

CALIFORNIA STATE UNIVERSITY SAN MARCOS
COLLEGE OF EDUCATION
EDMS 545 - Elementary Science Education
Tuesday 8:00-2:00 Poway Campus

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Required Textbooks: *Teaching Children Science. An Inquiry Approach*
By Alfred E. Friedl. NY: McGraw-Hill.
Handouts, provided
Successful Inclusive Teaching (3rd ed.).
By J. S. Choate, (2000). Needham Heights, MA: Allyn and Bacon.
Moon Journals; Writing, Art and Inquiry through Focused Nature Study.
By J. Chancer and G. Rester-Zodrow. Portsmouth, NH: Heinemann. On reserve.

Other Good Books: *A Year of Hands-on Science*. (1996). By Lynne Kepler. New York: Scholastic.
200 Goopy, Slippery, Slimy, Weird & Fun Experiments. (1993).
By Janice VanCleave. New York: JohnWiley
Science Matters: Achieving Scientific Literacy. By Robert M. Hazen
Great Explorations in Math & Science (G.E.M.S.). Lawrence Hall of Science.
<http://www.lhs.berkeley.edu/GEMS/>
Activities Integrating Math and Science. Aims Education Foundation.
<http://www.aimsedu.org/aimscatalog/default.tpl>

These and many other hands-on science books are in bookstores, museums, zoos, even grocery stores!

COURSE DESCRIPTION

This course is designed to provide a comprehensive overview of the objectives, skills, concepts, experiments, materials, and methods necessary to teach science to elementary school children. A series of team activities will provide you with first-hand experiences in these areas. This course focuses on instructional methods, techniques, materials, lesson planning, curriculum development, organization and assessment in science. The integration of curricular areas is addressed. Methods of cross-cultural language and academic development will be integrated into the course.

COURSE OBJECTIVES

By the end of this course, students should be able to

1. Demonstrate proficiency with inquiry skills of observing, measuring, inferring, classifying, predicting, verifying predictions, hypothesizing, isolating variables, interpreting data, and experimenting.
2. Identify exemplary materials (curriculum kits, science programs, textbooks, equipment, technology, ancillary materials) appropriate for elementary school children.
3. Demonstrate knowledge and understanding of the California Science Framework, the California Science Content Standards, and the National Science Education Standards.
4. Demonstrate an understanding of the physical, earth and life science concepts included in the K-8 California Science Content Standards, and how to design lessons to teach the concepts.
5. Use the Learning Cycle model of instruction to teach science in a contemporary manner.
6. Use technology in elementary science teaching.
7. Demonstrate confidence in leading and performing investigations designed to teach science concepts, science process skills, and scientific attitudes.
8. Use authentic methods of assessment to evaluate student learning of science concepts and processes.
9. Design an elementary science teaching mini-unit that integrates curricular areas.
10. Practice strategies to include all students in science (linguistically and culturally diverse, students with disabilities and other students with special needs).

COE MISSION STATEMENT

The mission of the College of Education Community is to collaboratively transform public education by preparing thoughtful educators and advancing professional practices. We are committed to diversity, educational equity, and social justice, exemplified through reflective teaching, life-long learning, innovative research, and on-going service. Our practices demonstrate a commitment to student-centered education, diversity, collaboration, professionalism and shared governance.
(adopted by COE Governance Community, October 1997)

INFUSED COMPETENCIES

Authorization to Teach English Learners

This credential program has been specifically designed to prepare teachers for the diversity of languages often encountered in California public school classrooms. The authorization to teach English learners is met through the infusion of content and experiences within the credential program, as well as additional coursework. Students successfully completing this program receive a credential with authorization to teach English learners.

(approved by CCTC in SB 2042 Program Standards, August 02))

Special Education

Consistent with the intent to offer a seamless teaching credential in the College of Education, this course will demonstrate the collaborative infusion of special education competencies that reflect inclusive educational practices.

Technology

This course infuses technology competencies to prepare our candidates to use technologies, emphasizing their use in both teaching practice and student learning.

COURSE REQUIREMENTS

COE Attendance Policy

Due to the dynamic and interactive nature of courses in the College of Education, all students are expected to attend all classes and participate actively. Absences and late arrivals/early departures will affect the final grade. At a minimum, students must attend more than 80% of class time, or s/he may not receive a passing grade for the course at the discretion of the instructor. Individual instructors may adopt more stringent attendance requirements. Should the student have extenuating circumstances, s/he should contact the instructor as soon as possible.

