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NetLogo Units of Study
Unit 3 Algebra Project

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Modeling Car Collisions

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Objective: Students will solve real world problems using computational modeling.



Materials Required:

Electric Cars

Yard Sticks

Stop Watches

Computers with NetLogo



Focus Standards

Mathematics Focus Standard: Algebra CED 3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. *For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.* ★

NGSS Focus Standard: HS PS2 3. Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.

Computer Science Focus Standard: CT 8. Use modeling and simulation to represent and understand natural phenomena.

CTE Focus Standard: D1.1 Develop information technology-based strategies and project plans to solve specific problems.

Essential Question

How can we predict when two cars, traveling towards each other at varying speeds, will collide?

