

Project: Circuit Labs

Purpose: Create lab one-pagers and videos that review the key set-up, processes, and calculations involved in the variety of labs we will be doing this unit.

Circuit Labs:

1. Resistors in Series vs. Parallel Circuits
2. Properties of Capacitors
3. Capacitors in Series and Parallel
4. Properties of Resistors
5. Ohmic vs. Non-Ohmic Resistors
6. Internal Resistance of a Battery
7. RC Circuits

All one pagers and videos will be due right before the end of the unit and will be entered as two quiz grades- one based on your product (see rubrics below), and one based on contribution to group project (Anonymous MS form to evaluate peers)

Requirements for One-Pager (to be submitted via a link in the OneNote collaboration space, can be front/back)

- Key Terms and Definitions
- Diagram of Experimental Set-Up
- Overview of Lab Procedure
- Sample Calculations/Equations

	1 Not at Standard	2 Approaching Standard	3 Met Standard	4 Mastery of Standard
Formatting <ul style="list-style-type: none"> • Clear, easy to read, legible • Short, concise • Variety of Images • Consistent font and clear headings 	Did not meet criteria	Met 2 criteria	Met 3 criteria	Met all 4 criteria
Key Terms, Definitions, and Equations <ul style="list-style-type: none"> • All vocab defined • All equipment identified correctly • Relevant equations explained 	Did not meet criteria	Met 2 criteria	Met 3 criteria	Met all 4 criteria
Overview of Experimental Procedure <ul style="list-style-type: none"> • Clear statement of purpose • Image/diagram of experimental set up • Short, concise procedure • Clear identification of variables and data collected (manipulated, measured, constants) 	Did not meet criteria	Met 2 criteria	Met 3 criteria	Met all 4 criteria
Example Problem(s) <ul style="list-style-type: none"> • Can be... <ul style="list-style-type: none"> o AP problems related to lab from quizzes/tests/prep books o Using the example data to calculate something 	Did not meet criteria	Met 2 criteria	Met 3 criteria	Met all 4 criteria

Requirements for Video

- Opening page that includes title of lab and group member names
- Video of lab with voice or captions explaining using correct terminology
 - can be live or through use of a simulation, or both!
- Walk-through of lab calculations/results

	1 Not at Standard	2 Approaching Standard	3 Met Standard	4 Mastery of Standard
Production Quality <ul style="list-style-type: none">• Clear, concise, easy to follow• All images/views clear and legible• Appropriate pace	Did not meet criteria	Met 2 criteria	Met 3 criteria	Met all 4 criteria
Key Terms, Definitions, and Equations <ul style="list-style-type: none">• All vocab defined• All equipment identified correctly• Relevant equations explained	Did not meet criteria	Met 2 criteria	Met 3 criteria	Met all 4 criteria
Overview of Experiment <ul style="list-style-type: none">• Live or Simulated demonstration of lab• Clear explanations over demonstrations• Identify possible sources of error	Did not meet criteria	Met 2 criteria	Met 3 criteria	Met all 4 criteria
Walkthrough of Lab Analysis <ul style="list-style-type: none">• Visual showing of either graphical analysis or mathematical analysis as appropriate• Equations used are clearly shown• Analysis all includes proper units	Did not meet criteria	Met 2 criteria	Met 3 criteria	Met all 4 criteria