7/24/2009

OES SYLLABUS TEMPLATE

GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
OFFICE OF EDUCATION SERVICES

EDUC 500: Science in Pre-K
Spring /2009-2010
Varied -Saturdays/9:00-3:30
September 12 – March 13
National Air and Space Museum/ Education Department

Instructor: *Ann Caspari*

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MRC 305 Box 37012
Washington, DC 20013-7012

COURSE DESCRIPTION: (35 words or less; should begin with a verb)
Learn to incorporate scientific inquiry techniques into the preschool classroom. Teachers will develop tools and knowledge necessary to initiate, document and assess three scientific inquiry learning modules in their preschool classrooms.

COURSE PURPOSE AND INTENDED AUDIENCE:
This course is intended to introduce preschool teachers to methods of teaching the basics of scientific inquiry to preschool students. The course is intended for in-service teachers with a current classroom of preschool students.

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COURSE FORMAT:
Class format will include presentations by the instructor(s), class discussion of assigned readings and concepts, in-class practice activities and exercises, application of learned techniques in individual classrooms with students, mentoring sessions in individual classrooms with instructors and presentations of documentation of inquiry learning in the classroom by each class participant.

STUDENT OUTCOMES: Students will be able to list conditions necessary for inquiry learning and assess their classrooms to determine whether they are set up to support an inquiry learning environment. Students will be able to teach at least one inquiry learning module in their classrooms and provide documentation of the inquiry process. Students will be able to articulate the benefits of inquiry learning for preschool children.

PROFESSIONAL STANDARDS (if applicable):

National Board for Professional Teaching Standard, Core Proposition 2
INTASC Standard _____
TESOL Standard_____
Other Professional Standard

REQUIRED/SUPPLEMENTAL/RECOMMENDED TEXTS AND/OR READINGS:

Required Texts:

Chalufour, Ingrid, and Karen Worth. Building Structures with Young Children. St. Paul: Red Leaf Press, 2004.
Chalufour, Ingrid, and Karen Worth. Exploring Water with Young Children. St. Paul: Red Leaf Press, 2004.
Colker, Laura J. "*Picturing Good Practice, Let There Be Light...and Shadows.*" Teaching Young Children 2:4, (April/May2009) National Association for the Education of Young Children.
Koralek, Derry, and Laura K. Colker. *Spotlight on Young Children and Science*, Washington: National Association for the Education of Young Children, 2003.
Worth, Karen, and Sharon Grollman Worms, Shadows, and Whirlpools Science in the Early Childhood Classroom, Portsmouth: Heinemann, 2003.

Supplemental Readings (if applicable):
Iwasyk, Marletta. *"Kids Questioning Kids: "Experts" Sharing."* Start Young! Early Childhood Science Activities. Ed. Shannon McNair. Arlington: NSTApress, 2006. 7-13.

Additional Resources (if applicable):

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

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Specific details about all course requirements with clearly stated expectations, how assignments will be assessed, rubrics (if applicable), etc.

GRADING SCALE:
A= 96 - 100%
A-= 90 - 95%
B+= 85 -89%
B= 80 - 84%
C= 79 – 65%
F= 64%

Class Attendance = 36 % (4 points per class)
Documenting Inquiry Assignments = 32 % (4 points per assignment)
Read and Reflect = 24 % (2 points per reading)
Classroom Assessments = 6% (1.5 points per assignment)
Field Trip = 1% (1 point)
Final Reflection = 1% (1 point)

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:
LAST DAY TO DROP CLASS WITHOUT ACADEMIC/FINANCIAL PENALTY IS BEFORE 20% OF THE CLASS SESSIONS HAVE MET; please designate which class session this is for this particular course.

