

University of North Texas at Dallas Spring 2013 SYLLABUS

EDEE 4330 D 090 : Science Grades EC-6		3Hrs
Department of	Teacher Education	Division of Education and Human Services
Instructor Name:	Dr. Ratna Narayan	
Office Location:	201 N Dallas 1	
Office Phone:	972 780 1340, Cell: 806 252 5277 Phone calls/texts to my cell are welcome between 9AM and 10 PM daily and replies can be expected within no more than 24 hours.	
Email Address:	Ratna.narayan@unt.edu	
Office Hours:	Monday 1-4pm Wednesday 4-7pm, Thursday 3 - 6 pm, or by appointment	
Classroom Location:	Dallas 1 room 344	
Class Meeting Days & Times:	Thursday 11.30 am – 2.20 pm	
Course Catalog Description:	The purpose of this course is to provide teacher candidates with the subject matter, background, and material organization for an integrated science program in the primary/elementary school. Students experience first-hand the scope and sequence of science education in a primary/elementary/middle school setting.	
Required Text:	<i>Peters, Joseph M. and Stout, David L. (2011). Science in Elementary Education: Methods, Concepts, and Inquiries. (11th Ed.). Boston, MA: Pearson. ISBN -13: 978-0-13-503150-6</i>	
Recommended Text and References:	Articles will be uploaded on Blackboard as and when required.	
Access to Learning Resources:	UNT Dallas Library: phone: (972) 780-3625; web: http://www.unt.edu/unt-dallas/library.htm UNT Dallas Bookstore: phone: (972) 780-3652; e-mail: 1012mgr@fheg.follett.com	
Course Goals or Overview:		
	<p>The goal of this course is provide teacher candidates with the knowledge, skills and dispositions as a basis for making decisions in respect to teaching elementary school science.</p> <p>The knowledge, skills and dispositions developed in this course are delineated in a variety of ways, including student learning outcomes, assessments, assignments, and various course activities. They are also developed in a manner consistent with recommendations of the National Research Council's National Science Education (NSES) and National Science Teachers Association (NSTA) Standards, requirements of the Texas State Board for Educator Certification (TEKS) and Interstate New Teacher Assessment and Support Consortium (INTASC) standards.</p>	

Learning Objectives/Outcomes: At the end of this course, the student will	
1	Be able to demonstrate the use of instructional strategies and teaching activities to teach the science content knowledge included in Texas' Essential Knowledge and Skills (The TEKS). TEKS
2	Learn to teach science activities or lessons at the elementary level by a variety of approaches (discovery, inquiry, decision-making, and problem solving) and in a variety of grouping arrangements. TEKS, NSES & INTASC standards
3	Plan and teach elementary science activities and lessons with adaptations for minority populations and students with special needs TEKS, NSES & INTASC standards
4	Learn to apply technology to elementary school science by identifying, describing, and using instructional software, Internet and other computer applications than would enhance instruction. TEKS, NSES & INTASC standards
5	Complete classroom observations and related tasks in field-based settings. TEKS, NSES & INTASC standards
6	Plan science activities and lessons and teach them to students in field-based settings TEKS, NSES & INTASC standards
7	Plan lessons that integrate mathematics, science, language arts and social studies and the arts (visual art, music, and theatre arts) around a particular theme TEKS, NSES & INTASC standards
8	Use reflective analysis to improve their teaching. TEKS, NSES & INTASC standards
9	Integrate the various areas of science as well as integrate science with other subject areas at the elementary level, as well as teaching science integrating visual media, arts, music and drama TEKS, NSES & INTASC standards

Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated both verbally in class as well as through Blackboard

TOPICS	TIMELINE
Nature of Science and Science Process skills Introduction to Field-Based Experiences and Teaching Science in the Elementary School, examining TEKS, TAKS and NSES standards. Content integration in the EC-6 classroom TEKS: K-6 (a) Nature of Science NSES / NSTA: Standards for Science Teaching EC-6, Chapter 3 Standard 2 – Nature of Science INTASC: Standard 2 - Student development, Standard 4- Multiple Instructional Strategies INTASC: Standard 1 – Content Pedagogy	Jan 17 th 2013 DAST drawing Science process skills
The Scientific Method, Inquiry-based Science teaching and Learning. TEKS: K-6 (0.1-0.4) Science Process / Inquiry NSES / NSTA: Inquiry and the National Science Education Standards Standard 3 - Inquiry INTASC: Standard 1 – Content Pedagogy	Jan 24 th 2013 Scientific method
Science Safety in the Elementary Classroom, MSDS sheets, safety contracts TEKS: K-6 (0.1) The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. NSES / NSTA: Safety and School Science Instruction Standard 9 – Safety & Welfare	Jan 31 st 2013 Safety contract

