The Diagnoser tool found on the physport.org website is one of high value to both students and teachers. By first assessing the current level of knowledge in a classroom of students, teachers can gain valuable information before teaching content as well as open the room up to meaningful discussion. The Diagnoser tool elicits student answers to various science content area and will provide instructors and students with pre or misconceptions on Science content as well as *individual* summary reports that can be used as starting points when teaching new topics in Science.

I can envision my PLC utilizing the Diagnoser tool at the beginning of new units and again at the end to gauge student progress. I feel that students will also feel success if the Diagnoser tool is used as a pre and post assessment method due to its individualized nature. Meeting with my PLC as well as my STEM supervisor would provide additional support if I were to need it when using the Diagnoser tool.

Goal: To elicit students' current knowledge, thoughts, ideas, and common misconceptions on force and motion concepts and to develop and provide students with follow up lessons aimed at providing grade level appropriate force and motion concept knowledge

Objectives:

1. To engage students in mini assessments on the www.physport.org Diagnoser tool based on force and motion concepts to determine their current knowledge base and possible misconceptions.

2. SWBAT (students will be able to) complete Diagnoser assessments tailored to their level of knowledge.

3. Students and instructors will be able to identify gaps (either in content or misconceptions) of current student force and motion knowledge and will work collaboratively to fill those gaps through planned, hands-on engaging lessons

Planning	**Learning & Implementation**				**Evaluation**	
Needs Assessment Data	**Resources**	**Content/Focus**	**Format/Type**	**Participant Learning Outcomes**	**Evaluation**	**Homework/ Follow Up**

				(Knowledge, Skills, Beliefs, Practices)		
Curriculum driven needs; standardized testing results (PARCC in NJ)	www.physport.org ; www.diagnoser.com Force and Motion tab: Identifying Forces, Forces Acting at a Distance, Forces as Interactions, Position and Distance, Change in Direction, Determining Speed	Force and Motion Basics	On-line diagnosing tool utilized www.diagnoser.com through www.physport.org 1. Diagnoser Question Sets assigned for each identified content area within the Force and Motion tab 2. Notebook page created at the beginning (pre-assessment) of Force and Motion unit using Diagnoser tool set summary pages provided to students upon completion of question sets	**Motion:** -Position of an object is appropriately determined as a location with respect to a reference object or scale. -The distance traveled (or change in position) in a time interval for an object traveling in one direction is the difference between the initial	1.Students complete Diagnoser tools for the assigned areas of Force & Motion concepts 2. As students progress through the Diagnoser tools, they are able to read feedback on their answers (on both positive and problematic areas)	1. Students rate their confidence in their understanding of each content area 2. Read summary report 3. Complete Force and Motion pre-assessment current knowledge page in Interactive Notebook using summary reports

			3. Notebook page created at the end of a unit (post-assessment) again using Diagnoser tool set summary pages provided to students upon completion of question sets	position and the final position in that time interval. **<u>Forces</u>**: -Students can identify the sources of forces on an object. -Students can correctly identify the direction a force is acting. -Students can compare the relative sizes of forces on static objects. -Students	3. Teacher formative assessment of student pre-assessment page in Interactive Notebook (students will use Diagnoser tool summary reports to create their current knowledge page)	**<u>FOLLOW-UP</u>**: 1.Students will take same Diagnoser Assessment Question Sets at the completion of Force and Motion unit 2. Students review individual personalized summary reports and create post-assessment knowledge page in Interactive Notebooks 3. Students and teachers conference to compare pre and post

				can identify the gravitational force exerted between the earth and another object. -Students can identify the magnetic force between a magnet and another object. -Students can identify the electric force between a charged object and another objects -All forces raise out of		assessments and learning progress on Force and Motion content

				an interaction between two objects -The force pairs are equal in magnitude -The force pairs are opposite in direction		