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Session; Date	Topic	Assignments
Session 1 : 9:00-3:30 Saturday, September 12	Introduction to Basic Inquiry What is Science Inquiry for Pre-K? Key components of science inquiry	Read and Reflect: Science in the PreSchool Classroom: Capitalizing on Children's Fascination with the Everyday World to Foster Language and Literacy Development, Kathleen Conezio and Lucia French, (Spotlight on Young Children and Science pp 4-15) Introduction, Building Structures with Young Children, Ingrid Chalufour and Karen Worth
	Teachers Role in Inquiry	Read and Reflect: Entries from a Staff Developer's Journal… Helping Teachers Develop as Facilitators of Three-to Five-Year- Olds' Science Inquiry, Robin Friedrichs Moriarity (Spotlight on Young Children and Science pp16-20) Getting Ready, Building Structures with Young Children
	Documenting Science Inquiry	Read and Reflect: Using Photographs to Support Children's Science Inquiry, Cynthia Hoisington, and Documenting Early Science Learning, Jacqueline Jones and Rosalea Courtney (Spotlight on Young Children and Science pp21-26 and pp 27-32) In the Classroom:

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		Classroom Assessment – How is your environment set up for inquiry? What do you need /want to make it work?
Session 2: 9:00-3:30 Saturday, September 26 (Last day to drop course)	Open Exploration –Building Structures	Read and Reflect: Open Exploration, Building Structures with Young Children In the Classroom: Set up a block play area in the classroom. Introduce an open exploration to the students. Observe students and share your observations with one or more course participants. Conduct classroom assessment. What materials do you need/want to conduct explorations of building?
Session 3: 9:00-3:30 Saturday, October 10	Physical Science: Building Towers	Read and Reflect: Focused Exploration: Towers, Building Structures with Young Children In the Classroom: Conduct focused exploration of towers. Mentoring session – observation and discussion time
Session 4: 9:00 – 3:30 Saturday, October 24	Physical Science: Building Enclosures	Read and Reflect: Focused Exploration: Enclosures, Building Structures with Young Children In the Classroom: Conduct focused exploration of enclosures. Assess: How has this approach changed your teaching, classroom, or

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		students?
Session 5: 9:00 – 3:30 Saturday, November 14	Shadow and Light	Read and Reflect: Let There Be Light … and Shadows! Teaching Young Children Vol. 2 No 4 Worms, Shadows, and Whirlpools, Science in the Early Childhood Classroom, Karen Worth and Sharon Grollman, pages 128-148 In the Classroom: Open exploration of light and shadow Mentoring Session: Observation and discussion
Session 5: December 12 9:00-3:30	Astronomy: Objects in the Sky move in predictable patterns	Read and Reflect: Teacher's Guide to One World One Sky Which activities promote inquiry learning? Which will you choose to use in your classroom? Kids Questioning Kids: "Experts" Sharing, Start Young! Early Childhood Science Activities, NSTA Press. Field Trip: One World, One Sky Planetarium Show and other activities, National Air and Space Museum In the Classroom: Playground Sundial
Session 6 9:00 – 3:30 Saturday, January 16	Introduction: Water	Read and Reflect: Introduction, Getting Ready, Exploring Water with Young Children In the Classroom: Conduct classroom assessment. What materials do you need/want to

		conduct water explorations?
	Open Exploration: Water	Read and Reflect: Open Exploration, Exploring Water with Young Children In the Classroom: Set up water exploration area and observe students in open exploration. Document students' inquiry and share with class participants.
Session 7 9:00 – 3:30 Saturday, February 13	Water Flow	Read and Reflect: Focused Exploration: Flow, Exploring Water with Young Children In the Classroom: Set up explorations of water flow. Document the students' explorations and share your observations with at least one other class participant Mentoring Session: observation and discussion time
Session 8 9:00 - 3:30 Saturday, March 13	Water Drops	Read and Reflect: Focused Exploration: Drops, Exploring Water with Young Children In the Classroom: Set up explorations of water drops in the classroom. Document the student's inquiry and share with the class. Final Reflection: How does teaching inquiry science differ from your previous methodology? What changes will you make to your teaching plans next year? How have the students been affected by the changes in teaching and learning? What are the continuing challenges to using this method?

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ASSIGNMENT RUBRIC

Rubrics will be based on rigorous set of rubrics designed by Education Development Center for scientific literacy course. We will meet with EDC to share information about rubrics and develop them for the course in the coming weeks.

	No Evidence 1	Beginning 2	Developing 3	Accomplished 4	Score
CRITERIA					
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