Learning Goals

If I had influence with the good fairy who is supposed to preside over the care of all children, I should ask that her gift to each child in the world be a sense of wonder so indestructible that it would last a lifetime, as an unfailing antidote against the boredom and disenchantments of later years, the sterile preoccupation with things that are artificial, the alienation from the sources of our strength.

--Rachel Carson, The Sense of Wonder

The teacher tells us we must ride the unknown...She says we cannot rely on a formula...She says we must learn from each act, and no act is ever the same...recipes are useless. These will achieve only the conventional, she says. But beauty demands a more arduous process. Suddenly, we find we have a new language...The possibilities, she told us, are endless...The possibilities, we see, never end...

-Griffin, Women and Nature: The Roaring Inside Her

The goals of this course are to help you begin a journey of becoming an effective and enthusiastic science and social studies teacher. The course is intended to support your growth in...

1. Learning to direct your own professional growth and learning (both content learning and methods of teaching)
2. Exploring what it means to understand science and history and to "do" science and history
3. Appreciating, understanding, respecting, and enjoying diverse learners’ ways of thinking about science and social studies issues and questions
4. Developing strategies and frameworks for making curriculum choices in science and social studies
5. Developing strategies and skills in developing learner-centered, conceptual change science and social studies units and lessons
6. Developing skills in teaching (and learning from teaching) science and social studies units and lessons
7. Defining, shaping, revising, and defending your philosophy about science and social studies teaching and learning
8. Becoming more confident and enthusiastic about teaching science and social studies

To meet these goals, we intend to engage in a number of activities. We will explore resources - the internet, standards documents, various curricular resources, children’s literature, and local museums and bookstores. We will teach lessons - first Kathy and Suzanne, and then you - and participate in professional discussions about the content, purpose, and effectiveness of those lessons. We will construct and try out lessons and units in both social studies and science, drawing on the myriad resources that we explore. And we will read widely - educational
research and scholarship, writing within the disciplines, and children’s literature – and discuss that writing as well.

**Course Themes**

The course is organized around five themes:

**Theme 1: Science and Social Studies Teaching as a Journey: Planning to teach and learn**
How can I continue to learn and grow as a professional?  
What are my own connections/disconnections with science? with history and the social sciences?  
What are my ideals for science teaching? for social studies teaching?  
What are my ideals for my own science learning? my own history and social studies learning?  
What are the beginning steps I can take in working towards my ideals?

**Theme 2: Understanding Science, Understanding History: Appreciating the complexities and ways of inquiry; developing a passion/curiosity for learning science and history**
What is science? What is history? Where do they come from? Who creates them?  
What are the methods of inquiry? What is the content?  
Why are they important to teach to all children?  
Why are they important to me?  
What do I need to know in order to teach for understanding? to teach “powerful” science and history?

**Theme 3: Listening to Children: How do they learn science? How do they learn social studies?**
Who are the learners in my classroom, and how can I learn about and build on what they bring to my science and social studies classroom?  
How do they make sense of the world around them -- the people, events, natural phenomena in their lives?  
How are they similar/different from me? from each other?

**Theme 4: Teaching from a Learner-Centered, Inquiry Perspective**
What’s worth teaching? What’s most important?  
How can I organize and plan my science and social studies teaching to best support meaningful student learning?  
How can I create a classroom environment that supports meaningful science learning? that creates powerful social studies learning?

**Theme 5: Bringing in the Outsiders: Welcoming All Students into Science and Social Studies Explorations**
How and why does science teaching alienate many students?  
How and why does social studies and history teaching alienate many students?  
How can I create a learning community that welcomes and respects all different kinds of learners in science and social studies?

