HON PHYSICS

SYLLABUS

January 21 - 24, 2020

**TUE:** ACTIVITY: It’s a Christmas Re-visit

 **HW:** Read chapter 7, pg. 246 – 249

Science In the News due Friday - *STEM*

 **Web post due by Saturday, 8:00 A.M.**

**WED:** Discuss chapter 7, pg. 246 - 249

 “Torque”

 **HW:**

**THU:** Discuss chapter 7, pg. 246 - 249

 “Rotational Equilibrium”

 **HW:**  Pg. 264 - 268: 30, 33 - 35, 38, 42, 54 AND Torque II WS

Science In the News due Friday - *STEM*

**FRI:** Discuss Center of Mass and Stability

 **HW:**  Torque II Worksheet – Due Wednesday

 **Print & Read** LAB: Torque

 **Web post due by Saturday, 8:00 A.M.**

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***King of the Hill Project*** *practice car due Monday. January 27*

***King of the Hill Project*** *final car due Monday. February 3*

***King of the Hill Project*** *RACE Tuesday. February 4*

***TEST*** *on chapter 7 Friday February 7*

When we are powerless to do a thing, it is a great joy that we can come and step inside the ability of Jesus. *Corrie ten Boom*

***King of the Hill Project Overview***

**Step 2:** Rough draft drawn on paper – *Due Tuesday, January 21*

* Drawn on paper with parts labeled, including what the parts will be made from. More than one view might be necessary to show the “engine” of the car and how it will work
* Include a written description of how the car will run, with a description of the physics principles involved.

**Step 3:** Make a practice vehicle that runs at least 10 cm - *Due Monday, January 27*

* This vehicle cannot be battery operated, etc., but otherwise it does not have to follow any of the guidelines of the King of the Hill Project. It can be a draft model of your project car, but it doesn’t have to be.
* It may be as simple or as complicated as you like, but it must run 10 cm without human assistance.

**Step 4:** Construct King of the Hill Project car - *Due Monday, February 3*

* This car must follow exactly the project guidelines. *Pay particular attention to size guidelines!*
* Give yourself PLENTY of time to construct your car and to fix small and large things that will break, spin out, snap, flip, or just plain not work.
* You must demonstrate that your car can run at least 10 cm; however, you may take your car home to make final adjustments before the next day competition.

**Step 5:** King of the Hill Competition – *Due Tuesday, February 4*

* Your car must be ready to run 7 minutes after the bell for class.
* Also bring to class a final schematic of your car with the parts labeled, including what the parts are made from. More than one view might be necessary to show the “engine” of the car and how it works Also include a description of how your car runs and the physics principles behind its design.
* Bring plenty of spare parts!
* In addition to the King of the Hill competition, there will be a race for speed and a race for distance.