**Physics of Sports Project **

Sir Isaac Newton lived during the 1600s. Like all scientists, he made observations about the world around him. Some of his observations were about motion. His observations have been supported by more data over time; and we now call these Newton’s Laws of Motion. His laws of motion explain rest, constant motion, accelerated motion, and describe how balanced and unbalanced forces act to cause these states of motion.

**Content Guidelines- project must include the following**

You will be creating **Prezi presentation** on a sporting event or physical activity of your choice. You must choose any activity that involves *motion*. You will apply the concepts of friction, gravity, inertia, momentum, and action/reaction forces to your sport. Your presentation will show how each of these concepts applies to your sport or activity. In scripting your presentation, make note of how an understanding of physics concepts can improve your performance/game.

You will be given a set of six questions that will apply to your chosen sport or activity. Initially you will need to spend time thinking about how to answer each of these questions. You will be required to complete a guided pre-write and storyboard rough draft for each of the five questions.

Once you have edited your storyboard rough drafts, you are ready to prepare your presentation. You may be as creative as you wish, however, be sure to make the content of your presentation the top priority. Adding all of the special effects needs to be secondary.

The requirements for your presentation include the following:

* Title and Author
* Define the following terms: friction, gravity, inertia, momentum, Newton’s first law, Newton’s second law, and Newton’s third law
* Images (at least one for each question) to visually represent how the concepts relate to your sport
* Minimum of 2 links to reputable websites that support your presentation
* Optional embedded video/movie clip

The six questions that you will answer are:

1) How do static, rolling, sliding and/or fluid frictions influence the movements in \_\_\_\_\_?

2) How does the force of gravity affect \_\_\_\_\_\_\_?
3) How does inertia (Newton’s 1st Law) apply to \_\_\_\_\_?
4) How does the relationship of force, mass, and acceleration (Newton’s 2nd Law) apply to \_\_\_\_\_?
5) How do action-reaction forces (Newton’s 3rd Law) apply to \_\_\_\_\_?

6) How does momentum apply to \_\_\_\_\_?

Upon completion email a link of your Prezi presentation to your teacher. Give your presentation a file name that includes your name and class.

**Deadlines:**

**Project Due: Tuesday, February 7th**