

## Unit 7: Machines, Efficiency & Mechanical Advantage

- You should be spending at least **60 minutes** a day on Physics Curriculum.
- **Completing** the note taking guide is required and **printing** the guide is highly recommended.
- Seeking help if you are not passing your post assessments and/or practices is essential.
- If you are behind you **MUST** spend additional time on Physics to catch up and meet due dates!
- If you cannot meet a due date, extensions must be requested and approval received **in advance**.
- To keep on track Unit 7 should be completed by December 18.

### Goals:

- Use mathematics and computational thinking to compare the ideal and actual mechanical advantage of a variety of simple machines.
- Use mathematics and computational thinking to determine the efficiency of a variety of simple machines.
- Carry out investigations to determine mechanical advantage of levers, an inclined plane, and a pulley.
- Design a machine with five or more simple machines to complete a task.

### Complete Unit 7 Pretest

#### Unit 7 Vocabulary

- Unit 7 Vocabulary is optional

#### Machines & Efficiency Notes

- Complete note taking guide

#### Machines & Efficiency Notes - Post Assessment

- take assessment after watching video notes and completing note taking guide
- must score a 80% or redo
- seek remediation if PA is not passed on 3<sup>rd</sup> attempt
- Pass by 12/6, end of class period

#### Machines and Efficiency Practice

- will open up after scoring 80% on Machine Notes post assessment
- must score a 74% or redo
- Pass both by 12/7, end of day

#### Mechanical Advantage Notes

- Complete note taking guide

#### Mechanical Advantage Notes - Post Assessment

- take assessment after watching video notes and completing note taking guide
- must score a 80% or redo
- seek remediation if PA is not passed on 3<sup>rd</sup> attempt
- Pass by 12/10, end of class period

#### Mechanical Advantage Practice

- will open up after scoring 80% on Mechanical Advantage Notes post assessment
- must score a 74% or redo
- Pass both by 12/11, end of day

#### Simple Machine Labs

- There are 3 Simple Machine Labs to be completed:
  - **Inclined Plane Lab**
  - **Lever Lab**
  - **Pulley Lab**
- All 3 Labs should be completed in the classroom by 12/17
- Every student is responsible for collecting data for all 3 labs and understanding the results; however, each student only needs to submit 1 lab report. See your teacher for which lab report you are required to submit. Your teacher will randomly select which lab report you need to write/submit. DO NOT do this without seeing your teacher first.
- Submit Lab Report by 12/17, 11:59 PM
- Refer to Scoring Rubric prior to submitting.
- Lab corrections due 12/21, 11:59 PM

### Optional Crib Sheet for Unit 7 Test

- When all practices are completed until a 74% or better is earned, you may use a “teacher guided” crib sheet.
- Pick up the crib sheet on 12/17 (or at least one day before the test).
- Completed crib sheet must be given to teacher 1 day prior to the test and returned after the test.

### Redo Practices for Review

#### Submit Unit 7 Warm Ups on December 18

#### Unit 7 Test

- Test will open up after passing all Post Assessments and Practices and completing all Labs for this unit.
- Test should be taken by 12/18

#### Retake Unit 7 Test

- If you score below a 65% you must watch the video notes:
  - Seek remediation
  - Complete all post assessment and practices in the unit again
  - Retake the Unit 6 Test and pass with a 65% or higher
  - **COMPLETE the RETAKE as soon as possible to avoid falling behind in the next unit**

### Rube Goldberg (Junk) Machine

- Work days are 12/19-12/21, 1/3-1/4
- Submit final product by 1/4, 3:30 PM.
- Refer to Criteria/Scoring Rubric prior to submitting.

### SEMESTER TEST PREP

- You may begin reviewing for your Semester Test while working on Unit 7 or wait until Unit 7 is completed.
- After you pass the Unit 7 Test the “Semester 1 Final” folder in Blackboard will open up.
- See the “Semester 1 Final” folder for information on your semester test, semester review questions, etc.
- The practice questions set up for you in this folder will prove very beneficial in preparing for your Semester Exam!