. Hence, please email me anytime you have questions. I can meet during office hours with a proper appointment.

Note: Redirecting your email does not relieve you of your responsibilities associated with official communication sent by Cal State L.A.

Important Note: *If you would like to receive a real-time text notification in the case of a campus emergency, please sign up at http://www.calstatela.edu/univ/police*

What should I do if I believe I may have been exposed to COVID 19?

If you are a student and you think you have come in close contact with someone with COVID-19 (living in the same household, intimate partner, caregiver, being within six feet of the ill individual for more than 10 minutes), please take the following steps:

- *Stay informed and use phone/technology to communicate with friends and family.*
- *Call your medical provider and follow their advice. We ask that you also contact the Student Health Center at (323) 343-3302. For other information and hours of operation, please visit the Student Health Center webpage.*
- *Follow current self-quarantine guidelines.*
- *If you must leave home, keep your distance from others.*
- *Monitor for symptoms of COVID-19 including fever, cough, and shortness of breath or trouble breathing. Symptoms may also include chills, body aches, sore throat, headache, diarrhea, nausea/vomiting, and runny nose.*

What do I do if I test positive for COVID-19?

We urge any students who test positive for COVID-19 to contact the Student Health Center at (323) 343-3302. When Cal State LA learns of individuals in our community who test positive, we can offer direction and support, and assess any potential issues that may need to be addressed. We will target outreach to those individuals who may need to take additional measures to safeguard their own health or the health of others.

LA County Department of Public Health Guidelines:

Isolation Instructions
English | Español

Prevent the Spread of COVID-19 at Home
English | Español

LAC DPH Guidelines for COVID-19 Cases (Isolation) and Close Contacts
English | Spanish

COVID-19 Rebound
English | Español

Land Acknowledgement

Every community owes its existence and vitality to generations from around the world who contributed their hopes, dreams, and energy to making the history that led to this moment. Some were brought here against their will, some were drawn to leave their distant homes in hope of a better life, and some have lived on this land for more generations than can be counted. Truth and acknowledgment are critical to building mutual respect and connection across all barriers of heritage and difference. We begin this effort to acknowledge what has been buried by honoring the truth. We are currently occupying ancestral land of the Tongva people. In our work to promote social justice in education we must always consider the many legacies of violence, displacement, migration, and settlement that bring us together here today.

This statement is drawn from the U.S. Department of Arts and Culture #HonorNativeLand initiative. You can learn more here (https://usdac.us/nativeland).

Student Learning Outcomes (SLO)

Upon completion of EDEL 4180, students will be able to:
SLO 1: Describe current national and state standards for science learning and anticipated changes in the Next Generation Science Standards (NGSS).
SLO 2: Plan instruction that helps students meet current and NGSS standards.
SLO 3: Evaluate and adapt curriculum materials to meet the specific needs of your student population.
SLO 4: Utilize methods to help students develop an understanding of concepts and facts, not just rote memorization.
SLO 5: Utilize methods to help ALL students understand science and become confident in their ability to do science.
SLO 6: Utilize technology to enhance science learning.
SLO 7: Design science learning experiences for your students which engage students in scientific inquiry.
SLO 8: Use a variety of methods to assess students' science thinking and various levels of understanding of science concepts and procedures, and plan instruction based on those understandings.

California Commission on Teacher Credentialing Standards and Teacher Performance Expectations Addressed in the Course

Please visit the California Commission on Teaching Credentialing for more Information on credentialing standards in the State of California:https://www.ctc.ca.gov/docs/default-source/educator-prep/standards/adopted-tpes-2016.pdf

California Teacher Performance Expectations (TPE)

TPE 1: Engaging and Supporting Students in Learning

1. Apply knowledge of students...
2. Maintain ongoing communication with students and families...
3. Connect subject matter to real-life contexts and provide active learning experiences to engage students...

4. Use a variety of developmentally and ability-appropriate instructional strategies, resources, and assistive technology, including principles of Universal Design of Learning (UDL) and Multi-Tiered System of Supports (MTSS) to support access to the curriculum...
5. Promote students' critical and creative thinking and analysis...
6. Provide a supportive learning environment for students' first and/or second language acquisition...
7. Provide students with opportunities to access the curriculum by incorporating the visual and performing arts...
8. Monitor student learning and adjust instruction...

TPE 2: Creating and Maintaining Effective Environments for Student Learning

1. Promote students' social-emotional growth, development...
2. Create learning environments (i.e., traditional, blended, and online) that promote productive student learning
3. Establish, maintain, and monitor inclusive learning environments...
4. Know how to access resources to support students
5. Maintain high expectations for learning with appropriate support...
6. Establish and maintain clear expectations for positive classroom behavior ...

TPE 3: Understanding and Organizing Subject Matter for Student Learning

1. Demonstrate knowledge of subject matter...
2. Plan, design, implement, and monitor instruction consistent with current subject-specific pedagogy...
3. Individually and through consultation and collaboration..., plan for effective subject matter instruction...
4. Adapt subject matter curriculum, organization, and planning to support the acquisition and use of academic language within learning ...
5. Use and adapt resources, standards-aligned instructional materials...
6. Model and develop digital literacy by using technology to engage students...
7. Demonstrate knowledge of effective teaching strategies with technology standards

TPE 4: Planning Instruction and Designing Learning Experiences for Students

1. Locate and apply information about students' current academic status, content- and standards-related learning needs and goals...
2. Understand and apply knowledge of the range and characteristics of typical and atypical child development to help inform instructional planning...
3. Design and implement instruction and assessment that reflects the interconnectedness of academic content areas...
4. Plan, design, implement and monitor instruction, making effective use of instructional time...
5. Promote student success by providing opportunities for students...
6. Access resources for planning and instruction...
7. Plan instruction that promotes a range of communication strategies and activity modes ...
8. Use digital tools and learning technologies across learning environments....

TPE 5: Assessing Student Learning

1. Apply knowledge of the purposes, characteristics, and appropriate uses of different types of assessments*

2. Collect and analyze assessment data from multiple measures and sources to plan and modify instruction...
3. Involve all students in self-assessment and reflection on their learning goals and progress...
4. Use technology as appropriate to support assessment administration, conduct data analysis...
5. Use assessment information in a timely manner to assist students and families in understanding student progress in meeting learning goals.
6. Work with specialists to interpret assessment results from formative and summative assessments...
7. Interpret English learners' assessment data to identify their level of academic proficiency in English...
8. Use assessment data, including information from students' IEP, IFSP, ITP, and 504 plans, to establish learning goals and to plan, differentiate, make accommodations and/or modify instruction.

