

Grade 10-12

Distance Learning Module 2: Week of: 4/6/2020

Physics Level 2 - Modified from Unit #5 - Momentum & Impulse, Work, Energy & Power

Targeted Goals from Stage 1: Students will be analyzing and creating models of work, when it's being done on an object, and more.

Content Knowledge: Students will demonstrate Knowledge of the following:

- in order to change the energy of an object, work must be done on the object.
- kinetic and potential together are the mechanical energy of an object
- potential energy is stored energy and can be chemical, nuclear, elastic or gravitational
- non conservative forces can remove mechanical energy from an object and convert it to heat
- work can be positive or negative ; it can add or remove mechanical energy of an object
- the total energy of an object is conserved if only conservative forces act on the object

Vocabulary: Momentum, impulse, work, displacement, direction of motion

Skills: Students will demonstrate the following skills:

- calculate gravitational potential energy, elastic potential energy and kinetic energy of an object
- use the conservation of energy to solve problems
- use the work energy theory to analyze objects that have friction acting on them
- apply kinematics and force principles to predict the motion of objects involving transfer of energy

Expectation: Complete the notes, work the UTexas problems, and the basic practice problems (no check in on that one)

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Students will begin reviewing the notes posted on the classroom	Notes that are posted on the Google Classroom Textbook, online copy posted on the Google	<i>Participation in Zoom classroom learning as available and needed</i>

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
	Classroom Videos posted that are going over the notes Use of the Zoom classroom <i>Crash Course Physics Videos:</i> <i>Work, energy, and power video</i> <i>Flipping Physics Videos:</i> <i>Work, energy, and power page directory</i> <i>Khan Academy Physics Videos:</i> <i>Work and Energy unit</i> <i>The Physics Classroom tutorials</i> <i>Work, energy, and power page directory</i>	
Tuesday: Students will continue reviewing the notes posted on the classroom, and will pair it with the posted videos. They will fill out a table/create a table of information that's designed to help them keep track of terms on this unit and equations.	Same as above	<i>Participation in Zoom classroom learning as available and needed</i>
Wednesday: students will work through the practice problems to be posted, which will have worked out solutions and talk throughs for students unable to make Zoom meetings	same as above	<i>Participation in Zoom classroom learning as available and needed</i>

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Thursday: students will work through the practice problems to be posted, which will have worked out solutions and talk throughs for students unable to make Zoom meetings	same as above	<i>Participation in Zoom classroom learning as available and needed</i>
Friday: No school for MPS	No school for MPS	No school for MPS

Week criteria for success (attach student checklists or rubrics): *Greater than 75 % on Assigned UTexas Assessments*

Supportive resources and tutorials for the week (plans for re-teaching): *Textbook; Finals site resources (Powerpoints, worksheets with answer keys, pdf notes); Khan Academy; Crash Physics videos; PHeT simulators from University of Colorado; Flipping Physics videos; Interactions with teacher using Zoom.*