<p>INTASC: Standard 6 – Communication & Technology, Standard 7 - Planning</p>	
<p>Constructivism in the Elementary Classroom Planning and Teaching Science: Activities, Lessons, and Units, 5E model, Hands-on activity, Visual Organizer, Extension activity, Formative and Summative Assessments, Administration and Arts Integration (e.g., scientific illustration, using science trade books [language arts literacy]), dramatic performance [skits/historical science leader role play], and music. TEKS: K-6 (0.5 – 0.14) Science concepts NSES /NSTA: Standards for Science Teaching EC-6 Chapter 3, Standards for Science Content EC-6 Chapter 6 Standard 5 – General Teaching Strategies INTASC: Standard 2: Planning Standard 7- Planning</p>	<p>Feb 7th 2013 5E lesson, subject integration</p>
<p>Scientific inquiry in the elementary class Definition, types, examples , expectations of teachers, students TEKS: K-6 (0.1-0.4) Science Process / Inquiry NSES / NSTA: National Science Education Standards, an overview Standard 3 - Inquiry NTASC: Standard 2: Planning</p>	<p>Feb 14th 2013 Scientific inquiry</p>
<p>Assessment in the Science Classroom TeXes, PPR, Content exams TEKS: The TEKS and the TAKS tests NSES / NSTA: Assessment in Science Education, Chapter 5 Standard 8 - Assessment INTASC: Standard 8 - Assessment</p>	<p>Feb 21st 2013 Assessments</p>
<p>Professional development opportunities for elementary science teachers TEKS: K-6 (0.5 – 0.14) Science concepts NSES /NSTA: Standards for Professional Development of Teachers of Science, Chapter 4 Standard 10 – Professional growth INTASC: Standard 9 – Reflective Practice, Professional development</p>	<p>Feb 28th 2013 Reflection</p>
<p>Multicultural Science Education TEKS: K – 6 (0.3) Science Process, connect science concepts with the history of science and contributions of scientists NSES / NSTA: Diversity and the National Science Education Standard 5 – General skills of teaching INTASC: Standard 3 – diverse learners March 11th – 17th spring break</p>	<p>March 7th 2013 Multicultural scientist</p>
<p>Use of Models in the elementary science classroom Student Science Model Presentations TEKS: K-6 (a) Use of models of objects and events as tools for understanding the natural world and to show how systems work NSES / NSTA: Standards for Science Teaching EC-6 Chapter</p>	<p>March 21st 2013 Models, FOSS</p>

3, Standard 5 – General skills of teaching INTASC: Standard 4- Multiple Instructional Strategies	
Science Fair projects and toys from trash presentations	March 28 th 2013
Controversial issues in science and science teaching TEKS: K-6 (0.4,0.5) Science Process NSES / NSTA: National Science Education Standards, an overview Standard 4 – Issues INTASC: Standard 1: Content Pedagogy Standard 10 – School and community involvement	April 4 th 2013 Issues
Scientific Literacy, reading and writing science, science notebooks TEKS: K-6 (0.3) Science Process NSES / NSTA: National Science Education Standards, an overview Standard 3 - Inquiry Standard 5 – General skills of teaching INTASC: Standard 1: Content Pedagogy	April 11 th 2013 Literacy science integration
Action research in the elementary science classroom TEKS: K-6 (0.5 – 0.14) Science concepts NSES / NSTA: Standards for Science Teaching EC-6 Chapter 3, Standards for Professional Development of Teachers of Science, Chapter 4 Standard 10 – Professional growth INTASC: Standard 9 – Reflective Practice, Professional development	April 18th 2013 Action research
Group Lesson Presentations	April 25 th 2013
Group Lesson Presentations	May 2 nd 2013 Last class
All assignments due by 10th May 5pm	