TPE 6: Developing as a Professional Educator

1. Reflect on own teaching practice and level of subject matter and pedagogical knowledge...
2. Recognize own values and implicit and explicit biases...
3. Establish professional learning goals and make progress to improve practice....
4. Demonstrate how and when to involve other adults and to communicate effectively with peers and colleagues, families...
5. Demonstrate professional responsibility for all aspects of student learning and classroom management...
6. Understand and enact professional roles and responsibilities as mandated reporters...
7. Critically analyze how the context, structure, & history of public education in California affects/influences

TPE 7: Effective Literacy Instruction for All Students

1. Plan and implement evidence-based literacy instruction…
2. **Plan and implement evidence-based literacy instruction…**
3. Incorporate asset-based pedagogies, inclusive approaches, and culturally and linguistically affirming and sustaining practices in literacy instruction…
4. Provide literacy instruction (and integrated content and literacy instruction) for all students…
5. Develop students' skills in print concepts, including letters of the alphabet; phonological awareness…
6. Engage students in meaning making by building on prior knowledge and using complex literary and informational texts…
7. Promote students' oral and written language development…
8. Develop students' effective expression as they write, discuss, present, and use language conventions.
9. Promote students' content knowledge by engaging students in literacy instruction, in all pertinent content areas…

In compliance with regulations of The Higher Education Opportunity Act of 2008 (HEOA), an institution must educate and inform its community about appropriate versus inappropriate use of copyrighted material. Materials used in connection with this course

may be subject to copyright protection under Title 17 of the United States Code. Under certain Fair Use circumstances specified by law, copies may be made for private study, scholarship, or research. Electronic copies should not be shared with unauthorized users. If a user fails to comply with Fair Use restrictions, he/she may be liable for copyright infringement.

Fieldwork Requirements for EDEL 4180

Before the pandemic, it was required that teacher candidates complete 15 hours of fieldwork in K-12 classroom settings in EDEL 4180, as part of the 600-hour requirement (which includes Directed Teaching) by the California Commission on Teacher Credentialing (CTC). Once the pandemic started, the CTC issued a statement allowing programs to include other supervised activities to meet the fieldwork hour requirement prior to Directed Teaching. Since we are still feeling the impact of COVID and variants in our area, the TE program is continuing these supervised fieldwork activities, including remote and online fieldwork experiences, that your methods instructors have already thoughtfully embedded in their syllabi.

This might include (Science and/or Engineering):

- Video observation and analysis
- Collaboration with experienced teachers in the field or online
- Planning instruction (e.g. creating lesson plans)
- Delivering instruction (e.g. peer teaching) & reflecting on instruction
- Analyzing student work (e.g. helping teachers grade) analyzing notebooks
- Visiting a school website to learn about instruction, curriculum and programs
- Visit Google Maps and learn about the target school neighborhood & resources
- Connect instruction to NGSS implementation of 3-Dimensions
- Observe the culture of science/engineering in classrooms
- Conduct science talks
- Connect hands-on learning to NGSS Dimensions
- Create a sample electronic notebook (transfer physical to online)
- Develop a lesson plan from a hands-on class investigation

Hence, the 15 hours required for EDEL 4180 are embedded in your assignments. These can be done individually or in teams throughout the semester. This is not an exhaustive list. If you have an idea for an investigation that will help you learn more about teaching science and/or engineering, please feel free to discuss with me for pre-approval. Completion of all assignments in the course sequence are required to fulfill the 15 hour requirement.

Purpose of Course

Children have a natural fascination with the world around them, and often topics in science are of great interest to young children. The purpose of this course is to acquaint elementary teachers with various instructional principles and practices for engaging children in science in ways that help them develop in their abilities to explore and make sense of **their** (the) world. Although children are fascinated with the world around them and are “natural scientists,” most often, the way that science is taught in the classroom and represented in society tends to alienate or marginalize many students from science beginning in elementary school. We will attempt to do this by bringing your field experiences into the methods course and back into the classroom as you build your personal views of youth-centered, equity and justice-oriented science teaching.

In this class, we will explore children's engagement with science, ask questions about what that means, and work towards creating ways to make science teaching meaningful, relevant, challenging, and engaging for children in your (future) classrooms. Most importantly, we will ask questions as to why some children disengage with science including the role expectations of schools, the perception of "who can do science" in society and within the profession, and what it means to know science (epistemology) do science (methods), and become in science (ontology). *Science has had a history of being exclusionary to those who do not find its supposed objective nature attractive. At the same time, science is inherently political, but what does that mean for our work as science teachers?* The purpose of this course is to unpack what this means and develop science instruction that reaches students and connects to their lives rather than alienating them further from the field and the potential impacts this has on children's social futures and educational pursuits.

The major themes and questions that guide this course are:

1. What is science? What does science mean to me?
2. What does science mean to children?
3. How do children learn science?
4. What does it mean to do youth-centered, equity-oriented and inquiry-based science teaching for all students?
5. How can I teach science in meaningful and engaging ways for all students?

We will look at these questions by exploring what it means to teach science to all learners while also being informed by the Next Generation Science Standards (NGSS) in relation to context. Hence, in this class, context is very important. Communities across large cities like Los Angeles and San Francisco and smaller, more rural cities in other parts of California--and across the country--presents us with complex, yet fascinating contexts for teaching. Urban districts teach the vast majority of the children in this country and they also serve a wide-range of students in terms of race, class, language, gender, among other isms. Similarly, communities provide us with a wealth of cultural resources from museums, libraries and cultural spaces--all places where science can and does happen.

Thus, the purpose of this course is to engage you in the foundational theory and practice of teaching science to diverse elementary students. To teach science so that all students learn science well, teachers need a strong professional knowledge base on which to rely on in making pedagogical decisions. However, no course can provide teachers with everything they need to know in order to teach science. Therefore, this course will begin by exploring the professional knowledge base and will engage you in the professional learning cycle so you can continue making critical decisions in your teaching career related to the topics presented in the course.

One of the greatest opportunities to learn in this class will be to view the work of science through the lens of youth knowledge and practice. With the unprecedented turn that history took last semester with the onslaught of COVID-19 on our lives--in ways that changed our daily routines, the practices within and for our families and the critical changes in the educational lives of our students (one that we know they may never recover from and which is a critical civil rights issue at this moment in time) --we must convince ourselves that science education is in all that we do. Hence, these critical questions of what science means to me, what science means to children and what that means for our future educational practice will be further investigated and looked at through the lens of the consequentiality of COVID-19 in our lives. Our lives as students, as teachers, community members, and as family members (parents, siblings, friends)

and experts. We will look at how our scientific literacy and response to the virus can impact our communities and our students--all which are inherently a part of our work in teaching.

Course Philosophy

Science impacts all that we do. As a subject, it is historically, politically and culturally embedded in our everyday lives --science is inherently tied to the decisions we make as people and as members of our communities. Hence, science teaching to me is best understood when we think of science as a culture. People who are scientifically literate can talk, think, act and identify within the discourse of science. They understand the beliefs, ways of knowing, and central assumptions that constitute making science-related choices for themselves and their communities. They understand how science is constructed, communicated, and used for and against whom and for what purposes. The teacher's job is to OPEN BORDERS TO THE CULTURE OF SCIENCE for students so that they too, can become participants in the culture of science.

