Physics

Fall 2025

Weeks 9 – 10

Oct 6 - 17

Monday / Tuesday (October 6 & 7)

Major grade – rewriting your CERs from the inertia lab

- T: 3Scientific and engineering practices. The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions. The student is expected to: (A) develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories; (B)communicate explanations and solutions individually and collaboratively in a variety of settings and formats; (C)and engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence.
- O: I will be able to produce a scientific CER
- D: by analyzing a video, discussing an appropriate CER, and then re-writing my CER from the Inertia Labs.
- A: Claim, Evidence, Reasoning
- Y: What are the key parts of each part of a CER?

Wednesday / Thursday (October 8 & 9)

- T: 5F - calculate the effect of forces on objects, including tension, friction, normal, gravity, centripetal, and applied forces, using free body diagrams and the relationship between force and acceleration as represented by Newton's second law of motion
- O: I will be able to calculate force including weight and friction
- D: by completing two worksheets about these topics.
- A: F = ma, friction, weight
- Y: How does gravity affect weight and friction?

Newton’s Second Law

$$F = ma$$

force = (mass)(acceleration)

Tuesday / Wednesday (October 14 & 15)

- POGILs

Journal 2.2

- Who is your hero and why?

- T: 5E - explain and apply the concepts of equilibrium and inertia as represented by Newton's first law of motion using relevant real-world examples such as rockets, satellites, and automobile safety devices
- 5F - calculate the effect of forces on objects, including tension, friction, normal, gravity, centripetal, and applied forces, using free body diagrams and the relationship between force and acceleration as represented by Newton's second law of motion
- 5G - illustrate and analyze the simultaneous forces between two objects as represented in Newton's third law of motion using free body diagrams and in an experimental design scenario
- O: I will relate my learning about Newton's Laws data
- D: by completing 2 POGILs about the three laws.
- A: Newton's Laws, inertia, Newton
- Y: How do Newton's laws relate to real world situations?

Thursday / Friday (October 16 & 17)

- Substitute on Friday
- PhET Forces

- T: 5E - explain and apply the concepts of equilibrium and inertia as represented by Newton's first law of motion using relevant real-world examples such as rockets, satellites, and automobile safety devices
- 5F - calculate the effect of forces on objects, including tension, friction, normal, gravity, centripetal, and applied forces, using free body diagrams and the relationship between force and acceleration as represented by Newton's second law of motion
- 5G - illustrate and analyze the simultaneous forces between two objects as represented in Newton's third law of motion using free body diagrams and in an experimental design scenario
- O: I will continue relating my learning about Newton's Laws data
- D: by finishing 2 POGILs from last class and completing a PhET simulation about forces.
- A: Newton's Laws, inertia, Newton
- Y: How do can Newton's laws be represented visually??