

# Dive right in to algebra & Physics



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Mac 3 – Winter 2008

# Major Concepts

Measurement

Rates of change

Linear functions

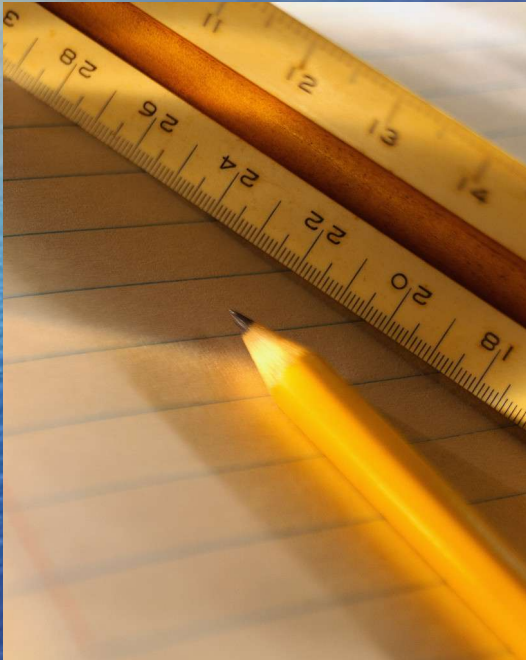
Quadratic functions

Force & motion

Extensions of concepts  
from the field trip



# Measurement



- Use appropriate tools to measure quantities
- Use formulas
- Unit analysis

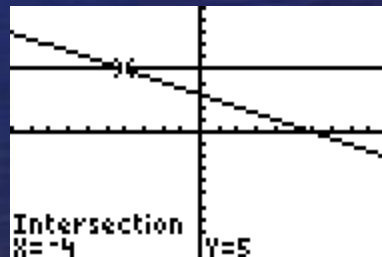
# Rates of change

- Recognize slope in physical settings
- Calculate slope
- Interpret slope as a rate of change



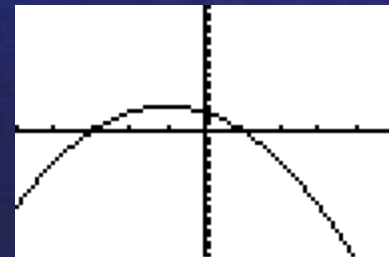
# Linear functions

- Recognize linear relationships in math and physics
- Model & Graph linear functions
- Calculate using linear functions
- Interpret results in a physics setting



# Quadratic functions

- Recognize quadratic relationships in math and physics
- Model & Graph quadratic functions
- Calculate using quadratic functions
- Interpret results in a physics setting



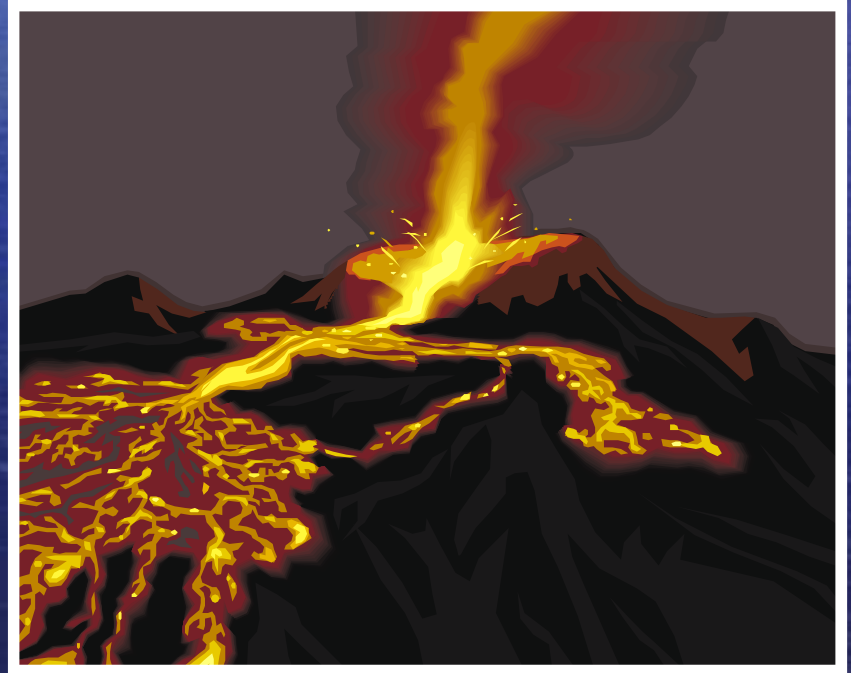
# Forces and motion

- Explore concepts and math of momentum, energy, gravity, velocity, acceleration, and Newton's laws
- Applications of force



# Extensions of concepts

- Explore the concepts and math from activities done during the field trip





# Activities & labs

- Crater creator lab
- Skydiving concepts – descent rates, glide ratio, wing loading, terminal velocity
- Parachute design and testing

# Field trip

## Physics, geology, astronomy and algebra

- John Day Fossil Beds
- Newberry Crater Volcanic Monument
- Pine Mountain Astronomical observatory
- Central Oregon skydiving center
- Performance Designs
- Crater lake national park



And fun will be had by all