Opening the borders to science, however, is challenging. Students whose home culture (or primary culture --not school culture) is similar to the culture of science can cross the borders into and out of the culture of science with relative ease. In other words, they have an easier time learning science. The ways that science has traditionally been taught in schools work to open the borders of science for these students. For many other students, crossing the borders of science is much more difficult. Their primary culture is different enough from the culture of science that the traditional ways of teaching science in school do not open the borders of science for them. For these students, learning science is very difficult and alienating.

One of the jobs of teaching science, then, is to determine how to open the borders of science for ALL students--regardless of class, race, gender, linguistic repertoire, and all other isms. This means understanding the culture of science, understanding the cultures of students, and then FIGURING OUT how to closely align the student's culture to the culture of science in the ways you teach, and they learn. Only then can the teacher work to build instructional sequences that help students think about science in ways that will help them understand science and its impacts on their lives.

Ideally, teachers would not have to build these instructional sequences on their own. Teachers should always be able to rely on curriculum materials and other resources to help them select instructional sequences that OPENS BORDERS to science for all students from diverse backgrounds. However, the reality is that many curriculum materials are not constructed to effectively help students learn science. The traditional response in science methods courses has been to teach teachers how to build their own instructional sequences. However, elementary teachers should be teachers, not curriculum developers. Elementary teachers don't have the time, experience and background to create their own material every time they teach. In another aspect, teachers are also given materials that they are required to teach, limiting the amount of culturally and socially relevant material they can include in their instructional sequences. Therefore, a more reasonable role is to support the critical uptake of curriculum materials, modify them to meet the needs of students in ways that your instruction can and should provide.

It is the philosophy of this course that teachers should select, evaluate and modify curriculum materials to build sequences that meet the DIVERSE NEEDS of students while also taking into account the CULTURE OF SCIENCE within its development. My goal is that in becoming critical users of curriculum materials in/with interacting with

fellow practitioners in this course, you will build a knowledge base and continue to develop it throughout your teaching career.

Course Schedule and Topics

This course will mostly be synchronous with some asynchronous components. The information on course meetings will be outlined in the course schedule and or updates will be posted to canvas and/or emailed.

We will meet on Thursdays from 7:25 - 10:10 PM via Zoom at this link:
Zoom ID: 824 6057 8754
Passcode: Science
Link https://lausd.zoom.us/j/82460578754?pwd=RG90ZFVUckFBTExUd3luZzFHaml5QT09

Segment Topic: Who are we and what is science to me?

Week 1: Course Introduction
Thursday, August 22, 2024 from 7:25 – 10:10 PM

Introduction to course: Review the course syllabus and formulate any questions you might have. These can be addressed in our introductory ZOOM Meeting or via email to the instructor. **TPE 1.4 (Introduce); TPE 2.1 (Introduce)**

For Consideration:
* What is your fondest elementary school experience? Why?
* Who are we as science learners, K-16 students and teachers?
* What is science and what does it mean to us, our families and communities?

* What are our hopes and fears of teaching science?
* What is our role in supporting science literacy for all?
TPE 1.1 (Introduce); TPE 1.3 (Introduce); TPE 3.2 (Introduce)

Readings:

- Review Syllabus and be prepared for ZOOM meeting starting at **7:25 PM**
- NGSS Standards: https://www.cde.ca.gov/pd/ca/sc/ngssstandards.asp
- (Video) How to Read NGSS: https://www.nextgenscience.org/resources/how-read-next-generation-science-standards

Making Connections: Consider your own schooling and teaching experiences; compare them to how our course assignments will connect to how children learn science.

Assignment: Discussion Post #1 – Post on your most memorable science or engineering experience and why you think it was so memorable. Discuss who we are as science learners and/or cultural artifact and reply to two peers. Due next class.

Preparation for next week:
Bring a composition book to next class and collect 4 - 6 different leaves from your neighborhood.

NOTES:

Week 2: Science Teaching, Standards and YOU
Thursday, August 29, 2024 from 7:25 – 10:10 PM

* **Think about** policies, history and perspectives around nationwide and statewide calls for *science for all* and its impacts on science teaching and practice **TPE 6.7 (Introduce)**
* **Familiarize yourself** with The Next Generation Science Standards (NGSS) and its impact on equitable science teaching? **TPE 3.6 (Introduce)**
* **Consider your role** in creating a science positive classroom and how your early experiences play a key role. **TPE 6.1 (Introduce)**; **TPE 6.2 (Introduce)**
* **Further your understanding** of "science for all" and explore how your experiences as a teacher and learner do or do not align with equitable access to quality science learning. **TPE 1.3 (Introduce); TPE 3.2 (Introduce); TPE 3.4 (Introduce); TPE 6.2 (Practice)**

Readings & Videos:

- NSTA Position Statement: Transitioning from Scientific Inquiry to Three- Dimensional Teaching and Learning. https://www.nsta.org/about/positions/3d.aspx
- NGSS APPENDIX A – Conceptual Shifts in the Next Generation Science Standards: https://www.nextgenscience.org/sites/default/files/resource/files/Appendix%20A%20-%204.11.13%20Conceptual%20Shifts%20in%20the%20Next%20Generation%20Science%20Standards.pdf

TPE 1.3 (Introduce) ; TPE 3.2 (Introduce)

Making Connections:
Visit your local elementary school neighborhood (walk around and/or Google Maps). Notice different places and spaces where youth play and/or hang out, the resources available to them and their families and the different connections you see to science and/or engineering.

Preparing your Science Notebook: We will be preparing a composition book to record our science learnings from class. This notebook will serve as a model for your future instruction implementation and will be build as you participate in the weekly hands-on lessons. You will be using the3 notebook to record your engagement in science, thinking, speaking, listening, reading, writing, and learning as well as unanswered questions. **TPE 7.4 (Practice); TPE 7.6 (Practice); TPE 7.7 (Practice); TPE 7.8 (Practice); TPE 7.9 (Practice); TPE 7.10 (Practice)**

Assignment:
Write a one page description of your visit findings explaining the connections to science and engineering resources and experiences available to our youth. You can also point out any missed experiences. Due next class

Preparation for next week:
Collect 4-6 leaves from your outdoor environment. Try to gather the ones that have already dropped instead of picking from live branches/trees.

NOTES:

Week 3: Meaningful Science Engagement
Thursday, September 5, 2024 from 7:25 – 10:10 PM

*** Learn about the impact of connecting** science experiences to science learning in students' everyday lives.
*** Consider examples** of current situations in the lives of students and how that can connect to classroom science curriculum.
*** Identify ways** to plan meaningful science learning that matters to diverse students based on our work in the field and learning from the Multi-tiered Systems of Support (MTSS)
* **Consider** how do we make NGSS science and engineering practices matter in our field classrooms and what does it mean to engage in them meaningfully?
TPE 1.3 (Introduction); TPE 1.5 (Practice); TPE 2.4 (Introduce); PE 3.1 (Practice); TPE 7.1 (Introduction); TPE 7.2 (Introduction); TPE 7.4 (Introduction)

Readings and Videos:
- (Video) TedTalk: Richard Turere https://www.youtube.com/watch?v=cjapPH6wyGA

- Bobrowsky, M. (2021) Do scientists really use the scientific method? *Science and Children,* 58(4).
- MTSS
- Science Notebooks (Select 1: K-2nd, 3rd – 5th, Middle School) FOSS Folio
- NGSS Standards: https://www.nextgenscience.org/ or https://www.cde.ca.gov/pd/ca/sc/ngssstandards.asp

TPE 1.3 (Introduce); TPE 1.5 (Introduce); TPE 2.4 (Introduce)

Making Connections:
Begin to connect your science education to current views of science teaching and learning. How do you see the NGSS implemented in school science? What are the possible positive impacts on connections between science and youth lives?

