

Personal Development Plan - Gravity

Name: _____ Date: _____

Learning Standard Number	Learning Objectives: In this unit I learned that...	Your evaluation of progress? What examples show that you have met the standard?	What help do I need from the teacher and/or others to achieve this standard?	Self Evaluation (Scale- 1= little understanding to 4= consistent demonstration)	Teacher Feedback
3A	Isaac Newton's Theory of Universal Gravitation can be used to describe and predict the effects of gravity on objects on Earth and in Space.				
3B	Einstein's concept of General Relativity is only a theory, but it is helpful in visualizing and understanding the fundamentals of how gravity may actually work.				
3C	Simple equations that include acceleration due to gravity can be used to answer questions about a free falling object , including distance and time fallen, and velocity of the object.				
3D	Air resistance is a significant factor in				

	understanding how objects behave in free fall on Earth.				
	Gravity is a force that is necessary for objects in Space to “orbit” other objects. The <u>shape and speed of an orbit</u> , can be explained in gravitational terms and mathematically through Kepler’s Laws				
3E	** Bonus Objective! ** <u>Weightlessness</u> is not the absence of gravity.				

Bonus Objective can be attempted only if all of the other objectives have been addressed in your PDP.

Required Elements

Gravity Class Notes/ CK12 Chapter Review (Ch. 15- 17)

[Stomp Rocket Lab - Freefall](#)

Freefall Calculations

Motion sensor inquiry for air resistance

Video Search/ Share- cartoon violations of gravity/ freefall motion

Film- Fabric of the Cosmos

Kepler’s Laws Class Discussion and online module

Possible Assessments to demonstrate understanding

- **Video Demonstration or Physical Demonstration**
- Create a Children's book or comic book
- **10 Tweets**
- Create a poem or a series of poems about the topic
- Film/video
- Screencast or Podcast
- **Explanatory Essay**
- Journal of discovery- journal entries as you research and discover answers to objectives.
- **Blog or Webpage Design**
- **Ask an Expert and Report Back - Email/ online or face to face interview**
- Interpret professional studies- current real world studies
- Artwork - paint, sculpt
- Create a "Wiki" or Wikipedia-Type Page
- **Photo Collage**
- Invent! This can be computer designed drawings, LEGO Sculptures, design ideas for future inventions that may benefit scientific study or humans in the future
- Use a computer simulation to illustrate a scientific concept
- Create an online quiz- questions and answers (10)
- **Self Directed Plan - Write a song, do a dance...you make it up!**