Course Evaluation Methods

The course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course

Assignments –

1. Weekly Activities– Readings and other activities such as the science story that are assigned weekly throughout the semester.
2. Reflection Papers– Reflective writings that serve to integrate your experiences in the classroom and in the field during the semester.
3. Field-based activities such as –
maintaining an observation manual,
preparing and teaching a science concept with a working science model you have constructed from the toys from trash website,
teaching a small group of students a science concept using hands-on inquiry based activities, Visual Organizer, Extension activity, Formative and Summative Assessments, Administration and Arts Integration (e.g., scientific illustration, using science trade books [language arts literacy]), dramatic performance

[skits/historical science leader role play], and music.

designing a science fair experiment, conducting and presenting it to your peers in the classroom as well as in the field

Perot museum assignment

4. Final Science Lesson presentation

Please note: All the assignments are CULPULSORY. I expect you to complete all the assignments in a timely fashion. There will be no substitutions unless I approve of them. Professional development opportunities will be offered; if you are unable to avail of these an alternate assignment will be provided.

Class Participation – Expectations

1. ATTENDANCE - Attend all classes, meetings, etc. arriving on time.
2. PREPARATION - Be prepared to discuss assigned readings and submit assignments according to established deadlines.
3. PARTICIPATION - Contribute constructively and respectfully to all discussions and activities.
4. RESPECT – Do not talk while the teacher or another presenter is speaking.
5. ACADEMIC HONESTY - Know and follow course, departmental, program and university policies on assignments and assessments.
6. PROFESSIONALISM - Know and follow departmental, program and university policies expected of PDS students.
7. Participation and Professionalism – CRITICAL!
 - a. Absences and tardies will count toward final grade reduction: 2 absences = one final grade reduction, 4 absences = two final grade reductions, 5 absences = three grade reductions.
 - b. Three tardies = 1 absence. (Tardy - must arrive within the first 10 minutes of class)
 - c. Completes assigned readings before coming to class
 - d. Answers questions and participates in class discussions
 - e. Avoid social or unrelated conversation, working on other assignments, using cell phone, checking email, surfing web, playing video games during class time etc.
8. I will endeavor to offer a professional development opportunity during the fall 2013 semester. More details to follow.
9. **You are expected to be present in class and on time especially on presentation dates. If you arrive late you will lose 25% of the assigned points.**

Grading Matrix:

Instrument	Point Value	Total
Reflection papers / assignments	10 x 10	
Field –based activities		
-Science model, develop and teach and present from toys from trash website	40	
- small group teaching	40	
- science fair experiment, develop, conduct and teach	40	
Perot Museum assignment	40	
Group Science lesson	40	
Grand Total		300

Grade Determination:

- A = 300 - 270 points
- B = 269 – 240 points
- C = 239 – 210 points
- D = 209 – 180 points
- F = below 179 points

University Policies and Procedures

Students with Disabilities (ADA Compliance):

The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. For more information, you may visit the Office of Disability Accommodation/Student Development Office, Suite 115 or call Laura Smith at 972-780-3632.

Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Assignment Policy:

All assignments are compulsory. There are no exceptions to this rule. Please refer to the assignment expectations document for details about each assignment and its due dates. Late assignments will result in a 5 point reduction for each day late.

If I am not satisfied with an assignment response, I reserve the right to deduct points and return it to you so you may improve on it and resubmit to get some of the deducted points back if the work is deemed satisfactory. All assignments are due by 12 noon Dec 8th 2012 after which NO assignments will be accepted or graded.

Exam Policy:

Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook).

Academic Integrity:

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of conduct and Academic Dishonesty policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Conduct at http://www.unt.edu/csrr/student_conduct/index.html for complete provisions of this code.

Please take the time to go through this link. If I find you have plagiarized from any source without giving them due credit I will give you a zero for that assignment.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

Attendance and Participation Policy:

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. **Students are responsible to notify the instructor if they are missing class and for what reason. If I have not heard from you and receive supporting documentation for your absence, I shall consider it an unexplained absence. Two such absences will**

reduce your overall grade by a letter grade irrespective of the points you might make. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent. If you have missed a class, please make an appointment to meet me so we can determine what needs to be done to make up the lost time.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.

