

Choose a topic and develop a lesson plan for one hour of data analysis- or probability-related instruction. This project conforms to the College ECE Lesson Plan Format (Revised 12/10/2014). The purpose is to give you classroom-ready lesson plans that you can use!

In your report, include:

- (1) General information: Name, target grade level, subject area, total duration of lesson, and a title of your lesson [Be creative!]) [5 points]

- (2) Primary Learning Outcome(s) (PLOs):

- State at least one observable concept(s) or measurable skill(s) the student will demonstrate as an outcome of participation in the lesson.
- Write each primary learning outcome as a statement. “The student will be able to...”

Related Georgia Standards of Excellence and/or CCSSM Standard(s)

- Identify one or two Common Core [<http://www.corestandards.org/>] or Georgia Standard(s) [<https://www.georgiastandards.org/Georgia-Standards/Pages/default.aspx>] closely aligned to each PLO. [10 points]

- (3) Step-by-step procedures for the topic including detailed examples and a few activities that clearly involve class participation. Aim for thoroughness, a flow from less to more difficult, and creativity. We expect clear evidence that you are engaging your students in activities which promote *conceptual understanding*, *mathematical reasoning*, and *procedural fluency*. [30 points]

Step One: Introduction

- Spark the students’ interest and excitement about new learning.
- Explain to the students what they will be learning (primary learning outcomes) and doing (orally, in writing, or both.)
- Establish a connection to the students’ prior knowledge in the same and/or other subject areas content.
- List at least one introductory question you plan to ask.

Step Two: Teaching the Primary Learning Outcome(s).

- List specific teaching strategies, methods, activities, etc. you will use to teach the PLO(s).

Step Three: Closure

- Summarize the PLO(s).
- Review the important concepts, skills, and essential questions.
- Help students to transfer the new knowledge or skills to future learning.

- (4) You are encouraged to build informal assessment into your hour of instruction. Give details about at least two forms of informal assessment.

For your formal assessment, provide a sample set of at least 10 homework problems with a variety of levels of difficulty. Whether you find this or create your own assessment instrument, include a solutions key with your handwritten work shown. Include any reference in the reference list (see #8 below). [20 points]

- (5) Differentiation/accommodation (How can the content and assessment of this lesson be adjusted for students with exceptional needs or diverse backgrounds?)

Extension (How can the lesson content and assessment be modified to work with students who already know the material?)

Remediation (For students who struggle with learning, how can the lesson content be taught differently? How can any assessment be modified?) [5 points]

(6) Materials and Equipment:

- Provide a list of all materials and equipment that you will need as you teach, practice, and assess each PLO.
 - Include copies of anything you give to students, sketches of materials you prepare, examples/models you show to students, etc. Also include copies of any formal assessments used.
- [10 points]

(7) Technology Connections/ Internet and Computer Resources

Include at least 2 technology resources for your project. (Feel free to use Dr. Clement’s “Recommended Websites” page in Desire2Learn for ideas.) [10 points]

(8) Include a list of references. This may include former or current teachers. Use current APA format for all references. [5 points]

Here are a few examples of APA 6th edition format (Book, Journal Article, Web Video):

Jones, T. (2017). *TEDxGeorgiaStateU: Rethinking the Purpose of Math Education*. [Video file].

Retrieved from <https://www.youtube.com/watch?v=wgvvCqAY1wI&feature=youtu.be>

Mokros, J., & Russell, S. J. (1995). Children's concepts of average and representativeness.

Journal for Research in Mathematics Education, 26(1), 20-39.

NGA/CCSSO, National Governors Association Center for Best Practices, Council of Chief State School Officers. (2010). *Common Core State Standards—Mathematics*. Retrieved from <http://www.corestandards.org/>

Stein, M. K., Smith, M. S., Henningsen, M. A., & Silver, E. A. (2009). *Implementing standards-based mathematics instruction* (2nd ed.). New York, NY: Teachers College Press and the National Council of Teachers of Mathematics.

A very helpful website for APA formatting is <https://owl.english.purdue.edu/>.

This project should be word processed as much as possible, with grammar and spell checks. Use a common (Times New Roman, Cambria, Calibri) 12-point font, double spaced, and a report binder of some sort. The attached rubric will be used to assess the quality of your project, with consideration given to the writing quality (grammar, spelling, style, organization, etc.), as well as content and understanding demonstrated. You may choose to write your procedures in a paragraph format or in a bulleted list format with complete sentences (whichever is more helpful to you).

(9) You will give a brief (4-5 minute) presentation of your project to your classmates in a roundtable format. Please upload a summary handout in Desire2Learn Discussions for each classmate to peruse. [5 points]

Our Gordon State College Hightower Library staff is readily available for help!

This project is worth 100 points and is due no later than _____.
No project is acceptable after the due date.



Suggested topics:

Mean or average	Mode	Median
Midrange	Range	Standard Deviation
Quartiles	Outliers	Bar Graphs
Histograms	Box Plots	Stem-and-Leaf Plots
Circle Graphs	Line Graph	Dot Plots

Do your best! Rise to the challenge! Live and learn!

Lesson Plan Project Grading Rubric

Name: _____

Descriptor	Inadequate	Needs Improvement		Meets Expectations	Exceeds Expectations
Quality Level	No Attempt	Major Errors	Minor Errors	High Quality	Exemplary
Score	0	1-2	3	4	5

1. *General Information:* Target grade level, subject area, total duration of lesson, & a creative title

(× 1) 0 1-2 3 4 5

2. *Primary Learning Outcome(s)/Related GSE and/or CCSSM Standard(s)*

(× 1) 0 1-2 3 4 5

3. *Step-by-step procedures* for the topic including detailed examples and a few activities that clearly involve class participation [3 Steps: Introduction, Teaching, Closure]

(× 5) 0 1-2 3 4 5

4. *Evidence of Informal Assessment* (Describe at least two forms of informal assessment) *and Formal Assessment* (Sample set of at least 10 homework problems with a variety of levels of difficulty/ Solutions key with your handwritten work shown)

(× 5) 0 1-2 3 4 5

5. *Differentiation/Accommodation/Extension/Remediation*

(× 1) 0 1-2 3 4 5

6. *List of Materials and Equipment*

(× 2) 0 1-2 3 4 5

7. *Technology Connections/Internet and Computer Resources:* At least 2 technology resources

(× 2) 0 1-2 3 4 5

8. *List of References*, using current APA format

(× 1) 0 1-2 3 4 5

9. *Grammar:* Attention to precise and accurate spelling, clarity of sentence construction and good organization

(× 1) 0 1-2 3 4 5

9. *Presentation to Classmates/Summary* handout for each classmate in D2L Discussions

(× 1) 0 1-2 3 4 5