For this class, if you miss 1 class session or are late (or leave early) for three or more sessions, your highest possible grade is a B. If you miss 2 class sessions, your highest possible grade is a C. If you miss more than 30% of the class (3 class sessions), you may not receive a passing grade for the course. Absences do not change assignment due dates. Late assignments will receive a 10% reduction in points for each day late. After one week, late assignments will receive no credit.

Writing

In keeping with the All-University Writing Requirement, all courses must have a writing component of at least 2,500 words (approximately 10 pages) which can be administered in a variety of ways.

Students with Disabilities Requiring Reasonable Accommodations

Students are approved for services through the Disabled Student Services Office (DSS). This office is located in Craven Hall 5205, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Students authorized by DSS to receive reasonable accommodations should meet with their instructor during office hours or, in order to ensure confidentiality, in a more private setting.

**You must go to ACD 202 to activate your CSUSM e-mail account.

COURSE ASSIGNMENTS

1. Participation, Collaboration and Professionalism	25%
2. Reading Responses (individual)	10%
3. Quick Writes	10%
4. Moon Journals/Field Trip	5%
5. Science Instruction Case Study	10%
6. Leadership of Hands-on Science Lesson (pairs)	10%
7. Science Exploratorium Lesson Plan and Presentation (may work in pairs)	10%
8. Science Teaching Unit and Presentation (may work in pairs)	10%
9. Final Assignment (individual)	5%
10. Science Teaching Notebook (individual)	5%

**Late assignments will be penalized by a 10-point reduction each day they are late.
Keep digital copies of all assignments for your Credential Program Electronic Portfolio.**

CRITERIA FOR GRADING ASSIGNMENTS

A	Outstanding work on assignment, excellent syntheses of information and experiences, great insight and application, and excellent writing.	90-100%
B	Completion of assignment in good form with good syntheses and application of information and experiences; writing is good.	80-89%
C	Completion of assignment, adequate effort, adequate synthesis of information and application of information and experiences, writing is adequate.	70-79%
D	Incomplete assignment, inadequate effort and synthesis of information, writing is less than adequate.	60-69%

Grades will be determined by points earned:

A = 93-100	C+ = 77-79
A- = 90-92	C = 73-76
B+ = 87-89	C- = 70-72
B = 83-86	D = 60-69
B- = 80-82	F = 0-59

ASSIGNMENT DESCRIPTIONS

1. PARTICIPATION, COLLABORATION AND PROFESSIONALISM (individual)

Students will engage in active learning each class session, and will be expected to actively participate, collaborate, and demonstrate professionalism at all times.

- Do you participate in class discussions productively, sharing your knowledge and understandings?
- Do you interact productively with your peers, taking on a variety of roles (leader, follower, etc.)?
- Do you contribute appropriately to group work—do you “do your share”?
- Are you able to accept others’ opinions?
- Are you supportive of others’ ideas?
- Do you support your peers during their presentations?
- Can you monitor and adjust your participation to allow for others’ ideas as well as your own to be heard?
- Do you show a positive attitude and disposition towards teaching all students?
- Do you exhibit professional behavior at all times?

Rubric for PCP: Participation, Collaboration and Professionalism

	Excellent 11-14 points	Acceptable 7-10 points	Unacceptable 0-6 points	
Attitude	Consistently displays a positive attitude. May offer constructive criticism and include alternatives that show initiative.	Displays a positive attitude. May offer constructive criticism and include alternatives that show initiative.	Seldom has a positive attitude. Often is critical. Does not offer alternative solutions to criticism.	
Participation	Attends every class, always on time and well prepared, and never leaves early. Gives closest attention to class activities and speakers.	Attends every class, on time and prepared, and never leaves early. Gives most attention to class activities and speakers.	Is not always ready when class time begins. Doesn't give full attention in class; sometimes talks when others are speaking.	
Professionalism	Consistently behaves, talks and works in a professional manner, regardless of task/topic.	Most of the time, behaves, talks and works in a professional manner, regardless of task or topic.	Seldom behaves, talks, and works in a professional manner, regardless of task or topic.	
Collaboration	Consistently listens to, shares with, and supports the efforts of others. Tries to keep people working well together.	Most of the time listens to, shares with, and supports the efforts of others, but sometimes is not a good team member.	Rarely listens to, shares with, and supports the efforts of others. Is not always a good team player.	
Contributions	Consistently provides useful ideas; always stays focused on the task. Exhibits a lot of effort and valuable contributions.	Most of the time provides useful ideas; most of the time stays focused. A satisfactory group member who does what is required.	Rarely provides useful ideas; not always focused. Reluctant to participate. Lets others take charge and participate.	
Disposition toward teaching	Consistently demonstrates concern in learning to teach all children. Always demonstrates strong commitment toward developing (a) an understanding of children, (b) teaching strategies, and (c) knowledge of the CA Standards for the Teaching Profession (CSTP), Teacher Performance Expectations (TPE), and CA Science Content Standards.	Most of the time demonstrates concern in learning to teach all children. Often demonstrates commitment toward developing (a) an understanding of children, (b) teaching strategies, and (c) knowledge of the CSTP's, TPE's, and CA Science Content Standards.	Rarely shows concern in learning to teach all children. Rarely demonstrates commitment toward developing (a) an understanding of children, (b) teaching strategies, and (c) knowledge of the CSTP's, TPE's, and CA Science Standards.	
Leadership	Shows strength through leadership in different class activities; other students respect you as a leader.	Effectively participates and contributes, but rarely shows leadership qualities.	Does not show leadership in any area of class.	

