

Engineering Explorations

Curriculum Map

Course Length: 1 Semester (18 weeks)

Unit and Topics	Duration	Month <small>(Semester 1)</small>	Month <small>(Semester 2)</small>
Unit 1: Mechanical Engineering – Mousetrap Vehicles Design, construction, and optimization of a mousetrap-powered car.	3 weeks	Aug/Sept	Jan
Unit 2: Electrical Engineering - Blinky Soldering, circuit board construction.	3 weeks	Sept/Oct	Jan/Feb
Unit 3: Civil Engineering - Bridges Bridge design, construction, and testing.	3 weeks	Oct	Feb/Mar
Unit 4: Aeronautical Engineering- Delta Flyer Airplane design, testing, and optimization.	3 weeks	Oct/Nov	Mar/Apr
Unit 5: Mechanical Engineering – Hot Air Balloons Forces, buoyancy, balloon design, and balloon manufacturing.	3 weeks	Nov	Apr
Unit 6: Mechanical & Chemical Engineering – Solar Ovens Design, construction, and testing of a solar oven.	3 weeks	Dec	May