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2021

EDE 684: Big Ideas of Science

Steven Azeka

CUNY College of Staten Island, steven.azeka84@login.cuny.edu

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otherwise stated in the assignment document). Written assignment should be submitted in conformance with APA style (see Writing Graduate Papers document on BlackBoard).

All software and hardware necessary for completion of the course work is provided in CSI Education Computer Lab, 3S - 206. *Not having access to technology resources at home is not accepted as an excuse for missed or late assignments.* The hours for the Education Computer Lab are posted in 3S – 206.

Expectations

Assignments that are late will receive half credit if submitted within one week of the due date. Please note that **no credit** will be given for any assignment that is submitted **more than one week late**, unless prior arrangements have been made with the instructor. Exceptions will be made only for **documented** illness, family emergency, a death in the immediate family, or work-related **required** meetings.

An INC grade is not a student option; it is given only at the discretion of the instructor. You may not request a grade of Incomplete unless you make the request in writing with a written statement from a physician explaining why you were unable to get the work done by the last class session.

You will be graded on what you have submitted by the last class session on **May 25, 2021**.

All students are expected to read and observe the CSI policy on academic honesty, cheating, and plagiarism.

Format of Submitted Work

All written work should follow the APA (American Psychological Association) style when quoting or paraphrasing material from the textbooks and referencing electronic and online sources.

All written work must be typed unless otherwise noted. Word processing can be done in Microsoft Word or Google Doc. Please use the following format for all typed work (unless otherwise noted):

- 12 pt font
- DOUBLE SPACE, Times New Roman, Arial, or San Serif fonts ONLY
- Include your name, date, ber, and title of the assignment on all work submitted for grade. All work should be PROOFREAD for grammar, spelling, mechanics, and accuracy as specified by the instructions for the assignment.

Assessment

Lab Grade		20%
<i>Lab Activity and Reflection</i>	20%	
Lecture Grade		80%
<i>Reading-Based Online Discussions</i>	15%	
<i>Journal Writings</i>	15%	
<i>Lesson Plan 1</i>	25%	

- **Lab Grade** – The purpose of the lab is to give you hands-on exposure to lab activities designed for primary school students. Each week, you will have a new lab that you will need to complete independently. Upon completion of the lab activity, you will have an opportunity to share your findings and experience in the reflection section.
- **Reading-Based Online Discussions** - The purpose of the readings and discussion is to collectively build your existing pedagogical and content knowledge surrounding the Big Ideas of Science. Each week, a new prompt will be posted to the Blackboard discussion form.
- **Journal Writings** - The purpose of the journal writings is to document and critically reflect on your science learning as you progress through the course. Your journal should consist of a minimum of **4 reflections** on assignments, lectures, presentations, or to the weekly prompt **due at the end of the semester**. Make sure to keep all journal writings in an electronic journal (Microsoft Word or Google Doc) that should be uploaded to Blackboard on or before the due date. Each journal entry should be half a page long (APA style).
- **Lesson Plan 1** - You will develop a standards aligned lesson based on one of the first set of Big Ideas of Science. More details will be provided on Blackboard.
- **Lesson Plan 2** - You will develop a standards aligned lesson based on one of the second set of Big Ideas of Science. More details will be provided on Blackboard.

Grading Schema

Grades for assignments in this course will be given according to the CSI grading policy for the graduate level courses as shown below.

Percentage Grade	Letter Grade	Scale Score
94 – 100%	A	4
90-93.9%	A-	3.7
87-89.9%	B+	3.3
84-86.9%	B	3
80-83.9%	B-	2.7
77-79.9%	C+	2.3
70-76.9%	C	2
69.9% or less	F	0

Tentative Class Schedule

Wk	Dates	Class focus	Major Assignment Due Dates
1	1/29 - 2/7	Introduction to the Scientific Method	
2	2/8 - 2/14	Approaches to the teaching Big Ideas of Science in primary school.	
3	2/15 - 2/21	Big Idea of Science #1: Physics' Model of the Atom: Seeing the Unseeable	
4	2/22 - 2/28	Big Idea of Science #2: Chemistry's Periodic Law: Sorting the Elements	
5	3/1 - 3/7	Big Idea of Science #3: Astronomy's Big Bang Theory: Tracing the Elements' Roots	
6	3/8 - 3/14	Big Idea of Science #4: Geology's Plate Tectonics Model: Down to Earth	
7	3/15 - 3/21	Big Idea of Science #5: Biology's Theory of Evolution: Life Begins and Branches Out	
8	3/22 - 3/26	Midterm	Lesson Plan #1 Due 4/4
	3/27 - 4/4	Spring Break	
9	4/5 - 4/11	Big Idea of Science #6: Energy is Conserved	
10	4/12 - 4/18	Big Idea of Science #7: Entropy: Universe Tends Toward Disorder	
11	4/19 - 4/25	Big Idea of Science #8: DNA Encodes Heritable Information	
12	4/26 - 5/2	Big Idea of Science #9: Symmetry Quantifies Beauty	

13	5/3 - 5/9	Big Idea of Science #10: Organisms are organized on a cellular basis	Journal Writings Due 5/16
14	5/9 - 5/16	Final Project	Lesson Plan #2 Due 5/24