

Unit 4: Energy/momentum labs

1. People Power
2. Spring Potential
3. Roller Coaster
4. Impulse

Lab: People Power

October 5-6

- Obj: Experimentally determine your stair climbing power while walking up 15 steps.
- Data: 5 equal intervals
- Calculations: Your weight in newtons and your work for each interval. Show work once.
- Graphs: Work v. time...use to find your average power
- The discussion should include: the shape & meaning of the graph as well a comparison of power within your group

Lab: Spring Potential

October 9
4th only

- Obj: Experimentally determine the spring constant and elastic potential energy of two different spring scales
- Data: 5 equal intervals; displacement is the independent variable
- Graph: Force applied v. displacement...use this graph to calculate the spring constant and elastic potential energy
- The discussion should include: comparing the results of the two spring scales

Lab: No Free Lunch (NRG Conservation)

October 11-12

- Obj: Design a roller coaster for a skater. Verify the law of conservation of energy as the skater moves along the track.
- Follow the provided lab procedures
- [Click to download the lab procedures](#)