You will do a self assessment, using this rubric, and write a 1-2 page rationale.
The professor will also do an assessment, using this rubric.

Total Score: j _____

2. READING RESPONSES (ON Chapters 4, 8, 14, 15, 19, and 21) (individual)

Students will be assigned readings. Students should email their reading responses to chapters, to the 24 hours prior to class. Students should use one of the following forms:

- A. A Big Ideas paper explaining the key science concepts
- B. A visual or symbolic representation of the key science concepts
- C. A graphic organizer that demonstrates the key science concepts and their relationships to one another (samples will be provided in class)

Responses should be ONE page. Ten points will be subtracted for every two hours they are late.

PRIMARY TEACHING PERFORMANCE EXPECTATIONS

TPE 1A: Subject-Specific Pedagogical Skills for Multiple Subject Teaching Assignments

TPE 4: Making Content Accessible

TPE 5: Student Engagement

TPE 6: Developmentally Appropriate Teaching Practices

TPE 6A: Developmentally Appropriate Practices in Grades K-3

TPE 6B: Developmentally Appropriate Practices in Grades 4-8

3. DAILY QUICK-WRITES (individual)

Each class session will begin with a quick-write, based on work completed thus far in the course and your readings or a student generated question to begin a class discussion.

5. LEADERSHIP OF HANDS-ON SCIENCE LESSONS – Critical Assessment Task (CATs)

Students will lead hands-on science lessons during class. The lessons should model inquiry instruction, good questioning skills, and be content-understandable and non-judgmental. The lessons should be based on the California content standards. SDAIE strategies, technology integration, and methods for teaching students with disabilities should all be included and pointed out during the lesson.

You will work in pairs to lead science lessons based on the Learning Cycle Model of Instruction. You will teach these to your classmates. Each lesson will be allocated 45-55 minutes of class time to teach. Your classmates will not role-play elementary students, but will learn the science content and how to teach it. Treat your classmates as teachers, not elementary students.

The lessons should include hands-on activities, and should emphasize particular science concepts. The Exploration and Application phases of the Learning Cycle must require different hands-on science activities using manipulatives. Hands-on activities are NOT reading or completing worksheets (though they may require students to read something or complete lab observation sheets). You should take the activities “off of paper” and require students to use the science process skills with science manipulatives.

Be sure you understand the concepts you are emphasizing, and that you can explain them. The lessons should be developmentally appropriate for K-6, and should follow the NSTA Safety Guidelines. Begin the lesson by writing two essential questions about the lesson on the board, for students to consider during the lesson. Make sure that you include the 3 stages of the Learning Cycle. Make sure that science content background and applications to everyday life are addressed. You need to explain SDAIE strategies and adaptations for students with disabilities. Additionally, include at least one idea that includes the arts.

Prepare a **Powerpoint Computer Presentation** to use in your lesson. The presentation should include a detailed explanation of the science content, as well as a list and definitions of science concepts important to the lesson. Additionally, include a list of at least 3 web sites (with short descriptions) that address the science topic and concepts through simulations, graphics and movies. You should have links to these web sites and show examples during the lesson. **You need to email the presentation to the instructor 2 days prior to your presentation.