**Course Readings**

There are two reading packets available at Budget Printing in the Trowbridge Shopping Center.  
One packet is TE 402, Section 5, Social Studies-Wilson, the other is TE 402, Section 5, Science-Roth.  
In addition, you are expected to purchase the following books:

**Social Studies:**
- Folsom, Burton W.  *Empire Builders: How Michigan Entrepreneurs Helped Make America Great*
Science:

Michigan Essential Goals and Objectives for Science Education (MEGOSE)


Note: The next two texts are available in book form but can also be accessed in full online:

Benchmarks for Science Literacy (Project 2061)
Project 2061 home page: http://project2061.aas.org/
Direct to Benchmarks: http://project2061.aas.org/tools/benchmol/bolframe.html

National Science Education Standards (National Academy of Sciences)
Direct to Standards: http://www.nap.edu/readingroom/books/nses/html/

**Please bring to each science class session:** Reading-unit planning packet, MEGOSE, and any materials required for class activities

Course Assignments

We will hand out descriptions of expectations for each assignment in class. This is a summary of all assignments, when they are due, and what percentage they will contribute to your overall course grade.

2.22.99 Reflective essay on children’s thinking in social studies

3.1.99 Reflective essay on teaching a social studies lesson I

3.3.99 Science Unit Plan Form A

4.14.99 Science Unit Plan Form B

4.19.99 Social studies unit plan

4.21.99 Assessment of Student Learning in Science

4.26.99 Reflective essay on teaching a social studies lesson II

5.3.99 Final exam will focus on course framing questions and a written statement of your goals as a social studies and science teachers and professional development plan for reaching those goals.
Final grade: The final grade in the course will be determined as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Class participation and preparation</td>
<td>20%</td>
</tr>
<tr>
<td>Unit plan, Social Studies</td>
<td>15%</td>
</tr>
<tr>
<td>Unit Plan, Science (Average of Form A and Form I)</td>
<td>20%</td>
</tr>
<tr>
<td>Reflective essays in social studies, 3 essays</td>
<td>15%</td>
</tr>
<tr>
<td>@ 5% each</td>
<td></td>
</tr>
<tr>
<td>Assessment of Student Learning, Science (Preassessment</td>
<td>10%</td>
</tr>
<tr>
<td>and Postassessment)</td>
<td></td>
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<tr>
<td>Final exam</td>
<td>20%</td>
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</tbody>
</table>

Transition to the Internship, Grading, and Course Policies

Transition to the internship. This semester marks an important transition in your lives. Soon you will be graduating from MSU and entering a full-time teaching internship. TE 402 begins that transition.

During TE 402, the Team 2 staff will be working to place you in a classroom for your internship. Feedback from your course instructors and your collaborating teachers will play an important role in assessing your readiness for the internship. The actual grade you receive for this course is not nearly as important as the knowledge, skills, and dispositions you develop that will prepare you to start the internship and your teaching career. At the end of the semester, you should assess your progress in terms of readiness for the internship. A 4.0 is meaningless if you feel unprepared to teach and learn in the internship. And as you enter your teaching career, there will be no one grading your performance and growth. You must assess your own learning and chart your own directions for growth.

Grading. Since this course serves as a transition to a professional internship and to masters level courses, each of you must be doing work at a level that matches high professional expectations. Any work that is not meeting these high standards will be given an incomplete along with suggestions for how to improve the work and a deadline for revisions. If the work is not satisfactorily revised by the deadline, the incomplete will become a 0.0. You must complete satisfactorily all course assignments and field assignments to pass the course. That is, you fail to hand in any assignment or fail to do any required field activities, you will receive a 0.0 for the course.

Field Component. Linking the ideas you are studying in class with your work in the field and (vice versa) is the key to maximizing your learning from this course. Everyone in the program recognizes the importance of this field component as a preparation for the internship. Therefore, your instructors, Team 2 coordinators, and CT will be evaluating your participation in the field as they consider your readiness for the internship. The field component will be graded on a pass/fail basis. If you fail this component of the course, you will fail the course.