Leaf Walk and Sort: Analyze and sort leaves. Look for patterns. Connect to NGSS

Assignment:
Discussion #2 – Connect the Leaf Sort to NGSS and potential for children learning outdoors and/or missed opportunities. Respond to two peers.

NOTES:

Week 4: Creating a Classroom Culture to Support Science Learning
Thursday, September 12, 2024 from 7:25 – 10:10 PM

* **Consider** what are classroom communities, the culture of science, and its impact on science teaching and learning.
* **Analyze the culture of science** in our field classrooms and how to best connect with what our students know and don't know about science.
* **Identify** ways to connect science learning in the classroom with the home environment

TPE 1.3 (Introduce); TPE 2.2 (Practice); TPE 2.3 (Introduce); TPA 2.4 (Introduce); TPA 2.5 (Introduce); TPA 2.6 (Introduce); TPE 7.3 (Introduction); TPE 7.4 (Introduction); TPE 7.8 (Introduction)

Readings and Videos:
- Appendix F – Science and Engineering Practices: https://www.nextgenscience.org/sites/default/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf

- Pang, V.O. et al. (2014) Culture matters in science education: A festival creates culturally learning opportunities for students and parents. Science and Children. 44-49. Poetry of Science: Puppies (2019) https://www.researchgate.net/profile/Valerie-Pang/publication/283369859_Culture_Matters_in_Science_Education/links/56743b5308ae125516e09ca5/Culture-Matters-in-Science-Education.pdf

TPE 1.7 (Introduce); TPE 2.3 (Introduce); TPA 2.4 (Introduce); TPA 2.5 (Introduce); TPA 2.6 (Introduce)

Making Connections:
Continue to observe the culture of science in classrooms. What are norms and expectations of students? Do you see certain students participating and not others? How are 3-Dimensions being carried out?

Assignment: Visit a classroom or view an online/video science lesson and look for evidence of NGSS. Write a one page summary on your findings.
TPE 3.6 (Introduce);TPE 4.6 (Assess);TPE 4.8 (Introduce); TPE 6.1 (Practice)

NOTES:

Week 5: Empowering Students to Foster Success in Science Learning
Thursday, September 19, 2024 from 7:25 – 10:10 PM

* **Consider** connecting the culture of science in our field classrooms to the theoretical framework of knowledge using the Universal Design for Learning (UDL).
* **Recall personal experiences** as a science learner and as a science teacher where power dynamics in the learning environment negatively impacted the experience. How could this have been avoided?
* **Ask a child** (student, family member, neighbor, friend) to draw a picture of them "doing science". Do not provide any additional prompting. Review their pictures. Some students draw themselves doing active investigations. Others may draw themselves reading a book. What can this activity teach you about student comfort and confidence with science learning? How can it serve as an assessment tool for the classroom culture?
* **Consider/Journal** answers to the following:
-What does it mean to teach from students' strengths?
-How do we create a "we" science culture in our field classrooms?
TPE 1.1 (Practice); TPE 2.3 (Practice) ; TPE 2.5 (Introduce); TPE 2.6 (Practice); TPE 5.2 (Introduce); TPE 7.2 (Introduction); TPE 7.3 (Introduction); TPE 7.4 (Introduction)

Readings and Videos:

- Matrix of Science and Engineering Practices: https://static.nsta.org/ngss/MatrixOfScienceAndEngineeringPractices.pdf
- Exploratorium Science Talk (3 videos) https://www.exploratorium.edu/education/ifi/inquiry-and-eld/educators-guide/science-talk
- Sensemaking FOSS Folios (choose a grade-level)
- UDL

TPE 2.5 (Introduce); TPE 2.6 (Introduce)

Making Connections:
Continue to observe classroom culture of science and how it connects to the ways students participate in the classroom. Are there any connections between the practices and the ways values, beliefs and assumptions of student learning that are reproduced in the classroom? Are they specific to science topics?

Assignment:
Discussion #3 – How do we make science and engineering practices matter in our classrooms and what does it mean to engage in them meaningfully? Respond to two peers.

NOTES:

Week 6: Committing to Science for all Students
Thursday, September 26, 2024 from 7:25 – 10:10 PM

*** Consider** universally accessible methods of teaching and learning in science with a focus on emergent Bilingual students, students with disabilities including Dyslexia, and how views of race, class and gender have impacted participation in science classrooms for youth from minoritized communities.
* **Consider when modifications a**re necessary and how to integrate modifications to create a similar learning experience for all.
TPE 1.1 (Introduce); TPE 1.4 (Introduce); TPE 1.6 (Introduce); TPE 4.5 (Introduce); TPE 4.7 (Introduce); TPE 7.2 (Introduction); TPE 7.3 (Introduction); TPE 7.4 (Introduction); TPE 7.11 (Introduction)

Readings and Videos:

- Access and Equity K-8 FOSS Folio
- **California Dyslexia Guidelines - Chapter 2 Neuroscience of Dyslexia**
- NSTA Position Statement: Science for English Language Learners. https://www.nsta.org/about/positions/ell.aspx
- SKIM: Next Generation Science Standards NGSS Lead States (2013). Appendix D Making the Next Generation Science Standards Accessible to All Students:

https://www.nextgenscience.org/sites/default/files/Appendix%20D%20Diversity%20and%20Equity%20-%204.9.13.pdf
- (video) Hands-on Science Fun with ELLs https://www.youtube.com/watch?v=Jj3ZLznJwTE

TPE 1.1 (Introduce); TPE 1.4 (Introduce); TPE 1.6 (Introduce); TPE 7.

Making Connections:
Focus your efforts on observing and communicating with 1-2 students/peers. Start thinking of ways you can relate to them and better understand their cultural background, language, interest and experience in science, favorite science topics, general attitude and experiences related to school, and future plans related to science teaching and learning.

Assignment:
Research evidence of meeting student needs (ELLs, SPED, **Dyslexia**, GATE, etc.) through NGSS. Write a one page summary on your findings.

NOTES:

Week 7: Culturally Responsive Teaching
Thursday, October 3, 2024 from 7:25 – 10:10 PM

* **Consider** universally accessible methods of teaching and learning in science with a focus on emergent * **Consider** what types of experiences teachers can provide that align with culturally relevant science teaching. How will these support learning in a diverse classroom?
TPE 1.1 (Practice); TPE 1.1 (Assess); TPE 1.3 (Assess);TPE 3.5 (Practice); TPE 3.6 (Practice) TPE 3.7 (Practice);; TPE 4.3 (Introduce); TPE 4.4 (Assess); TPE 4.8 (Introduce); TPE 7.3 (Introduction)

Readings and Videos:
- Ashbrook, P. (2021). Culturally responsive teaching. *Science and Children.* 58(4).
- Family Science Night: A Fun Way to Engage English Language Learners and Get Their Parents Involved. *The Science Teacher,* 37-40.

