



Course Syllabus: Teaching Science in Elementary School

College of Education
EDUC 4503 Section 101
Spring 2026 MW

Contact Information

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Course Description

This field-based course focuses on elementary school science pedagogy with emphasis on instructional strategies and models, the use of technology in the learning/teaching process, effective practices, professionalism, curriculum, and lesson design. Different teaching strategies include: appropriate use of creative approaches to the learning/teaching process, cooperative learning, direct instruction, inquiry, concept attainment, etc. An important component of this field-based block of classes is the course time spent in active participation in field (classroom) experiences.

Textbook & Instructional Materials

One of the following textbooks are recommended for this course:

- Contant, T. L., Tweed, A. L., Bass, J. E., & Carin, A. A. (2018). *Teaching science through inquiry-based instruction*. New York: Pearson.
- Peters, J. M., & Stout, D. L. (2011). *Science in elementary education: Methods, concepts, and inquiries*. Boston: Pearson Education

Study Hours and Tutoring Assistance

Located in Moffett Library, The Office of Tutoring and Academic Support Programs (TASP) offers a variety of resources designed to help students meet the demands of the college classroom. Their mission is to provide the necessary support to help students achieve academic success. This can be completing in-person and through distance learning. MSU-Texas-Tutoring

Student Handbook

Refer to: [Student Handbook](#)

Academic Misconduct Policy & Procedures

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.

[Office of Student Conduct](#)

Moffett Library

Moffett Library provides resources and services to support student's studies and assignments, including books, peer-reviewed journals, databases, and multimedia materials accessible both on campus and remotely. The library offers media equipment checkout, reservable study rooms, and research assistance from librarians to help students effectively find, evaluate, and use information. Get started on this [Moffett Library webpage](#) to explore these resources and learn how to best utilize the library.

Grading

Table 1: Points allocated to each assignment

Assignments	Points
Lab Safety Assignment	50
Lesson Plan	100
Lesson Observation	100
Teaching Reflection	50
In-Class Activities	250
Final Exam	200
Total Points	750

Table 2: Total points for final grade.

Grade	Points
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Less than 60%

Homework

Use this area to describe your homework. Be sure to include how and when homework will be turned in.

Written Assignments

There are some written assignments in this course that build your understanding of thinking about how children assimilate science and also prepare you to become aware of research-based practices in teaching science. Details for assignments will be on D2L. Any questions can be asked via email or during class. Expectations for written work:

Correct grammar, punctuation, and spelling are expected on all written assignments (although web discussions are not held to the high standard of a research project or other written assignment).

Written assignments should be:

- Done in Microsoft Word and turned in as an attachment in Dropbox on D2L or Converted to a PDF and turned in as an attachment in Dropbox on D2L.
- Discussions (if applicable) should be completed within the D2L discussion space and NOT uploaded as an attachment.

Lesson Planning

Teacher candidates must demonstrate the ability to plan, assess, and implement instruction. This begins in the Foundational block where the teacher candidates create and write lessons for effective teaching. Teacher candidates are required to develop lesson plans. The specific format can be adapted, but should always include the objectives, TEKS, procedures, materials/resources, assessments, and required components of the lesson plan. Student engagement is a key element in a good lesson with student learning and success as the goal. Candidates must form assessment strategies to determine the extent to which students master the learning objectives.

Candidates also describe the instructional delivery method addressing the following step-by-step procedures:

1. Questions and concerns listed in the directions given to you by your instructor
2. Setting purposes ("Today we will be...I want you to...because you will...")
3. Method(s) for engaging students in the lesson
4. Any questions asked during the lesson should be in bold
5. Higher order thinking reflected in questions
6. Instructional Strategies: Modeling, Discussion, "Hands-on", Inquiry, etc.
7. Grouping: when and how
8. Instruction that addresses learners' needs (ELLs, Special Education, 504, Gifted, Struggling Learner)
9. Closure

After teaching the lesson, candidates are then required to reflect on and explain:

- the lesson delivery and appropriateness of instructional strategies,
- the impact for future planning using evidence from gathered data and
- collaboration opportunities with the mentor teacher.

The skills acquired during lesson planning provide the foundation and are also built upon for unit planning and other key assessments.

Late Work

Late work will receive a 25% deduction per day per assignment (including Saturday and Sunday). This means if the assignment is for 100 points, you can make a maximum score of 75 after one day, 50 after two days, 25 after three days, and zero after 4 days if all your answers are correct. *There is NO late work on discussion boards or quizzes! All this is non-negotiable!!! If there are any issues or you are confused about an assignment, contact me *BEFORE* the assignment is due (at least 24 to 48 hours before the assignment is due). Time shown on D2L, or email will be used. Please note: Even though this is a face-to-face class, this class requires you to have access to a computer (with Internet access) to check for class news updates, materials, instructions, resources and upload your assignments in D2L. It is your responsibility to have (or have access to) a working computer in this class. *Assignments are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time for submission.

Extra Credit

Extra Credit opportunities will be given and will depend on the flow and needs of the class. Any change in this policy will be dependent upon opportunities and instructor preferences.

Make Up Work/Tests

There will be no make-up or resubmissions allowed on assignments, quizzes, discussion boards, or any other activity in class.

