

SCIENCE AT THE MOVIES

Mondays, September 8-December 8 (no class Oct 13 and Nov 24; 12 weeks)

11:15am -12:45pm

Ages 11-14

In this STEM-focused class, students explore scientific principles and engineering challenges inspired by popular films and characters. Through hands-on experiments, they investigate aerodynamics using dragon flight models from *How to Train Your Dragon*, and explore chemical reactions inspired by *Harry Potter*. While no movies will be shown, students will engage in physics, chemistry, engineering, and space science concepts using themes from *Shrek*, *Pokémon*, *Minecraft*, *The LEGO Movie*, and more to spark creativity and learning. All lab costs are included in the registration fee.

Instructor: Ashley Blocker, BSc

Location: STEM Lab (Suite 21)

Full semester - \$275 OR \$25/lab (plus \$0.99 AH fee)

10% off sibling discount

Register for full semester or individual labs.

LAB SCHEDULE:

SHREK SWAMP SCIENCE – Monday, September 8

Inspired by Shrek's love for the swamp, students dig into the science of soil, mud, and earthworms to learn how these messy environments support life and recycle nutrients.

HARRY POTTER POTIONS – Monday, September 15

Students explore the science of pH and create color-changing "potions" inspired by *Harry Potter*, learning how different acids and bases cause dramatic transformations in liquids.

LEGO MOVIE BUILD - Monday, September 22

Students build creative structures inspired by *The LEGO Movie*, while applying engineering concepts like stability, balance, and design to construct functional and imaginative models.

MINECRAFT BOW AND ARROW – Monday, September 29

Students explore the science behind the mechanics of bows and arrows, using *Minecraft* as a foundation to understand force, trajectory, and the physics of projectile motion.

DESPICABLE ME SHRINK RAY - Monday, October 6

Students explore the fascinating science of polymers, focusing on their unique properties of shrinking and stretching, with a fun twist inspired by the shrink rays from *Despicable Me*.

HOW TO TRAIN YOUR DRAGON GLIDERS - Monday, October 20

Students explore the science of flight through gliders and paper airplanes, using principles of aerodynamics and flight control inspired by the dragons in *How to Train Your Dragon*.

MUFASA AND LION HABITAT FRAGMENTATION - Monday, October 27

Students examine the impact of habitat fragmentation on lion populations, drawing inspiration from *Mufasa* and the challenges faced by Mufasa's pride in the wild.

ELIO AND ADAPTATIONS - Monday, November 3

Students explore the science of adaptations, learning how living organisms evolve and adjust to their environments, inspired by the unique alien biology in the movie *Elio*.

ANIMAL COMMUNICATION AND THE WILD ROBOT - Monday, November 10

Students explore the science of animal communication, studying how different species use sounds, signals, and body language to interact, inspired by the animal behaviors in *The Wild Robot*.

MINECRAFT MOVIE REDSTONE ENGINEERING – Monday, November 17

Students learn the basics of circuits by comparing real electrical components to Minecraft's redstone system.

PADDINGTON AND THE AMAZON RIVER - Monday, December, 1

Inspired by the movie *Paddington Goes to Peru*, students explore the Amazon River's ecosystem, learning about its biodiversity and the unique plants and animals that call it home.

POKEMON AND CATAPULTS – Monday, December 8

Students explore the science of catapults through the lens of Pokémon, learning how force, angles, and energy affect a Pokéball's trajectory. By building and testing their own mini catapults, they discover real physics concepts like projectile motion and kinetic energy—just like when aiming for the perfect catch!