1 Rocket Rd  
Hawthorne, CA 90250

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Dear High School Students,

With the success of our first commercialized rocket named Dragon, we are the first privately owned company to pilot a mission to the International Space Station. Now with NASA decommissioning the Challenger Space Shuttle, we face the challenge of spearheading the future of the space program in the United States. We are challenging high school students from all across the United States to help design new rockets for space flight. Rocket engineers from various universities will be sent to specific chosen high schools to help with the prototypes.

A foundation of physics and advanced algebra is necessary for the success of this project. SpaceX is committed to assist students in meeting their state required concepts. To that end, the management board of Space X has found the following state requirements relative to this project.

• describe and analyze motion in one dimension using equations with the concepts of distance, displacement, speed, average velocity, instantaneous velocity, and acceleration;

• analyze and describe accelerated motion in two dimensions using equations, including projectile

• calculate the effect of forces on objects, including the law of inertia, the relationship between force and acceleration,

• calculate the mechanical energy of, power generated within, impulse applied to, and momentum of a physical system

• analyze the parabolic path of the rocket flight including maximum height

Dr. Will Magnus