TPE 1.7 (Introduction); TPE 2.2 (Practice); TPE 3.2 (Practice); TPE 4.2 (Introduce)
(Video) Teaching Science through Cooking
https://www.youtube.com/watch?v=7G3Ml2MRu5Y **TPE 1.1 (Practice); TPE 1.3 (Practice); TPE 2.2 (Introduction); TPE 4.1 (Introduce)**

Making Connections:
Focus your efforts on connecting race, class and gender to ways youth participate in science.

Assignment:
Discussion #4 – How do we make science and engineering culturally responsive? Give some examples and respond to two peers.

TPE 1.4 (Assess); TPE 1.5 (Assess); TPE 2.3 (Assess); TPE 2.6 (Assess); TPE 3.2 (Assess); TPE 3.4 (Assess); TPE 5.1 (Assess); TPE 5.2 (Assess)

NOTES:

Week 8: Communication Strategies for Science Learning Success
Thursday, October 10, 2024 from 7:25 – 10:10 PM

* **Incorporate** sense-making of students' science ideas through science talks. Specifically focus on how sensemaking of student ideas help us to better center science knowledge, practice, and positioning and their connections to agency and scientific literacy.
* **Connect science talk practices** with inquiry-based learning. Jot down three ways that science talk practices align with teaching science in a way that puts students at the center of their learning.
* **Review** how you traditionally discuss science with your students or other young people in your life. Do you spend more time talking or listening?
TPE 1.1 (Practice); TPE 1.3 (Assess); TPE 3.5 (Practice); TPE 4.1 (Practice); TPE 4.6 (Practice); TPE 7.6 (Introduction); TPE 7.7 (Introduction); TPE 7.8 (Introduction)

Readings and Videos:
- Talk Moves for ELLs (Strategies and Misconceptions) https://learningstrategieseng491.weebly.com/productive-talk- moves.html
- FOSS Sensemaking Folio (provided)
- (Video) Talk Moves Overview https://www.youtube.com/watch?v=1cqrQFXwLLA

TP 1.1 (Introduce); TPE 4.1 (Introduce)

Making Connections:

Work with your master teacher to have the opportunity to engage in science discussion with students. This can be a small group or the full class. Model the techniques from our readings and video.

Assignment:
Write a one page summary about sensemaking in science. What is the purpose and what are some necessary focus elements for conducting a sensemaking circle?

NOTES:

Week 9: Exploring Assessments In Science
Thursday, October 17, 2024 from 7:25 – 10:10 PM

* **Consider** the role of performance assessment in authentically evaluating mastery of science skills and processes and across the three dimensions: Science and Engineering Practices, Crosscutting Concepts, and Disciplinary Core Ideas.
* **Brainstorm a trial method** of measuring masterly of scientific tools such as scales, rulers, and handleless. If possible, test your assessment on a student.
* **Consider** how we see and measure progressive learning over time. How does this view of progressive
learning contribute to equitable assessment practices?
* **TPE 4.7 (Practice); TPE 5.1 (Introduction); TPE 5.2 (Introduction); TPE 5.5 (Introduction); TPE 7.10 (Introduction)**

Readings and Videos:
- Formative assessment in the science classroom. *Science and Children.* 56(9), 8-11. Formative assessment in the science classroom: https://www.nysed.gov/sites/default/files/programs/bilingual-ed/brief-7-formative-assessment-in-the-science-classroom-a.pdf
- SKIM: Next Generation Science Standards NGSS Lead States (2013). Appendix E Disciplinary Core Ideas Progression: https://www.nextgenscience.org/sites/default/files/resource/files/AppendixE-ProgressionswithinNGSS-061617.pdf

TPE 5.1 (Introduction); TPE 5.2 (Introduction); TPE 5.5 (Introduction)

Making Connections:

Review one or two science assessments currently being used in the classroom. How do they connect with the readings and best practices as outlined in the video?

Assignment:
Discussion #5 – How are assessments evaluating the 3-dimensions? Or not? Give examples. Respond to two peers.

NOTES:

Week 10: Student Centered and Self-Directed Science Learning
Thursday, October 24, 2024 from 7:25 – 10:10 PM

Consider what it means to teach in youth-centered, equity-oriented ways that center teacher performance expectations for learning.
* How do we center youth in our planning and instruction?
* How can we learn to better incorporate common core, academic content standards and California teacher expectations in our planning and teaching?
* How do we ensure as teachers we continue to distribute power to students.
TPE 1.3 (Practice); TPE 2.2 (Practice); TPE 2.3 (Practice); TPE 3.1 (Practice); PE 6.1 (Introduce); TPE 6.2 (Introduce); TPE 7.4 (Introduction)

Readings and Videos:
- Appendix G – Crosscutting Concepts: https://www.nextgenscience.org/sites/default/files/Appendix%20G%20-%20Crosscutting%20Concepts%20FINAL%20edited%204.10.13.pdf
- (Video) Student Centered Learning https://www.youtube.com/watch?v=WvzVAQkuSqU
- (Video) Reimagining Learning https://www.youtube.com/watch?v=w6vVXmwYvgs

TPE 1.3 (Practice); TPE 2.2 (Practice)

Making Connections:
Over the course of a school week, identify three times in the classroom students were allowed to lead the discussion, experience, or learning.

Assignment:
Design an NGSS mini-lesson using materials that can easily be found at home. Your lesson plan should include the 3 dimensions and aspects of our previous learning (sensemaking, cultural relevance, etc.)
TPE 1.4 (Assess); TPE 1.5 (Assess); TPE 2.3 (Assess); TPE 2.6 (Assess); TPE 3.2 (Assess); TPE 3.4 (Assess); TPE 5.1 (Assess); TPE 5.2 (Assess)

NOTES:

Week 11: Thursday, **October 31, 2024 Halloween (No Class – Work on Field Work Assignments)**

Week 12: Field Trips and Community Engagement to Enhance Science Learning
Thursday, November 7, 2024 from 7:25 – 10:10 PM

* **Explore community resources** that can enhance science learning from how best to utilized field trip opportunities to how to utilize community resources in the classroom to create more opportunities for critical thinking opportunities.
* **Brainstorm a Community Service Need or Citizen Science Project** that could be led by students.
Does your school:
* Need a community garden?
* Have an erosion problem when it rains? * Attract too many gulls during lunchtime?
Identify 2-3 ideas that could be at the center of classroom design project.
TPE 1.5 (Practice); TPE 3.2 (Practice); TPE 4.7 (Practice); TPE 7.3 (Introduction); TPE 7.4 (Introduction)

Readings and Videos:
- APPENDIX I – Engineering Design in the NGSS: https://www.nextgenscience.org/sites/default/files/Appendix%20I%20-%20Engineering%20Design%20in%20NGSS%20-%20FINAL_V2.pdf
- (Video) Rethinking Field Trips https://www.youtube.com/watch?v=ovbGNiGWeLM

TPE 1.5 (Practice); TPE 3.2 (Practice); TPE 4.7 (Practice)

Making Connections:

Consider the local community where your school is located. Consider all the different ways (if transportation was not a barrier) these resources/locations could enhance the school science curriculum. Examples:
- a flower shop
- a local park
- a (safe!) empty lot where native weeds are growing - an automobile repair shop
- a medical clinic
Science is everywhere!