Prepare a Science Lesson Handout which includes the following:

- a. Learning Objective(s) written in complete sentences. “The students will _____.”
Use an action verb and explain how students will demonstrate their new knowledge and understanding.
- b. Science Concept(s) and definitions(s) written in complete sentences.
Do not say “The students will _____.” (That is an objective, not a science concept.)
- c. California Science Content Standard(s) which may be addressed, along with grade level.
- d. Exploration Activity
- e. Concept Introduction (also called Concept Invention)
- f. Concept Application Activity
- g. SDAIE strategies

- h. Adaptations for students with disabilities
- i. A 1-2 page summary of the science content background
- j. A list of 3 relevant web sites (with descriptions)
- k. Applications to everyday life.
- l. Two higher thought questions that you want students to be able to answer by the end of your lesson:
 - a. One MAIN IDEA question
 - b. One APPLICATION question

INCLUDE ONLY THE QUESTIONS, NOT THE ANSWERS.

- m. Description of 1 way to infuse the arts into this science lesson.

Bring copies of the activity for classmates with (a) team members' names at the top and (b) reference at the bottom.

Class Evaluations of Lesson

Each team will prepare an evaluation instrument to be used by five class members not on the team, The evaluation instruments should have the team member's names, title and science topic at the top. Have five categories to judge the presentations, and a rating scale of one to five, with one representing the best. **Give the instructor a copy of the evaluation that includes a description of each person's role in researching and presenting the lessons.**

6. SCIENCE INSTRUCTION SURVEY

Students will develop a case study of science instruction involving input from classroom observations, a K-8 teacher or teachers and K-8 students. It will include 5 parts: your observations, teacher interview, student surveys, chart comparison, and case study paper. Carefully read A-F below.

Observations of Science Lessons

- A. Ask an elementary teacher if you can observe 2-3 science lessons in his or her class. Then answer the following:
1. How would you define science instruction in this classroom?
 2. What are the characteristics of science instruction?
 3. What do the students do during science instruction?
 4. What materials are used?
 5. How often do the students engage in hands-on activities?
 6. Do they each participate and have a role?
 7. How is the classroom organized for science instruction?
 8. What science materials are in the classroom?
 9. What evidence is there of science?
 10. Do you see writing infused within the science lessons? If so, what are some examples?
 11. Are there children in the class who are learning English? What differences and similarities exist for children who are learning English?
- Feel free to add more descriptive information in regard to science instruction.

- B After you have answered the above questions find time to interview the teacher..
Ask the teacher to answer the Teacher Survey. Please inform the teacher that the school and district will not be identified, only the grade level. Please do not put the teacher's name on the survey.

Teacher Survey

1. How do children learn science?
2. How do you organize instruction so that children learn concepts related to the California science standards?
3. What are the different activities that you do during science instruction?
4. How do you group the students during science activities?
5. How often do you teach science?
6. How often do the children participate in hands-on science activities?
7. Do you integrate writing activities into science lessons? What are some examples?
8. What is the easiest thing about teaching science?
9. What is the most difficult thing about teaching science?
10. If you could design the ideal science program, what would be the characteristics of the program?
11. How do you organize instruction for science in two languages or in a language other than English? What challenges does this present for you?
12. How do you adapt instruction for students with special needs? Are there particular techniques or issues related to science teaching and students with special needs?

Feel free to include other questions during the interview. If possible, take a portable tape recorder to record the responses for later transcription, as it is easy to miss some things when you are taking notes. Be sure to ask the teacher if she or he minds if you use the tape recorder, and do not use it if the teacher is hesitant.

- C. Ask the teacher if you can hand out the Student Survey to the students in the class. (You may do this with 6 or more students.) Do **not** have the students put their names on the surveys. Feel free to include other questions on the survey, but do not make it too long for the students to answer. This survey will work with third graders and up; you can try it with second graders but I would suggest reading the questions aloud one at a time for them. If you are working with K, 1 or 2 use the following alternative strategy: Choose approximately 6 students (if you are in a bilingual class choose 3 who have English as their native language and 3 with Spanish or whatever other language is spoken in the class). Interview each student using the survey questions. Record the answers, if possible, and transcribe the taped interviews. Be flexible and adapt the survey to the level of the students.

Student Survey

Please answer the following questions.

Grade level: _____ Are you a Boy Girl ?

