## In Advanced Physics I we learn about motion and energy:

Math for Physics (measurements, rounding, algebra, trig, graphing)

Straight line motion, velocity and acceleration (how things move)

Forces and their effects on motion (why things move)

Motion and forces in 2 dimensions

Parabolic motion (how objects fly through the air)

Motion in a circle and Gravitational motion (what and how the universe holds together)

Momentum (motion during collisions)

Energy of motion (kinetic and potential energy, work and power)

Energy of heat (how heat moves, how to stop it, how to predict it)

Energy of waves (basic wave phenomenon)

Energy of sound (how sound is transmitted, produced, how instuments play)

Energy of light (how light travels, all the ways you can manipulate it with mirrors, lenses)

Electricity (static electricity, how circuits work, electrical safety)

Magnetism (how magnets work, the relationship between electricity and magnetism)

I'd love to teach more, but the semester is only so long...

Each unit is about a week to a week and a half long.

Midterm exams and semester exams appropriately placed.

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