

## **Physics Learning Activities - Week 4**

Week of 4/13-4/17 Exploring the Dynamic Motion

We worked hard to ensure that the Learning Plan provides accessibility for all learners. We hope that you see that there are options to engage learners at all levels. These activities are not intended to replace the normal school day. ***There is now an expectation for students to turn these documents in to your specific educators.*** We want you to take time to enjoy family, be safe, stay healthy and find time within this week to engage in learning opportunities. Feel free to create a schedule that works for you and your family. We strongly encourage each student to participate in approximately two hours a day. We want your brain working and challenging yourself, while staying safe and having fun. There are additional options for reading.

The Learning Activities Document only provides a brief description of the choices students have to demonstrate their learning. For access to the student documents, please go to GoogleClassroom. When finished, students can submit their work to their teacher on GoogleClassroom. If a parent would like to be added to the Google Classroom, please send an email to your student's teacher.

For Additional Information on Community Resources and Support See:

<http://www.fairhavenps.org/cms/One.aspx?portalId=106528&pageId=27385241>

For this week we have 1 Google Classroom assignment and 3 Explore Learning - Gizmo simulation labs. Please email me if you need help logging on to Explore Learning.

1) Check out this Bad Physics In Movies article: What is something you have seen in movies that looks like it violates some laws of physics? And do you think in the future we could make this possible with some advancements in science?

2) Pulleys: Lift a variety of heavy objects (armchair, safe, piano) using pulleys and a rope. Systems of one, two, four, or six pulleys can be used. Up to six people can be used to pull on the rope, which adds force (effort).

3) Pulley Lab: Use a pulley system to lift a heavy weight to a certain height. Measure the force required to lift the weight using up to three fixed and three movable pulleys. The

weight to be lifted and the efficiency of the pulley system can be adjusted, and the height of the weight and the total input distance are reported.

4) Levers: Use a lever to lift a pig, turkey, or sheep. A strongman provides up to 1000 newtons of effort. The fulcrum, strongman, and animals can be moved to any position to create first-, second-, or third-class levers.