Course Policies

Field Attendance
Regular on-time attendance twice a week (2-3 hours each time) is expected. Your collaborating teacher will keep records and will care a great deal about your attendance pattern and punctuality. These are the most basic of expectations of people who are working with children. We will ask for midterm and end-of-semester feedback from teachers about your attendance, preparation, and participation in the field.
Class Attendance
Regular on-time attendance and full participation in class is critical to your learning. This is not a lecture class where you can copy someone else's notes. This is an active learning class. You need to be here. Punctuality and regular attendance at your school site is also extremely important. Students and teachers there will be counting on your presence. Allow plenty of travel time to get to school on time.

Absences
Of course, illness and other emergencies cannot be avoided. If you are unable to attend a class session, you must call or e-mail your instructor in advance. Similarly, you must call your collaborating teacher in advance if you are unable to meet a field visit commitment.

Team 2 Attendance Policy
In accordance with the Teacher Preparation Program's Professional Conduct Policy, attendance and punctuality in class meetings and field experiences are critical to your success in this course and the program. It is your responsibility to familiarize yourself with the policy in your Student Handbook. In the case of recurring absences or tardiness, the course instructor will notify the appropriate Team 2 Coordinator, and you may be required to attend a meeting regarding your attendance. More than a total of 2 unexcused absences (e.g., absences without timely communication with the instructor and/or collaborating teacher, absences with inadequate reasons) in classes or in your field experiences will affect your grade and may result in a final grade of 0.0 for the course.

