

PHYSICS IN ACTION

Mondays, September 9-December 9 (no class October 14, or November 4 and 25; 11 weeks)

9:30am-10:45pm

Ages 8-10

Students study physics by investigating every-day actions and interactions of matter, force, motion and energy. Labs focus on hands-on physics activities and experiments to explore the fundamentals of this scientific disciplines. All lab costs are included in registration fee. Course enrollment is limited to 12 students.

Instructor: Candra Umunna, BSc

Location: Science Center (suite 5)

Course fee: \$200 OR \$20/lab

10% off early registration discount through July 31

10% off sibling discount available beginning August 1

LAB SCHEDULE:

Minute to Win It: Science Edition – Monday, September 9

Students learn the proper use of laboratory tools, and then complete one-minute scientific challenges to learn the importance of units in measurements of time, length, mass and volume.

LEGO® Racers – Monday, September 16

This week, we study motion along a straight line by calculating speed, velocity and acceleration with LEGO® cars students design and build.

Motion in Dimensions – Monday, September 23

Students conduct experiments involving force and motion in 2- or 3-dimensional space, including projectile motion, and centripetal and centrifugal forces.

Newton's Laws of Motion – Monday, September 30

Simple machines are built and used to demonstrate Newton's three Laws of Motion. Students experiment with varying forces to observe how the resulting motion is affected.

Forces in Action – Monday, October 7

We apply Newton's Laws of Motion as we explore friction and drag with airplanes and other vehicles we design and build.



Mass and Collisions – Monday, October 21

Today, we crash things to study the effect of mass on collisions and investigate momentum and center of mass as we build cars designed to protect an egg when they crash.

Force of Gravity – Monday, October 28

This week, we investigate what gravity really is, and how we observe it on Earth. Students explore the center of gravity of different objects as they experiment with balance.

States of Matter – Monday, November 11

In this lab, we review the characteristics of different states of matter, and experiment with various elements and compounds to study changes in state.

Oscillations – Monday, November 18

Students learn about oscillatory motion as they study and experiment with waves, pendulums and springs.

Thermodynamics – Monday, December 2

In this lab, we study heat and temperature, and how they related to energy, matter and work. Students conduct experiments to determine how specific conditions affect temperature.

Electricity and Magnetism – Monday, December 9

We explore electric and magnetic fields in this lab, and investigate the relationship between electricity and magnetism, and build simple electromagnets and circuits.

www.DiscoverScienceCenter.com