Optional Policies:

Use of WebCT/Blackboard

I will expect you to use Blackboard to upload your reflection papers and I will give you feedback on those on Blackboard. Please monitor these for additional comments I give or information I require.

Use of Cell Phones & other Electronic Gadgets in the Classroom

Please do not use your cell phones in class. If it is an emergency, I will permit you to leave class and take the call. **If I see you texting or playing videogames or checking your email in class I will drop you a letter grade.**

Food & Drink in the Classroom

I do not mind food and drink in the classroom, however when we are conducting an activity, I will expect all food and drink to be put away immediately. All food and drinks must be properly disposed of.

Use of Laptops

If I need you to use a laptop during class I will take you to the computer lab.

Grade of Incomplete, "I"

A grade of incomplete, "I" will be given only under extenuating circumstances.

EDEE 4330 spring 2013

Assignment details and Expectations

You will be referring to this document a lot during the spring 2013 semester so please keep this safe and turn it in when you are required to. Please bring it to every class.

Assignment details:

All written responses must be typed, single spaced, 12 font and spell checked. It is extremely likely I will ask you to make changes and improve on your work. If I do so, please make the changes. You will have a week to make the requisite changes. Failure to do so will result in a lowering of the grade.

If your work is submitted past the due date you will lose points, and if it is very late, you will not receive any points for the work.

1. Weekly reflection papers / assignments: 10 x 10

This class is a three credit course which means you will be expected to do at least three hours of out of class work per week during the semester. There will be an assignment every week except for those weeks where one is already scheduled. Assignments can be anything, a discussion to a chapter, a written reflection paper, a web based task, a presentation etc. and will be assigned in class. There are tentatively 10 such assignments, if we do not get to complete all 10, the grading scheme will be adjusted to reflect the same.

The assignment will be posted on Blackboard right after class under the Discussion tab and you will have a week to respond to it. You will post your response right under the prompt on blackboard unless prompted to do otherwise.

The assignment for the week of January 24th is the following. This week I would like to test your science content knowledge. You are all training to be elementary teachers. As you are generalists and might be teaching any subject any grade EC-6 you are required to know the relevant content. I will give you a copy of the 5th grade TAKS test, please complete it to the best of your ability and bring it to class. We will discuss the answers in class.

For your response to be posted on Blackboard: please tell me what broad areas of science Physical, life, earth science you had trouble with.

What individual questions did you get wrong, why do you think you got them wrong?

How do you plan to improve your science content knowledge over the course of this semester to ensure success in your EC-6 science part of the test as well as in your future teaching? Be specific. I don't want a response like "I will study" or "I don't know". I want a specific plan that you will generate and stick to.

Please write in complete sentences and spell check. You may paste your response here directly or upload a word document.

Grading: You will get 10 points if the assignment is complete by class time next week. I am not interested in how you scored so please give it your best shot without any external help.

Note: you will lose points if your response is late @ 1 point a day. I will look at the date and time the response was posted and deduct accordingly. You will also lose points if you do not specifically address how you plan to improve your science content knowledge over the course of this semester to ensure success in your EC-6 science part of the test as well as in your future teaching. I am expecting at least two paragraphs with regard to how you plan to ensure success with the EC-6 science content.

Also for Jan 24th:

1. Please look through the toys for trash website and pick two science appropriate working models that you will be making and presenting to the class on March 28th 2013. You will upload the links to Blackboard; I will look at them and approve them. If I think the model is too easy I will ask you to choose a more complex one.
<http://www.arvindguptatoys.com/toys.html>
2. You will choose 3 science tentative fair projects and upload them to Blackboard so I can look through them and approve one of them. You will be presenting this to the class on March 28th.

One such assignment in this category you must prepare for is the Multicultural Scientist that will be made in class. I need you to pick a scientist, an unsung hero from your own culture, or a different ethnic background. Make sure the scientist isn't a well-known / popular scientist. I will ask you to post your selection of scientist on Blackboard so your peers know not to choose the same scientist. If I feel your scientist is too well known, I will ask you to choose another scientist. You may change your choice at any time provided you do not choose one that has already been picked.

Paper requirements:

You will upload a word processed paper to Blackboard with a cover page with your name, the name of the scientist and a clear picture of the scientist, where the person is from, important achievements, his/her bio and how you will integrate this scientist in your science teaching at the elementary level.

