

MICKELSON EXXONMOBIL TEACHERS ACADEMY SYLLABUS

**GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
Division of Elementary, Literacy, Multicultural and Secondary
Education**

**EDUC 500.622
Mickelson ExxonMobil Teachers Academy
Fall 2012
Sunday – Friday
7:45 am – 4:30 pm
July 22nd, 2012 through December 1st, 2012
Liberty Science Center, Jersey City, New Jersey**

Instructors: *Kim Cherry*
kcherry@nsta.org

COURSE DESCRIPTION:

Strengthen pedagogy and content knowledge in math and science for teachers in grades 3 – 5 the Mickelson ExxonMobil Teachers Academy is a five-day residential intensive course.

COURSE PURPOSE AND INTENDED AUDIENCE:

Goals for the Academy are to focus on Improving the Teaching and Learning of Mathematics and Science:

Members of the academy teams will:

- Deepen their understanding of mathematics and science content in the areas of data and statistics, measurement, force and motion;
- Build expertise in facilitating student learning through problem solving and inquiry;
- Use links between math and science to support student learning;
- Understand how children learn and apply that knowledge to classroom instruction;
- Increase their knowledge and use of instructional resources to support student learning; and
- Network with others involved in elementary school mathematics and science education.

PROFESSIONAL STANDARDS:

National Board for Professional Teaching Standard, Core Proposition 2

REQUIRED/SUPPLEMENTAL/RECOMMENDED TEXTS AND/OR READINGS:

Required Texts:

Uncovering Ideas in Physical Science, Page Keeley
Stop Faking It: Force and Motion, William Robertson
Math Matters 2nd Edition, Suzanna Chapin and Art Johnson
Questions for Math Teaching by Peter Sullivan and Pat Lilburn

Supplemental Readings:

Article: Science and Children, November 2010 – Science Notebooking

Article: Science and Children, January 2011 – Date Collection

Others as assigned

COURSE REQUIREMENTS, PERFORMANCE-BASED ASSESSMENTS, EVALUATION CRITERIA, AND GRADING SCALE:

All participants are required to attend ALL whole group, color group and number group sessions. The total course hours range from 35 – 45 hours.

Participants are also required to complete follow-up reflection due November 1, 2012.

***Reflection: (1 -3 pages typed)**

These questions guided your “Planning for Instruction” at the end of the Mickelson ExxonMobil Teachers Academy.

- ☐ *What one significant change do you plan to make in your mathematics and science instruction when you return to your classroom? If you are not a classroom teacher, respond from the perspective of your role in supporting mathematics and science instruction.*
- ☐ *Why is this a change you want to make?*
- ☐ *What impact do you expect this change to make on student learning? On other’s learning?*
- ☐ *What support do you need to make this change happen?*

Your Reflection Task (1-3 pages double-spaced typed) builds on the plan. Use the questions below to guide this reflection.

- ☐ Describe how this change has impacted your teaching and your students’ learning.
- ☐ Share both challenges and success stories.
- ☐ Share examples of student work or other evidence reflecting this change in your teaching.
Examples: scan samples of your students’ notebooks, share a 5E lesson plan, ask your students for feedback on a lesson, etc.
- ☐ Describe your “next steps” in changing your personal teaching practice to model the objectives of the Mickelson ExxonMobil Teachers Academy.

Please send all reflection papers s to [your course instructor](#) on or before Thursday, November 1st, 2012 at 5:00 pm.

GRADING SCALE:

A = 10 points

A- = 7 – 9 points

B+ = 5 – 6 points

B = 3 – 4 points

C = 2 -1 points

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS:

The Graduate School of Education (GSE) expects that all students abide by the following:

Students are expected to exhibit professional behavior and dispositions. See gse.gmu.edu for a listing of these dispositions.

Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.

Students must agree to abide by the university policy for Responsible Use of Computing. See <http://mail.gmu.edu> and click on Responsible Use of Computing at the bottom of the screen.

Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.