Important Dates

- Last day for term schedule changes: January 23rd, 2026.
Check date on [Academic Calendar](#).
- Deadline to file for graduation: February 16th, 2026.
Check date on [Academic Calendar](#).
- Last Day to drop with a grade of "W": April 29th, 2026.
Check date on [Academic Calendar](#).
- Refer to: [Drops, Withdrawals & Void](#)

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Attendance

Absence Policy - Professional teachers are dependable, reliable, and responsible. Therefore, candidates are expected to be on time and in attendance at **every** class, and to stay for the **entire** class. **Tardiness, leaving early, and excessive absences (3) are considered evidence of lack of dependability, and are taken seriously. *Candidates will receive a grade of F on the third absence. If a candidate is taking 'blocked' courses that are taught at a Professional Development School, requiring field experience, the candidate will be dropped with an F from those classes as well.*

After an absence from the course, it is imperative that a student schedule an appointment with the course instructor to discuss attendance. Failure to schedule and attend a conference will result in the loss of classroom participation and disposition points and also in the overall grade being lowered by one letter. It is the candidate's responsibility to make up for any missed work. It is also expected that you will complete all course field experience hours in a professional manner. Professional conduct is expected when observing or participating in school settings (e.g., dressing appropriately, arriving on time, remaining for the entire pre-arranged time, not canceling, and demonstrating respect in all interactions with young people, parents, teachers, and staff). If you must miss your field experience for any reason, you are expected to call the school and the teacher you are working with **before** school begins for the day. You must also contact the course instructor by e-mail or phone to let me know you will not be present and arrange a time with me when we can discuss the most appropriate way to make up that absence. Excessive tardiness (determined by the professor) can be defined as an absence and subject to the absentee policy. Three instances of tardy arrival will be counted as one absence.

If a class member is absent, for whatever reason, that individual assumes responsibility for contacting the instructor to account for missed work and to turn in work. It is impossible to provide a summary of all that takes place during any given class via email. If a student is going to be absent, they have the responsibility to contact the instructor to turn in assignments and obtain copies of any handouts from the missed class. Tentative assignment due dates are listed on the course schedule. While the actual due dates may vary due to the flow of the class, all assignment due dates will be finalized and announced in class well in advance of the specific date. **Late work, unless arrangements are made by the student and approved in advance by the instructor, will not be accepted for full credit.*

During your field observations, you are required to submit time logs in TK20 to your cooperating teacher for attendance and participation verification. You must accumulate a minimum of 50 hours total prior to clinical teaching, which need to be approved by the cooperating teacher. This should be done weekly, and you should periodically check TK20 to ensure that your time logs have been approved. For this course, a minimum of 20 hours in the classroom should be

dedicated to engaging with students in instructional or educational activities, although you will likely spend more than 20 hours doing so. Prior to your clinical teaching experience, you should have at a minimum of 50 hours of field-based experiences, 30 of which show active engagement in instructional or educational activities. All time log entries must have a detailed description/reflection explaining the instructional or educational activities. At the end of the course, on the date indicated on the calendar, you must upload a screenshot of every approved time log to the appropriate Dropbox in D2L

Class Participation

Students should participate in all the activities of this course. It is important that students meet all the deadlines as posted. In the case of any emergency situation (like death or illness in family, etc.) it is important that the student should report the same to the professor in a timely manner. It is your course, and the primary intention should be to reach the goals and acquire proficiency in the topics discussed in the course. Generally, students are graded on intellectual effort and performance rather than attendance, absences may lower the student's grade where class attendance and class participation are deemed essential.

Excessive tardiness or absence (as determined by the professor), disruptive attitude, or failure to consistently meet class requirements might result in instructor-drop, if required. Being repeatedly late for class will also result in a grade reduction regardless of other marks. Tardiness will result in loss of classroom disposition points and three instances of tardy arrival will be counted as one absence.

Each student brings a unique perspective and life experience to the learning environment and is expected to participate actively and thoughtfully by making pertinent contributions. All students are expected to read assignments and be prepared to discuss them. Note that you are provided with focus questions that are designed to structure your reading of the assigned texts. Moreover, the course instructor may assign additional readings. *Participating in class discussions and following expectations is a part of your grade*. Please come to class with questions or issues from the reading that you found central or worthy of further exploration. Students may also be asked to do activities and exercises related to the assigned readings or to lead discussions on a topic or reading. You will have many opportunities to participate in class and on D2L. These opportunities are a very important part of this course.

Change of Schedule

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is eligible for a 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

Refund and Repayment Policy

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exists in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

Services for Students with Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Student Wellness Center, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to [Disability Support Services](#).

College Policies

Campus Carry Rules/Policies

Refer to: [Campus Carry Rules and Policies](#)

Smoking/Tobacco Policy

College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes has prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit [Campus Carry](#).

Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [MSUReady – Active Shooter](#). Students are encouraged to watch the video entitled “Run. Hide. Fight.” which may be electronically accessed via the University police department’s webpage: ["Run. Hide. Fight."](#)

Grade Appeal Process

Update as needed. Students who wish to appeal a grade should consult the Midwestern State University [MSU Catalog](#)

***Notice:** Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.