TE 402 COURSE CALENDAR
(subject to possible revisions)
Spring 1999

We have laid out the course so that Kathy and Suzanne are working on similar themes - in science and social studies respectively - in parallel. We begin by considering standards - what they are in teaching, in social studies/history, in science - and what implications those standards have for our work as professionals. Kathy and Suzanne will also start the term off by teaching lessons in their respective subject matters and the class - as a whole - will develop a set of expectations and norms (including the use of standards) to discuss and reflect upon that teaching. For the remainder of the term, we will develop unit and lesson plans; try them out in CTs classrooms and in our own; read about history, science, children's thinking, and the like; and explore various resources available to us as teachers. We have laid the course calendar out on the following pages, day-to-day (including the requisite field, reading, and writing requirements) so that you might easily keep track of what you need to do and when.
<table>
<thead>
<tr>
<th>Week of</th>
<th>MONDAY</th>
<th>WEDNESDAY</th>
<th>READING/Writing Assignments</th>
<th>Field Assignment</th>
</tr>
</thead>
</table>
| Jan 11  | 1.11.99 Introduction to the class. Review of the syllabus.  
          Draw a Scientist  
          Draw a Social Scientist/Historian  
          General Standards:  
          MSU TE program standards  
          Social Studies:  
          MI SS standards  
          MI PASS teaching standards  
          NCSS teacher education standards; NCHE standards  
          Science:  
          MEGOSS  
          And one website about science standards: http://project2061.aacas.org/tools/benchol/bolframe/books/nses/html/  
          http://www.nap.edu/readingroom/books/nses/html/ | Start field visits  
          Start Listening Log  
          Science unit topic |
| Jan 18  | 1.18.99 No class MLK Day | 1.20.99 Science day Welcoming all Students: Science Curriculum and Teaching Models  
          What is the neighborhood of science, and how can we welcome all students into it?  
          What are some instructional models of teaching science? | 1.18.99:  
          No reading  
          1.20.99:  
          Science Quotes  
          Kahle  
          Roth. Neighborhood of Science | Teach "Draw a Scientist" Lesson  
          Talk to CT about a science unit topic  
          Continue each week with a Listening Log |
| Jan 25 | 1.25.99 Social studies day: What is understanding in history and social studies?  
Overview of social studies activities, calendar, assignments, and expectations  
Suzanne’s Lesson 1  
Unit planning workshop | 1.27.99 Science day: What does it mean to understand science?  
Kathy’s Unit 1  
Unit Planning: Getting started | 1.25.99: Holt, School history  
Holt, Being a historian  
Husbands, Understanding the past: Evidence and questions  
1.27.99: Bring students’ drawings of scientists  
Reader Farrow and standards about your unit topic  
Write a lesson plan for your unit topic | S$: Talk to CT about his/her social studies plans for February  
Get from CT the social studies scope and sequence for your grade level  
Find teaching resources for science unit |
| Feb 1 | 2.1.99 Social studies day: Technology exploration  
Meet in Tech Lab  
Social studies lesson hunt 1 | 2.3.99 Science day: Children’s thinking  
Unit Planning Workshop: Preassessment | 2.1.99: Explore:  
http://www.proteacher.com/090044.shtml;  
http://www.nationalgeographic.com/resources/ngo/education/ideas.html;  
http://www.hyperhistory.com/online_n2/History_n2/a.html  
2.3.99: Read Bell and Roth (this one is in the unit plan section of the packet) about kids’ ideas and interview strategies  
Write down interview questions for your unit. Justify using readings. Bring to class. | Explore science software resources relevant to your unit topic. Engage one or more students in using the software and write a critique. |
| Feb 8 | 2.8.99 Social studies day: Children’s thinking  
Suzanne’s Lesson 2  
Discussion of readings  
Discussion children’s interview assignment | 2.10.99 Science day: Technology exploration  
Meet in Room 111 for first half of class.  
Kathy’s Unit 1 (cont.) | 2.8.99: Barton and Levstik, Back when God was around and everything  
Fournier and Wineburg, Picturing the past  
2.10.99: Watson & Konicek | S$: Arrange with CT for date to teach lesson from the web  
Arrange with CT for interviewing focus group of children for SS assignment  
Do science preassessment interviews with 3 students |
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 15</td>
<td>2.15.99 Science day: Technology Exploration and Instructional Models for Teaching Science</td>
<td>2.17.99 Social studies day: Children's literature Book club discussion of The Giver and Number the Stars Discuss the use of children's literature</td>
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<td>MEET AT ELLIOTT ELEMENTARY IN HOLT Analysis of Food for Plants unit and the unit planning guide 2.15.99</td>
<td>2.15.99: Read: Food for Plants unit plan Unit plan guide Pick 4 lessons from the plants unit that could be used as a shorter mini-unit. Justify why. Bring with you to class meeting at Elliott Elementary in Holt.</td>
</tr>
<tr>
<td>Feb 22</td>
<td>2.22.99 Social studies day Suzanne's Lesson 3 Unit planning workshop</td>
<td>2.24.99 Science Day Unit Planning Unit Planning Workshop</td>
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<td></td>
<td>2.22.99: Find relevant children's literature for unit plan Hand in reflection paper on SS children's interview assignment</td>
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<td></td>
<td>2.24.99: Bring all materials for science unit planning including preassessment interview results</td>
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<tr>
<td>March 1</td>
<td>3.1.99 Science day Unit Planning Workshop</td>
<td>3.3.99 Science day Becoming an Intern, Becoming a teacher Professional Growth in Science and Social Studies Teaching: Intern Panel</td>
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<td>3.1.99: Hand in reflection paper on teaching SS lesson Bring science unit planning materials to class, including whole class preassessment.</td>
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<td>3.1.99: Turn in Science Unit Plan Form A</td>
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<tr>
<td>Date</td>
<td>Social Studies Day</td>
<td>Science Day</td>
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<tr>
<td>March 15</td>
<td>Exploring resources</td>
<td>Instructional Strategies and Student learning</td>
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<tr>
<td>March 22</td>
<td>Book club discussion of Empire Builders</td>
<td>Assessment and Assessment of Kids' Learning with Technology</td>
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<tr>
<td>March 29</td>
<td>Using primary documents</td>
<td>Getting ready to teach</td>
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<tr>
<td>April 5</td>
<td>Children’s thinking and classroom discourse</td>
<td>Children’s thinking and classroom discourse</td>
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<tr>
<td>April 12</td>
<td>Professional discussions of teaching</td>
<td>Professional learning communities: The MCRN Project</td>
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</tbody>
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