What language(s) do you speak? English Spanish Other

1. What happens during science in your class? How does your teacher teach you science?
2. How often do you do hands-on science activities in class?
3. What sorts of science activities do you do in class?
4. Do you work in groups to do science activities? If so, what do you do in the groups? Does each person have a job to do?
5. Do you have science materials to use during science activities? What sorts of materials do you use?
6. What are some of the science topics you have studied this year in science class?
7. Do you like science time? What do you like best about it?
8. Are you a good student in science? What helps you learn best?

D. Examine the three sets of data (your observations, those of the teacher and students) for matches and mismatches. Create a grid to organize the data:

Comparison Chart

	My Observations	Teacher Interview	Student Surveys
How is science taught/what happens during science time?			
How does the teacher teach science/what does the teacher do?			
Do the students participate in hands-on science activities?			
Adaptations and Accommodations			

E. Using the data you have collected and the match/mismatch chart, type a 2-3 page CASE STUDY PAPER of the science instruction.

F. **Turn in 2 copies of the following. Staple all together in the following order, with the Case Study paper on top.**

1. Your 2-3 page CASE STUDY PAPER.
2. Your own answers to questions (in A above) as you observed in the classroom
3. Teacher Interview questions (B above) and answers
4. Student Surveys (C above) with student answers
5. Comparison Chart (D above) of your observations, teacher interview answers and student survey answers.

7. SCIENCE EXPLORATORIUM LESSON PLAN AND PRESENTATION WITH SCHOOL AGE CHILDREN – Critical Assessment Task (CATs)

Develop an inquiry activity to teach to elementary students. You may work in pairs on this assignment. You will prepare a hands-on science lesson and poster about a science concept. You will present the lesson at our Elementary School Science Exploratorium. Be sure you understand the concept(s) you are emphasizing, and that you can explain it. The activity should be developmentally appropriate, and should follow the NSTA Safety Guidelines. Prior to teaching the lesson, turn it in to your instructor for review. After teaching the lesson, turn in a copy of your Reflection. The lessons should include hands-on lessons, and should emphasize particular science concepts. The Exploration and Application phases of the Learning Cycle must require different hands-on science activities using manipulatives. Hands-on activities are NOT reading or completing worksheets (though they may require students to read something or complete lab observation sheets). You should take the activities “off of paper” and require students to use the science process skills with science manipulatives.)

Turn in your typed Lesson Plan with your names at the top and REFERENCES at the bottom.

1. Science Concept (and definition) you are teaching. Write it out in a complete sentence. Do not say “The students will _____.” (That is an objective, not a science concept.)
2. Essential Questions
3. 1-3 Behavioral Objectives
4. California Science Content Standards addressed
5. Exploration Activity
6. Concept Invention
7. Concept Application Activity
8. The Reflection (answer the following):
 - a. How did the children respond? (What did they say and do?)
 - b. How do the children’s actions and responses demonstrate their level of understanding.
 - c. How did you (or can you) improve upon your lesson to facilitate understanding?

8. SCIENCE TEACHING UNIT AND PRESENTATION– Critical Assessment Task (CATs)

(may work in pairs)

You will create a typed unit on a specific science topic. You must bring a stamped, self-addressed manila envelope in order to receive a final grade. (You may work in pairs on this assignment.)

Unit Components:

1. Unit Plan (1 page; include title, grade level, goals for unit, Calif. Science Content Standards addressed, and one-two line descriptions of each learning cycle lesson)
2. Essential Questions
3. Authentic Assessment
4. Rubric for Assessment (see rubric.forteachers.org for assistance)

5. 1 Learning Cycle Lesson Plans

*Adapt from Commercial Lessons
in books and science curricula.*

Do not re-invent activities.

For each lesson, include the following:

- a. Topic
 - b. Science Concept you are teaching. Write out the science concept(s) (and definitions) you are teaching in a complete sentence. Do not say “The students will ____.” (That is an objective, not a science concept.)
 - c. California Science Content Standards addressed
 - d. Objectives (1-2) (use behavioral objectives with action verbs—i.e., The students will ____)
 - d. Exploration Activity- explain what students do and teacher does
 - e. Concept Introduction (also called Concept Invention)--explain what students do and teacher does
 - f. Concept Application Activity- explain what students do and teacher does
6. Science Content Background for the teacher (2-3 PAGES—typed)
 7. Integration of literature and writing. 2 non-fiction sources and 2 fiction sources.
 8. SDAIE Strategies and explanation of how used
 9. Adaptations for Students With Disabilities and explanation of how used
 10. 3 Ways to Integrate Technology and Explanation of how used, this should include at least two web cites.
 11. Description of an arts component to integrate. (Select one of the arts disciplines and elaborate.)
 12. References

The lessons should include hands-on lessons, and should emphasize particular science concepts. The Exploration and Application phases of the Learning Cycle must require different hands-on science activities using manipulatives. Hands-on activities are NOT reading or completing worksheets (though they may require students to read something or complete lab observation sheets). You should take the activities “off of paper” and require students to use the science process skills with science manipulatives.