Grading: 10 points

You will lose points for your written material if it is late, and does not meet the requirements mentioned above.

You will get zero points if I don't see you have made an effort in doing this assignment.

The emphasis is on how you would integrate the scientist you chose and his/her achievements into your science class. Identify a science topic that will lend itself to you introducing the scientist.

Another such assignment is the Science Safety contract / science Rules. If you are bilingual, you will be required to write these in Spanish. If you are ESL, you will make sure you address the vocabulary in your assignment so the students will understand these terms.

Paper requirements:

You will upload both documents to Blackboard. Please make sure they are not copied off the internet but are ones you have created. Please be thorough when creating the 2 documents.

Grading: 10 points

You will lose points for your written material if it is late, and does not meet the requirements mentioned above.

You will get zero points if I don't see you have made an effort in doing this assignment.

The science-literacy connection is another assignment in this category. You are required to draw the connections between an elementary story book and science content. For instance, the book Bartholomew and the OObleck can be connected to states of matter, properties of matter etc.

Paper requirements:

You will upload a word document to Blackboard that contains the following: the picture of the front title of the book, the author, publisher, year ISBN number information, and a brief synopsis of the book, the science content you will connect it to and the grade level. Please make sure you define all the science terms accurately.

Grading: 10 points

You will lose points for your written material if it is late, and does not meet the requirements mentioned above.

You will get zero points if I don't see you have made an effort in doing this assignment. The emphasis is on the integration of science and literacy. If the science content is not clearly delineated you will lose points.

Section 1 of the Portfolio is also included in this category. You will be required to turn in a rough draft, I will give you feedback on this and then you will make corrections and turn in a final product that I will grade. I will give you an exemplar to follow and model your work on. This assignment carries 30 points. You will lose 50% of the points for turning in late work.

2. Small Group teaching 40 points

A small group can be a minimum of 4 students to the whole class.

Requirements: This must be an activity-based science lesson. You will also incorporate a reading / vocabulary strategy while teaching the science content. The small group activity must be a minimum of 30 minutes long; you choose the grade level and the science content to be taught with the approval of your cooperating teacher. You will design an intervention that tests the students' initial knowledge base and through hands-on activities extends it or fills in the gaps. An appropriate assessment must also be administered. Please discuss the topic assigned with me and get approval on your lesson prior to teaching it at the school. The assignment will also have a reflective component. If you are allowed to take pictures of students participating in the activity please do and please include student work as well.

Submission: Please make sure you send me a copy of your plan and activity details prior to conducting the activity by email to ratna.narayan@unt.edu

Final submission to be sent via email to my UNT email ratna.narayan@unt.edu

Your assignment must include the following: A cover page with your name and assignment. A content page detailing the science content to be taught including vocabulary words and their meanings must follow. Tell me about who your students are male, female, grade level, why you chose them for this assignment. What do they know about the topic and how did you determine this (please detail whether you used an activity, game or questioning, and what questions). What are the TEKS and ELPS relevant to the activity? What reading / vocabulary strategy did you use and why? How do you think it went? How did you conduct the science activity, what materials and what procedure? How did the students respond to the activity? How did you assess the student's gain in knowledge? Please attach pictures and copies of student work. Looking at the student work, how do you think the students performed? Your written paper will also constitute a reflective component in which you will explain what worked with respect to your project, what didn't work and what you would do differently the next time.

Grading: 40 points: You will lose points if the above requirements are not met, or if the assignment is turned in late or you have not made changes I have suggested when turning in your rough draft.

3. Science Fair experiment 50 points

The rationale behind this assignment is to give you the experience of generating, conducting and presenting a science fair type experiment. You will try and involve a few students in your class in your project. If you do, you will first discuss this with the mentor teacher you have been assigned to at the school as well as with me. Once you have completed your experiment, you will make a power point presentation and print out a copy and display it at your school and get feedback from the elementary students and teachers. You will also present it to your person March 28th

PLEASE RUN YOUR IDEAS BY ME AND GET WRITTEN PERMISSION BEFORE EMBARKING ON THE EXPERIMENT.