Assignment:
Fieldwork – Student Choice. Write a one page summary of your learning/experience.

NOTES:

Week 13: Applying Theory to Practice
Thursday, November 14, 2024 from 7:25 – 10:10 PM

* **Consider and review** how the field classrooms allow us to unpack problems of community and how to solve them using NGSS-centered instruction. Specifically, yow do field teaching experiences shift the ways we focus on how we teach science?
*** Explore** how action research could be a part of your teaching to create better experiences for you, your students, and your school community. Examples:

- Conduct a DAST with students
- Analyze the classroom library. What percentage are science books? What percentage of those are
  engineering related?
- Track your actions in 15 min throughout the day. What percentage is instructional related? What percentage is administration?
- What else can you discover?

TPE 5.1 (Practice); TPE 5.2 (Introduce); TPE 3 (Introduce); 5.5 (Introduce); TPE 5.6 (Introduce); TPE 5.8 (Introduce); TPE 7.1 (Introduce); TPE 7.4 (Introduction); TPE 7.9 (Introduction)

Readings and Videos:

- APPENDIX H – Understanding the Scientific Enterprise: https://www.nextgenscience.org/sites/default/files/Appendix%20H%20-%20The%20Nature%20of%20Science%20in%20the%20Next%20Generation%20Science%20Standards%204.15.13.pdf
- Draw a Scientist (DAST) https://time.com/5201175/draw-a-scientist-studies/

TPE 5.1 (Practice); TPE 5.2 (Introduce); TPE 3 (Introduce); 5.5 (Introduce); TPE 5.6 (Introduce); TPE 5.8 (Introduce)

Making Connections:
Assist the teacher in classroom teaching, taking on opportunities to teach where appropriate. Incorporate the readings and videos of best practices to date.
TPE 1.4 (Assess); TPE 1.5 (Assess); TPE 2.3 (Assess); TPE 2.6 (Assess); TPE 3.2 (Assess); TPE 3.4 (Assess); TPE 5.1 (Assess); TPE 5.2 (Assess)

Assignment:
Fieldwork – Student Choice. Write a one page summary of your learning/experience.

NOTES:

Week 14: Developing and Delivering High Quality Instruction
Thursday, November 21, 2024 from 7:25 – 10:10 PM

* **Consolidate** all that you have learned to envision yourself teaching high-quality science, using NGSS and the additional techniques we have learned as a way to connect students' lives, interests, knowledge and practices to science and connections to our science talks.
* **Plan** how you will incorporate your new knowledge into the final course signature assignment from instructional strategies to a focus on authentic assessment, formative and summative.
TPE 5.1 (Practice); TPE 5.2 (Practice); TPE 5.3 (Practice); TPE 5.4 (Practice); TPE 5.5 (Practice); TPE 5.6 (Practice); TPE 7.1 (Introduce); TPE 7.4 (Introduction); TPE 7.6 (Introduction); 7.9 (Introduction)

Readings and Videos:
- APPENDIX J – Science, Technology, Society and the Environment: https://www.nextgenscience.org/sites/default/files/resource/files/APPENDIX%20J_0.pdf
- Hershberger, K. & Zembal-Saul, C. (2015). KLEWS to Explanation-Building in Science. *Science and Children,* 66-71.
- STEM Teaching Tools: http://stemteachingtools.org/tgs/assessment
- (Video) NGSS Teaching in Action with NSTA https://www.youtube.com/watch?v=XJBN6BX04Ms

TPE 5.1 (Practice); TPE 5.2 (Practice); TPE 5.3 (Practice); TPE 5.4 (Practice); TPE 5.5 (Practice); TPE 5.6 (Practice);

Making Connections:

Assist the teacher in classroom teaching, taking on opportunities to teach where appropriate. Incorporate the readings and videos of best practices to date.

Assignment:
Fieldwork – Student Choice. Write a one page summary of your learning/experience.

NOTES:

Week 15: Thursday, **November 28, 2024 Fall Break (11/29 – 11/29) (No Class – Work on Field Work Assignments)**

Week 16: Exceptional Science Teaching Today and Tomorrow
Thursday, December 5, 2024 from 7:25 – 10:10 PM

* **Consider** how to continue to grow as a science teacher and stay abreast of best practices while juggling a busy teacher's schedule. Review the readings as resources for good science teaching today and the future.
* **Familiarize** yourself with the California Science Teachers Association (www.CSTA.org). How do you think this can this organization and it's resources be helpful to your science teaching? Would you be most interested in their newsletters? Becoming a member? Follow on Facebook?
* **Identify a plan** for staying updated on science news. We as teachers need to regularly review current happenings in science news. Review the assigned website as one example of a resource. Consider what will work best for you as a method of staying updated on science happenings.
*** Consider** attending a science teachers conference. Talk to your colleagues and professors for suggestions of conferences that may be inexpensive or paid for by school.
TPE 6.1 (Practice); TPE 6.2 (Practice); TPE 6.3 (Introduce); TPE 6.5 (Introduce); TPE 7.1 (Introduce); TPE 7.4 (Introduction); TPE 7.6 (Introduction); 7.9 (Introduction)

Readings and Videos:
- Talk Science Primer: https://inquiryproject.terc.edu/shared/pd/TalkScience_Primer.pdf
- New Vision for Science Education: https://ngss.nsta.org/Documents/New%20Vision%20for%20Science%20Education.pdf

- Appendix C – College and Career Readiness: https://www.nextgenscience.org/sites/default/files/resource/files/NGSS%20Appendix%20C%20Final%20072613.pdf

TPE 6.1 (Introduce); TPE 6.2 (Introduce); TPE 6.3 (Introduce); TPE 6.5 (Introduce)

Assignment:
Fieldwork – Student Choice. Write a one page summary of your learning/experience.

Week 17: Course Conclusion & Final Exam
Thursday, December 12, 2024 from 7:25 – 10:10 PM

* **Consider** the new science instructional tools you now have for your tool kit. Which are you most looking forward to using? Which do you think will most compliment your natural instructional style
* **Organize** what you've gained from the course into an easily referenced and accessible format.
* **Explore** a topic that interests you personally. Identify a way to increase your science content knowledge
each month in line with your other responsibilities and commitments.
* Assess your learning of how children learn science and apply in final exam
TPE 7.4 (Asses); TPE 7.8 (Asses); TPE 7.9 (Asses); 7.10 (Asses)

Assignment:
Fieldwork – Student Choice. Write a one page summary of your learning/experience.
Course Evaluation and submit all missing assignments.

