

ENGINEERING NOTEBOOK

- LEVEL:** Middle and High School (all grades)
- SCOPE:** Required for all MESA Day project competitions (except: MESA Shark Tank, National Competition)
- OVERVIEW:** The purpose of the Engineering Notebook is for students to more closely follow the practices of an engineer in the completion of their MESA Day projects. The Engineering Notebook will encourage students to take a purposeful and sustained approach to building their devices. MESA projects are not designed to be completed in a single class period or day, but to be the result of thoughtful research, planning, analysis and evaluation. The notebook should provide a written record of the thought and insight that a student put into their project, from initial ideas to the final completed project.
- MATERIALS:** Any standard notebook, including but not limited to spiral and subject notebooks and composition books may be used. Notebook page size must be equivalent or greater than that of a composition book page (approx 9.75" length x 7.5" width). Pocket sized notebooks, post it notes, flashcards, etc. cannot be used. Computer generated notebooks and/or pages are allowed.
- REQUIREMENTS:** Notebooks must contain the following. Each section should be tabbed/labeled:

PROPER LABELING

Proper labeling is required of each notebook. Students must have group member names, grades, school and MESA center on the inside cover of their MESA Engineering Notebooks.

PROJECT INTRODUCTION

A one page introduction for the project. Students can write about why they chose the project that they are worked on and what challenges they expect to run into with this project. They may also briefly describe the project criteria and constraints. This introduction should be honest and genuine.

DAILY ENTRIES

At least ten daily entries will be required. Each entry should have the date of entry and should be at least half a page long. They should answer the following questions:

- What did you work on/discuss today?
- What was the result of your work?
- What do you need to do during your next meeting?

The purpose of the daily entries is for students to describe their actions of the day, result of the day, and next steps. The intention is to see more evidence of the engineering process with these daily entries.

PROJECT SKETCHES

Notebooks should contain at least two distinct project sketches that should be placed towards the back or end of the completed notebook pages. The sketches should indicate a progression in the thinking and design of the device, and be detailed. Sketches must be larger than half a page, and can either be drawn on the notebook page directly or attached.

APPLIED MATHEMATICS

Notebooks should contain evidence of 1-2 applied mathematics principles as it pertains to the project. Please refer to each of the project rules for the specific requirements.

SCORING:

A deduction of 20% of the total project score will be assessed for a missing or incomplete notebook. The rubric on the next page will help assess notebook completion.

MESA DAY 2017-2018

Notebook Requirement Rubric (criteria may vary by individual competition)

Please use this rubric to assess notebook entries. An incomplete or missing notebook will lead to a 20% deduction from the total project score

Criteria		YES	NO
1	Is the notebook properly labeled? <i>(Names, Grades, School, MESA Center)</i>		
2	Does the notebook contain a one page introduction to the project? <i>(On the first page of the notebook)</i>		
3	Are there at least 10 dated entries in the notebook?		
4	Is each entry at least half a page long?		
5	Are there at least two distinct project sketches included?		
6	Is there evidence of 1-2 applied mathematics principles?		
TOTAL			

Does the notebook meet the requirement? (circle one) **YES** **NO**
Notebooks must meet all criteria to fulfill this requirement