PROPOSED CLASS SCHEDULE:

Schedules are placed in registration packets.

JERSEY CITY -- SEND MY TEACHER

| SUNDAY 22-Jul-12 | MONDAY 23-Jul-12 | TUESDAY 24-Jul-12 | WEDNESDAY 25-Jul-12 | THURSDAY 26-Jul-12 | FRIDAY 27-Jul-12 |
|--------------------------|---|---|---|--|--|
| | R: G: B: | R: G: B: | R: G: B: | R: G: B: | R: G: B: |
| | P: Y: | P: Y: | P: Y: | P: Y: | P: Y: |
| | 7:00-7:45 Breakfast | 7:00-7:45 Breakfast | 7:00-7:45 Breakfast | 7:00-7:45 Breakfast | 7:00-7:45 Breakfast |
| | 8:00-8:45 Whole Group LuAnn/Sherri | 8:00 - 9:45 Color Group | 8:00-8:45 Planning time 45 mins | 8:00-10:30 Color Groups | 8:00-10:45 Color Group |
| | Interactive Theater 30 mins | Walking Directions 1 hour and 45 mins | | Origami Boxes | Iron Scientist |
| | 8:45 - 9:15 Whole Group Emil Jacobs 30 mins | | 8:45-9:00 Break <i>restroom only</i> 15 mins | 2 hours and 30 mins | 2 hours and 45 mins |
| | | 9:45-11:15 Color Group | 9:00-11:00 Color Group | 10:30-10:45 Break 15 mins | 10:45-11:00 Break 15 mins |
| | 9:15-9:30 Break <i>restroom only</i> 15 mins | Gravity on a Roll Speed & Acceleration 1 hour and 30 mins | Measurement Menu 2 hours | 10:45-12:15 Whole Group Learning Center | 11:00-11:30 Planning time 30 mins |
| | 9:30-11:15 Color Group | | | 1 hour and 30 mins | 11:30-12:30 LUNCH 1 hour |
| | Egg Drop 1 hour and 45 mins | 11:15 - 11:30 - Break 15 mins | 11:00 - 11:15 Break 15 mins | 12:15-1:15 LUNCH 1 hour with ExxonMobil Guests | 12:30-1:45 Whole Group Calvin Mackie -- Keynote |
| | | 11:30-12:30 Color Group | 11:15-1:00 Color Group | 1:15 - 3:00 Color Group | 1 hour and 15 mins |
| | 11:15-12:30 Color Group | 11:30-12:30 Color Group | Thirds the Charm 1 hour and 45 mins | | |
| | Four Points 1 hour and 15 min | Science/Math Notebooks 1 hour | | Pendulums 1 hour and 45 minutes | 1:45 - 2:00 Group Photo |
| 3:00-5:00 Registration | | | 1:00 End of Day | | |
| 5:30 Reception | 12:30-1:30 LUNCH - | 12:30-1:30 LUNCH | | | |
| 6:30 Dinner -- 8th floor | School Team Working Lunch | School Team Working Lunch | 1:15 - 1:45 Staff Debriefing | | |
| 8:00 Team Coordinators | 1 hour | 1 hour | | 3:00 - 4:00 Whole Group | 2:00 Departure |
| | 1:30-2:30 Whole Group | 1:30-2:45 Color Group | | Special Session 1 hour | Staff/Faculty Clean-up |
| | Cathy Seeley 1 hour | How Children Learn 1 hour and 15 mins | | | |
| | 2:30 -2:45 Break 15 mins | 2:45-3:00 Break 15 mins | | | |
| | 2:45-4:30 Color Groups | 3:00 - 5:00 Color Group | | 5:30-6:30 Reception 1 hour | |
| | What's Typical 1 hour and 45 mins | May the Force Be With You 2 hours | | | |
| | | | | 6:30-9:00 Dinner Gerry Wheeler -- Keynote Grand Ballroom | |
| | 5:00 - 6:00 Staff Debriefing | 5:30 - 6:30 Staff Debriefing | | | |