ALL Assignments DUE: Sunday, December 15, 2024 6:00 PM

Grading Scale

Assignment Information				
HW Assignments	**Week**	**Due**	**Points**	**Grading Scale:** 93% - 100% = A 90% - 92% = A- 87% - 89% = B+ 83% - 86% = B 80% - 82% = B- 77% - 79% = C+ 73% - 76% = C 70% - 72% = C- 67% - 69% = D+ 60% - 66% = D 0% - 59% = F
Discussion #1 Sci./Eng. Experience	#1 8/22/24	8/29/24	5	
Neighborhood Walk Summary	#2 8/29/24	9/05/24	10	
Discussion #2 Leaf Walk	#3 9/5/24	9/12/24	5	
Classroom Visit Summary	#4 9/12/24	9/19/24	10	
Discussion # 3 Science Matters	#5 9/19/24	9/26/24	5	
Student Needs & NGSS Summary	#6 9/26/24	10/03/24	10	
Discussion #4 Culturally Responsiveness	#7 10/03/24	10/10/24	5	
Sensemaking Summary	#8 10/10/24	10/17/24	10	
Discussion #5 Assessments & 3D	#9 10/17/24	10/24/24	5	
NGSS Mini-Lesson	#10 10/24/24	10/31/24	10	
Fieldwork* (Halloween)	#11 10/31/24	11/17/24	10	
Fieldwork	#12	11/14/24	10	

	11/07/24			
Fieldwork	#13 11/14/24	11/21/24	10	
Fieldwork	#14 11/21/24	12/05/24	10	
FALL BREAK*	#15 11/25 – 11/30	N/A	N/A	
Fieldwork	#16 12/05/24	12/12/24	10	
Final Exam	#17 12/12/24	12/12/24	50	
Class Participation			10	
Attendance			15	
	*Break – Plan Accordingly			

Additional Policies

Class Participation: Online Discussion
It is expected that you are present for the duration of our synchronous time. This means cameras are on and environment distractions are minimized. You are expected to complete reading, reactions and assignments aligned with the syllabus. Your participation in the online discussion board demonstrates your active engagement with the course. Please participate having completed readings and with full attention to the prompts and postings by your classmates. Your contributions in this forum should be similar to how you would participate in class discussion. Please participate confidently and understanding there are no right/wrong answers. This is where you can feel comfortable applying and discussing what you are learning in class!

Class Participation Deadlines
* Discussion prompt for each week's readings (for weeks they are assigned).
* You must provide both a primary reaction and two responses to your peers to be completed before the next class. Please do not let the assignments accumulate into the next week as it will be difficult for others to respond if everyone waits until the last minute. Staying on top of the deadlines will ensure maximum points for all. Your peers are depending on you. They cannot respond to a peer of there are no posts to respond to.

Assignment Deadlines:
Time and Date deadlines for each assignment are noted in the syllabus. **Please note that prior approval is needed for submission of late work** unless it is an extenuating circumstance (e.g. with a doctor's note, or other documentation that is Cal State LA approved). If you submit an assignment late, there is a point penalty. That is as follows:
1-3 days late: 5%

4-7 days late: 10%
1+ weeks late: 20%

Special Note from Me: We are living in unusual times and I understand that there continue to be many challenging and unusual work and learning situations. Please keep an open dialog with me as your professor if you are experiencing any challenges so we may work together to support your performance in this class. I am here to support your learning. Please feel comfortable reaching out.

Gender Expression and Identity
This course affirms people of all gender expressions and gender identities. I will gladly honor your request to address you by an alternative name and/or gender pronoun. Please advise of this request at any time during the semester so that I may make appropriate changes to my records, as class rosters are provided with student's legal names unless it has been changed through the Registrar's Office.

Grading and Assignment Feedback
Unless there are unique circumstances, I will grade and provide feedback on assignments through the online system within 2 weeks. I do strive to return the same week, though some assignments require more thoughtful review and thus are more time consuming. If you have points deducted from your assignment I reference the specific area in the rubric for clarity, though primarily focus on providing positive feedback on your achievements and successes and how you can build on those for continued success.

You are always welcome to discuss an assignment score/grade with me if you need more clarity or have a difference of opinion. I'm **always** open to respectful and thoughtful discussion.

Overview of Assignments

Summary Assignments and Fieldwork: Science Experiences (10 Points each)

Purpose - This is where learning and reflection comes together. As you continue to build on what you are learning about how children learn, you will reflect on the weekly foci to submit a summary with key details from your learning experience as it connects to the Next Generation Science Standards (NGSS) instruction. Before planning any self-directed fieldwork, please discuss with me for pre-approval. Other considerations:

- These assignments can be done individually or in groups
- Consider adding pictures, descriptive diagrams/tables, student work samples, or links to your own recorded videos of implementation/engagement
- Summaries and Fieldwork narratives can be:
    - 1 page typed (2-3 paragraphs)
    - May include bulleted items or diagrams
    - Examples are Highly Encouraged (pictures, artifacts, screenshots, student examples) with description/captions

Participating in this activity increases your ability to assimilate all the information you learned this semester and build your own funds of knowledge with regards to good science teaching.

WORD COUNT: 200 - 500 (Post)

TPE 1.4 (Assess); TPE 1.5 (Assess); TPE 2.2 (Assess); TPE 2.6 (Assess); TPE 3.2 (Assess); TPE 3.4 (Assess); TPE 5.1 (Assess); TPE 5.2 (Assess); TPE 7.1 (Practice & Assess); TPE 7.2 (Practice & Assess); TPE 7.3 (Practice & Assess); TPE 7.4 (Practice & Assess); TPE 7.6 (Practice & Assess); TPE 7.7 (Practice & Assess); TPE 7.8 (Practice & Assess); TPE 7.9 (Practice & Assess) SLO 1; SLO 2; SLO 3; SLO 4; SLO 7; SLO 8

Submission: Electronic

Assignment Rubric (10 points)

Critera	10 Strongly Meets or Exceeds	8 Moderately Meets	6 Minimally Meets	4 Partially Meets	2 Does Not Meet
Completion of Requirements	Student meets all content requirements of assignment	Writing meets most content requirements of assignment	Writing meets some content requirements of assignment	Writing meets minimum content requirements of assignment.	Though an attempt is made, writing does not meet the minimum requirements.

