Grade 10-12
Distance Learning Module 4: Week of: April 20th – April 24th

Science: Physics Level 2 - *Modified from Unit #4 - Circular Motion*

Targeted Goals from Stage 1: Desired Results
Students will use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.
Students will explore Newton''s second law for circular motion to discover that it accurately predicts changes in the motion of macroscopic objects.

Content Knowledge: Students will demonstrate Knowledge of the following:

- Objects moving in a circular path have a net force directed inward
- Friction, gravity, normal force, tension can all be "centripetally directed" forces
- the centripetal acceleration is dependent on the radius of the circle and the velocity of the object

Vocabulary: Centripetal, Centrifugal, radius, Force, gravity, gravitational

Skills: Students will demonstrate the following skills:

- calculate the centripetal acceleration of an object
- find the maximum speed an object can swing in a circle without the string breaking
- draw free body diagrams of circularly moving objects and identify the net force directed inward

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

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Students are to continue taking notes on the second part of the chapter, Centripetal force. They can supplement Zoom class meetings	Notes that are posted on the Google Classroom Textbook, online copy posted on the Google Classroom	Completing UTexas with a score of 75% or higher *Participation in Zoom classroom learning as available and needed*

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
with the videos/resources to the right, and also the video lecture that is posted on the classroom, working through the problems.	Videos posted that are going over the notes Use of the Zoom classroom *Crash Course Physics Videos:* *Uniform Circular Motion* *Newtonian Gravity* *Flipping Physics Videos:* *Universal Gravitation List* *Khan Academy Physics Videos:* *Centripetal & Gravitational Unit* *The Physics Classroom tutorials* *Circular Motion & Gravitational Motion Directory Page*	
Tuesday: Students are to start working on the UTexas which has a focus on centripetal force. IF students struggle with UTexas and need extra time, they are to let teachers know ASAP	Notes that are posted on the Google Classroom Textbook, online copy posted on the Google Classroom Videos posted that are going over the notes Use of the Zoom classroom *Crash Course Physics Videos:* *Uniform Circular Motion*	Completing UTexas with a score of 75% or higher *Participation in Zoom classroom learning as available and needed*

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
	Newtonian Gravity *Flipping Physics Videos:* *Universal Gravitation List* *Khan Academy Physics Videos:* *Centripetal & Gravitational Unit* *The Physics Classroom tutorials* *Circular Motion & Gravitational Motion Directory Page*	
Wednesday: Students are to complete the UTexas which has a focus on centripetal force. If students struggle with UTexas and need extra time, they are to let teachers know ASAP	Notes that are posted on the Google Classroom Textbook, online copy posted on the Google Classroom Videos posted that are going over the notes Use of the Zoom classroom *Crash Course Physics Videos:* *Uniform Circular Motion* *Newtonian Gravity* *Flipping Physics Videos:* *Universal Gravitation List* *Khan Academy Physics Videos:*	Completing UTexas with a score of 75% or higher *Participation in Zoom classroom learning as available and needed*

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
	Centripetal & Gravitational Unit *The Physics Classroom tutorials* *Circular Motion & Gravitational Motion Directory Page*	
Thursday: Students will take a UTexas assessment that will focus on the circular motion unit	UTexas web site	*Participation in Zoom classroom meeting while taking a timed UTexas assessment.*
Friday: Students will receive feedback regarding the UTexas assessment and will critically analyze the results in order to improve their learning before moving on to the next unit, the following week.	Teacher feedback on previous day's assessment and student led class discussion on common content misconceptions.	*Participation in Zoom classroom learning*

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; Finalsite 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.*