You will present your unit using a Powerpoint Presentation during Finals class time.

9. FINAL ASSIGNMENT (individual)

This reflections assignment of 3 questions will be given in class.

10. SCIENCE TEACHING NOTEBOOK (individual)

You will keep a class notebook, and will meet with the instructor during the last class period to review contents. Please use section dividers and labels for sections. For some assignments, you may need to make copies in order to include everything in your notebook.

- I. California Science Content Standards for grades K-8 (download from <http://www.cde.ca.gov/board/pdf/science.pdf> and print)
- II. Reading Responses
- III. Quick Writes
- IV. Exam over Learning Cycle Lessons
- V. Learning Cycle Lessons presented in class
 - a. Lesson Plan Handout
 - b. Learning Log for each lesson
- VI. Science Instruction Case Study

- a. Case Study Paper
- b. Your Observations
- c. Teacher Interview
- d. Student Surveys

VII. Science Exploratorium Lesson Plan

VIII. Draft of Unit (unit due last class)

IX. Other Class Handouts

EISENHOWER NATIONAL CLEARINGHOUSE <http://enc.org>

The Eisenhower National Clearinghouse (ENC) has recently launched an all-new web site, ENC Online, at <http://enc.org>. ENC, which was established by the U.S. Department of Education, provides K-12 math and science educators with information about teaching materials, innovative ideas, and professional development.

The content on ENC Online has been organized into four major categories. They are Curriculum Resources, Web Links, Professional Resources, and Topics. Through Curriculum Resources, teachers can locate teaching or professional development materials using subject words, grade level, cost, and type of material to meet their specific needs.

Teachers have said that the Digital Dozen, a monthly selection of exemplary math and science web sites, is one of their favorite features on the site. It is now found in the Web Links area. (Teacher can now also choose to have Digital Dozen delivered to their email boxes when registering with ENC.) Web Links also includes links to sites offering lesson plans, arranged by math or science topics.

The Professional Resources area is intended to become a part of a teacher's professional support system. A Timesavers section found within the Professional Resources area offers a collection of the most popular professional resources in one place for quick linking and use. Standards and state frameworks are also found under Professional Resources, as are federally funded resources, professional development strategies, and research articles.

ENC has always created projects and publications on relevant topics for teachers. The Topics area arranges hundreds of articles, teacher interviews, and selected curriculum resources and web sites thematically. Key education issues addressed in the Topics area include inquiry and problem solving, integrating educational technology, equity, and assessment. These areas include the materials developed for ENC Focus, our quarterly magazine for math and science educators.

Tentative Schedule

January 20th	Course Overview What is Science? The Inquiry Process Review Syllabus (download before first class) Sign up for Leadership Science Activity Read Chapters 1 and 3 TPEs
January 27 th	The Learning Cycle The CA Science Content Standards Science Lesson – Heat Energy-Chapter 4 Science Lesson- Static Electricity-Chapter 5 Integrating Science and Long Term Planning
February 3 rd	Science Lesson- Current Electricity- Chapter 7 Science Lesson- Sound – Chapter 8 Science Curriculum Kits Moon Journal Assignment Science Lesson- Light/Lenses/Color – Chapter 9
February 9 th	Inclusive Science Teaching Science Lesson-Air and Air Pressure-Chapter 10 Science Lesson-Weather-Chapter 11 Introduce Moon Journal Assignment Work on School Science Exploratorium
February 17 th	Poway school campus is closed <ol style="list-style-type: none">1. Go on a “field trip” (list will be given out in class)2. Complete Moon Journal assignment3. Meet with group on long term planning project4. Read chapters 13, 14, and 16)
February 24 th	Science Lesson – Geology-Chapter 15 Science Lesson – Plants – Chapter 17 Present Group Projects
March 2	Science Lesson – Animals – Chapter 18

Read chapter 19
Present Group Projects

March 9th Final (questions given in class)
Read chapters 20 and 21
Presentation of Group Projects
Notebook Review
Science Survey Due