Clarity	Ideas are exceptionally coherently and logically organized with well-developed paragraphs	Ideas are mostly coherently and logically organized with well-developed paragraphs and effective transitions	Ideas are somewhat coherent and logical. Some paragraphs are well-developed and use effective transitions.	Ideas are minimally coherent and logical. Paragraphs lack development and transitions.	Though an attempt is made, ideas are not coherent and writing is unclear.
Connection to Course Theory and Content	Assignment connects effectively and seamlessly to course content: key theories and pedagogy.	Assignment mostly connects effectively to course content, theories and pedagogy.	Assignment is somewhat aligned with course content, theories and key themes.	Assignment is minimally aligned with course content, theories and key themes	Though an attempt is made, assignment does not connect to course content, theories and/or key themes.
Connection to K-12 Pedagogy	Assignment demonstrates excellent understanding of K-12 pedagogy; activities are developmentally appropriate and demonstrate a student-centered approach.	Assignment demonstrates good understanding of K-12 pedagogy; activities are mostly developmentally appropriate and address a student-centered approach.	Assignment demonstrates some understanding of K-12 pedagogy; activities are somewhat developmentally appropriate and/ or demonstrate some student-centered approaches.	Assignment demonstrates minimal understanding of K-12 pedagogy; activities are minimally appropriate and lack a student-centered approach.	Though an attempt is made, assignment does not connect to K-12 pedagogy and a student- centered approach.

Overview of Assignments (Continued)

Canvas Discussion Board Posting and Peer Comments (5 points each)

A large part of your work in class involves reflecting on your ongoing learning in the course and sharing that information with peers. As an online class, this is a big part of demonstrating to me and your peers that you are actively engaged in the course. Accordingly, you will have approximately 150 word reflections to post every other week for a total of five. The syllabus outlines each class session a discussion is due. You are also required to respond to two other people in the class (**minimum: 50 words per response**). Important here is that you engage in discussions that are fruitful, beneficial and critical to your developing work as colleagues in teaching. Questions are also encouraged.

WORD COUNT: 100 (Post) 50 (Response)

TPE 4.1 (Assess); TPE 4.2 (Assess); TPE 4.3 (Assess); TPE 7.1 (Practice & Assess); TPE 7.2 (Practice & Assess); TPE 7.3 (Practice & Assess); TPE 7.4 (Practice & Assess); TPE 7.6 (Practice & Assess); TPE 7.7 (Practice & Assess); TPE 7.8 (Practice & Assess); TPE 7.9 (Practice & Assess)

Submission: Electronic

Assignment Rubric (5 points)

Critera	5 Strongly Meets or Exceeds	4 Moderately Meets	3 Minimally Meets	2 Partially Meets	1 Does Not Meet
Completion of Requirements	Student meets all content requirements of assignment	Writing meets most content requirements of assignment	Writing meets some content requirements of assignment	Writing meets minimum content requirements of assignment.	Though an attempt is made, writing does not meet the minimum requirements.
Clarity	Ideas are exceptionally coherently and logically organized with well-developed paragraphs.	Ideas are mostly coherently and logically organized with well-developed paragraphs and effective transitions	Ideas are somewhat coherent and logical. Some paragraphs are well-developed and use effective transitions.	Ideas are minimally coherent and logical. Paragraphs lack development and transitions.	Though an attempt is made, ideas are not coherent and writing is unclear.
Connection to Course Theory and Content	Assignment connects effectively and seamlessly to course content: key theories and pedagogy.	Assignment mostly connects effectively to course content, theories and pedagogy.	Assignment is somewhat aligned with course content, theories and key themes.	Assignment is minimally aligned with course content, theories and key themes	Though an attempt is made, assignment does not connect to course content, theories and/or key themes.

Connection to K-12 Pedagogy	Assignment demonstrates excellent understanding of K-12 pedagogy; activities are developmentally appropriate and demonstrate a student-centered approach.	Assignment demonstrates good understanding of K-12 pedagogy; activities are mostly developmentally appropriate and address a student-centered approach.	Assignment demonstrates some understanding of K-12 pedagogy; activities are somewhat developmentally appropriate and/ or demonstrate some student-centered approaches.	Assignment demonstrates minimal understanding of K-12 pedagogy; activities are minimally appropriate and lack a student-centered approach.	Though an attempt is made, assignment does not connect to K-12 pedagogy and a student- centered approach.

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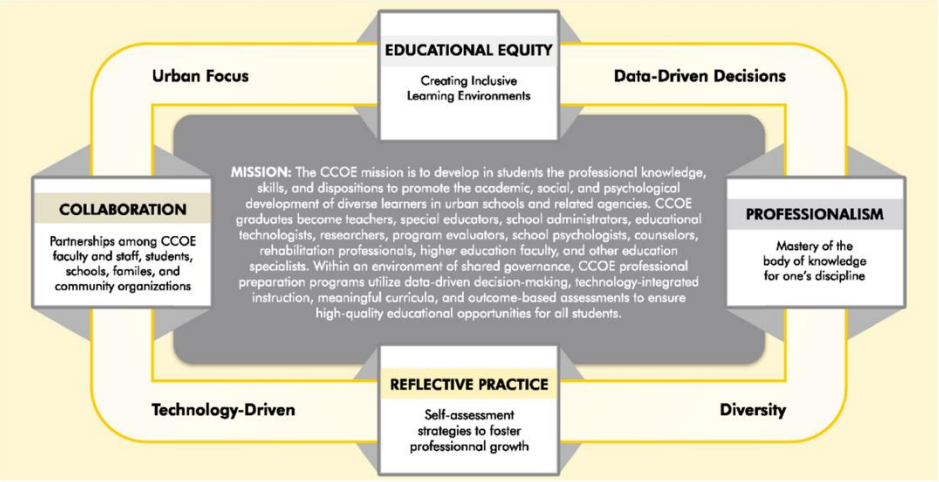
CHARTER COLLEGE OF EDUCATION

CONCEPTUAL FRAMEWORK

VISION: The Charter College of Education (CCOE) is a learning community of faculty, administrators, staff, students, and community members that work collaboratively to ensure that all students receive a high-quality education, honor the diversity of all learners, advocate for educational and community reforms, develop reflective practices that promote equity, and facilitate the maximum learning and achievement potential of all children and adults.



Core Values: The Charter College of Education prepares outstanding and caring educators, counselors, and leaders to work with diverse learners in urban schools and related agencies guided by the following core values.

EDUCATIONAL EQUITY

We believe in creating inclusive learning environments with equitable educational opportunities for all learners, including those with disabilities and those from diverse cultural, linguistic, and socio-economic backgrounds. We believe everyone can learn if given the opportunity and support. We honor the dignity of every individual and hold high academic expectations for all learners. We value diversity because it enriches the quality of everyone's learning.

REFLECTIVE PRACTICE

We believe that CCOE students should develop reflective practices, including self-assessment strategies to foster professional growth. We promote the deliberate application of knowledge to practice and the constant reflective analysis of one's practice in relation to school and/or community needs.

PROFESSIONALISM

We believe professionalism is mastery of the body of knowledge for one's discipline and the demonstration of cultural, technological, ethical, and professional competencies. CCOE courses and professional preparation programs are designed to teach professional dispositions, skills, and/or knowledge.

COLLABORATION

We believe that collaborations and partnerships among CCOE faculty and staff, students, schools, families, and community organizations enhance educational excellence, urban school and related agency transformations, and educational access and equity for all learners. Meaningful and lasting educational collaborations and partnerships are grounded in understanding the complexity of all stakeholder's needs and their interdependence, and we advocate that all CCOE professional preparation programs build collaborations and partnerships.