For this assignment, you will explore a question related to a science concept in the elementary school. You will formulate the question as a hypothesis, set up the experiment, collect data and record it, both as narratives and pictures, analyze that data and present the results in the form of a short paper. Please include a scientific reason for your results. A short will be made to the class. The assignment will also have a reflective component.

Requirements: You will need a trifold science fair board for your oral presentation as well as a written paper to be submitted to me.

The slides/ headings I am looking for the trifold board as well as paper are the following: Title of the project with your name, your question, your hypothesis, materials, method, and data tables with graphs and photographs, and qualitative descriptions, results, scientific reason for the results.

Your written paper will also constitute a reflective component in which you will explain what worked with respect to your project, what didn't work and what you would do differently the next time. You will mail the written paper to me @ratna.narayan@unt.edu

Grading: 50 points: you will lose points if the work is turned in late and is missing any of the above specified components. If you do not tackle the scientific reason in your own words you will lose 30 points.

4. Toys from trash

For this assignment, you will go to the website <http://www.arvindguptatoys.com/toys.html> and pick two different items, follow directions to make then WORK and present them in class on March 28th. Each will be accompanied by a brochure in which you explain a) how you made the model and b) the science behind the model.

When you peruse the site, please do not pick craft and art projects like making a paper bag or woven man, I am looking for science related materials, so please take heed.

5. Science Lesson Presentation

This is a TK 20 requirement for EDEE 4330 and MUST be completed and uploaded into TK 20 by all students. You will work on this project in groups that I will pick.

Purpose. This activity will give you a “behind the scenes” look at teaching on your own to reveal the hidden work and effort involved. From your perspective as a student, teaching may look easy. After all, an effective teacher should make teaching look easy. As a student you do not see what went into the planning of the lesson. You also do not see what was required by the teacher to make the delivery seem easy.

What to do. You will select a science topic from grades 5/6 and design and teach a grade level appropriate aspect of that topic (represented in the TEKS) to the EDEE/EDME 4330 class. This is a mini-lesson, taking 30 - 45 minutes maximum. **Your team will take on the role of the teachers and teach the class as if they were the grade level students. For example, if the lesson is for 5th graders, you will be a 5th grade teacher and the EDEE class will be the 5th graders.** The lesson that you will prepare will include a hands-on activity for the class, a graphic organizer, and an assessment quiz.

Preparation. You will need to prepare the following:

2. A copy of the instructional plan which includes class and materials management.
3. A copy of the Lesson Plan (5E). Should include TEKS used.
4. Instructions for the hands-on activity (1 copy for each student).
5. Safety rules
6. Materials needed for the hands-on activity.
7. The graphic organizer (1 copy for each student).
8. An assessment quiz of 5 questions three of which must be Bloom’s HOT
<http://www.mcsk12.net/schools/peabody.es/hots/hots1.htm>
9. A “dead time” activity (for those that complete the quiz early)

Logistical Considerations:

1. TAKE CHARGE: On the day of your presentation you will have no less than 30 but no more than 45 minutes to set up materials, present and conduct the hands-on activity, provide closure using the graphic organizer and arrange for the return/removal of all materials.

2. TAKE CHARGE AGAIN: At the end of the lesson, you will administer the 5 question quiz. Quiz should be designed to be completed in 5 no more than 10 minutes. Provide the dead time activity for those that finish the quiz early.
3. Following your teams lesson we will conduct a review of your lesson.

What is the purpose of the plus/delta?

1. *To have everyone consider what went well (plus) or what could be changed (delta) to improve the processes in the learning and implementation of the lessons**
 2. *To review a project eliciting comments from anyone who wishes to give a comment(s)*
 3. *To open communication and facilitate the creation of a community of learners*
- *comments must be positive, ...'unconditionally constructive'***

You will need to upload to TK 20 the following:

1. One copy of the instructional plan
 2. One copy of the lesson plan (5E)
 3. One copy of the instructions for the hands-on activity
 4. One copy of the graphic organizer
 5. Set of quizzes graded
 6. Roster with quiz grades
 7. One copy of the dead time activity
 8. Reflection
6. Perot museum assignment
Details to follow.

The New Perot Museum of Science opened on Dec 1st 2012 in Downtown Dallas. This assignment will be based on the exhibits at the Museum. We will get you into the Museum for no charge. Details will be provided to you by Feb 1st.

7.