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**GEORGE MASON UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
GRADUATE SCHOOL OF EDUCATION**

**EDPD502.6R6
Elementary Science Series: Earth Science
1 Credit Graduate Fall Semester/2015
Saturday/8:15 am – 3:45 pm
September 12, 2015 and September 19, 2015
Kelly Leadership Center
Room 2002-2004**

Instructors: *Anthony Kilgore*

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Office Hours: *By appointment only*

Address: *Hylton Senior High School Planetarium*

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Dale City, VA 22193

COURSE DESCRIPTION:

Educators will collaborate to acquire new content knowledge to support student mastery of elementary earth science content. At the conclusion of this course, educators will have improved professional practice and increased content knowledge resulting in continuously improving student learning. Educators will explore a variety of learning experiences and pedagogical applications that foster student interest, the inquiry process, critical thinking, and a conceptual understanding of physical science topics.

COURSE FORMAT:

During the course, participants will engage in class discussions, laboratory investigations, and collaborative learning.

LEARNER OUTCOMES:

As a result of the course, learners will:

- Increase their content knowledge of various science topics
- Implement or design and deliver an inquiry-based laboratory investigation.
- Reflect on professional practice.

PROFESSIONAL STANDARDS:

This professional development opportunity supports Prince William County Public Schools Professional Educator Performance Standard I (Knowledge of Students), Standard II (Instructional Planning), Standard III (Instructional Delivery), Standard IV (Assessment of

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and for Student Learning), Standard V (Learning Environment), and Standard VI (Professionalism).

REQUIRED/SUPPLEMENTAL TEXTS AND/OR READINGS:

Provided Texts:

Inquiry Within: Implementing Inquiry- and Argument- based Science Standards in Grades 3-8 3rd edition Douglas Llewellyn

Answers to Science Questions from the Stop Faking It Guy! William Robertson

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

The assignments for this course include personal reflections, scientific journal summaries, and delivery of an inquiry-based science lesson to classroom students. All assignments should be written for clarity and edited carefully for grammatical errors. A consistent format (such as APA) should be used for citing and listing references. All assignments should be submitted to the instructors electronically by the due dates designated.

Participation (20%)

Attendance and active participation are vital to the successful completion of the course. Participants are assessed at the conclusion of each class session. Every class participant is expected to contribute to class activities and discussions. Participants must attend all class sessions.

Article Summaries (20%)

Requirements:

- 100-150 word summary of two content-related articles, one assigned and one self-selected
- 12 point font, Times New Roman or Arial
- A copy of the self-selected article with source listed must be submitted with summary

Class Reflection (20%)

- 250 word written reflection
- 12 point font, Times New Roman or Arial
- Reflection should focus on how the course information will be used in classroom instruction.

Inquiry-based Investigation (40%)

Class participants will teach an inquiry-based investigation related to course content to their students. Participants will schedule an informal observation of the investigation by the course instructor.

Requirements:

- The investigation may be a PWCS Elementary Science Inquiry Handbook investigation or may be one created by the participant.

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- If created by the participant, the investigation should include references cited using APA format.
- Email the course instructor the following information when scheduling the classroom observation: date, time, location, investigation title and a brief description of the investigation.
- Reflect on the teaching and learning experience. The reflection must include the following:
 - One page minimum
 - 12 point font, Times New Roman or Arial
- Submit three to five student work samples from the investigation
- **All observations must be completed and evaluated by December 11, 2015.**

GRADING SCALE:

- A** 95 – 100 percent
- A-** 90 – 94 percent
- B+** 85 – 89 percent
- B** 80 – 84 percent
- C** 70 – 75 percent
- F** 69 percent or below

GMU POLICIES AND RESOURCES FOR STUDENTS

- a. Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/honor-code/>].
- b. Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>].
- c. Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.
- d. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- e. Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- f. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- g. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].

PROFESSIONAL DISPOSITIONS

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Students are expected to exhibit professional behaviors and dispositions at all times.

CORE VALUES COMMITMENT

The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles. <http://cehd.gmu.edu/values/>

For additional information on the College of Education & Human Development, Graduate School of Education, please visit our website <http://gse.gmu.edu>

Date	Topic/Learning Experiences	Readings/Assignments
Session One: Saturday, September 12, 2015 (KLC Room 2002/2004) 8:00 AM – 3:45 PM	<ul style="list-style-type: none"> • Course overview, objectives, expectations • Discussion: Weather phenomena/Forecasting • Investigation: Weather Forecasting • Discussion: Oceans • Investigation: Ocean Floor Features and Currents 	<ul style="list-style-type: none"> • Complete all required reading assignments from textbooks. • Complete summary of assigned content article. (Due 9/19/15) • Select and summarize a content-related article. (Due 9/19/15)
Session Two: Saturday, September 19, 2015 (KLC Room 2002/2004) 8:00 AM – 3:45 PM	<ul style="list-style-type: none"> • Discussion: Geologic Processes • Investigation: Geology • Possible Field Trip to PW Forest Park to study the geology of the park. • Discussion: Earth-Sun-Moon System/Solar System at Irene V. Hylton Planetarium • Investigation: Earth-Sun-Moon at the Planetarium 	<ul style="list-style-type: none"> • Complete all required reading assignments from textbooks. • Select or develop inquiry lesson for classroom delivery. • Schedule informal observation of classroom inquiry lesson. • Complete a reflection of inquiry lesson implementation. • Complete a reflection of the course. (Due September 25, 2015)