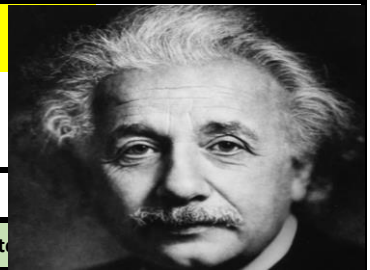


# NEW YORK TIMES PHYSICS 2016 - 2022

# APPLICATIONS

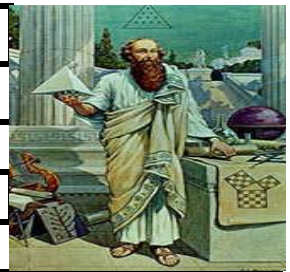


Dr. John P. Cise, Prof of Physics, Emeritus  
 Austin Com. College, 1212 Rio Grande St  
 Austin, Tx. 78703 jpcise@aol.com

2016 - 2022 = This site: <http://CisePhysics.homestead.com/files/NYTPhysics2016E.pdf>  
 2008 - 2022 Home page: <http://CisePhysics.homestead.com/files/NYTCisePhysics.pdf>  
 5/24/2021 = edit date , N = ~400 [jpcise@aol.com](mailto:jpcise@aol.com)

SpaceX/Heat Physics applications in GREEN 2nd column. Some Example Solutions are shown highliited in green.e.g.:5.11,5.21.5.31.5.41.5.51.5.61..et

CONCEPT	CONTEXT/FOCUS	Article DATE	Physics Application ITEMS	web page pdf		
<b>VECTOR</b>	SPORTS	1/26/2016	Ski Across Antarctica	<a href="http://CisePhysics.homestead.com/files/AntarcticaCrossing.pdf">http://CisePhysics.homestead.com/files/AntarcticaCrossing.pdf</a>	<b>VECTORS</b>	
<b>ADDITION</b>	POLITICAL	3/13/2016	Travel about Syrian region.	<a href="http://CisePhysics.homestead.com/files/SyriaRegions2016.pdf">http://CisePhysics.homestead.com/files/SyriaRegions2016.pdf</a>		
1		6/30/2018	Smuggled:Guatamala-Houston	<a href="http://CisePhysics.homestead.com/files/SmuggleCost2018.pdf">http://CisePhysics.homestead.com/files/SmuggleCost2018.pdf</a>		
		5/4/2019	1619:400 yrs of slave trade	<a href="http://CisePhysics.homestead.com/files/SlaveTrade1619.pdf">http://CisePhysics.homestead.com/files/SlaveTrade1619.pdf</a>		
		5/29/2019	US Cimate zones move North	<a href="http://CisePhysics.homestead.com/files/PlantGrowingZonesGoingNorth.pdf">http://CisePhysics.homestead.com/files/PlantGrowingZonesGoingNorth.pdf</a>		
		5/23/2019	Western Chinese Muslims Caged	<a href="http://CisePhysics.homestead.com/files/ChinaMuslimsCaged.pdf">http://CisePhysics.homestead.com/files/ChinaMuslimsCaged.pdf</a>		
		8/30/2019	1939 Ger./Russia Invade Poland	<a href="http://CisePhysics.homestead.com/files/Poland1938WarBegins.pdf">http://CisePhysics.homestead.com/files/Poland1938WarBegins.pdf</a>		
		GEOLOGY/GEOGRAPHY	4/26/2018	CO2 Absorbing Rocks: Oman	<a href="http://CisePhysics.homestead.com/files/CO2AbsorbingRocks.pdf">http://CisePhysics.homestead.com/files/CO2AbsorbingRocks.pdf</a>	
			8/10/2018	Aral Sea Disappearing	<a href="http://CisePhysics.homestead.com/files/AralSeaDisappearing2018.pdf">http://CisePhysics.homestead.com/files/AralSeaDisappearing2018.pdf</a>	
			8/31/2019	KAZAK Chevron Oil Field	<a href="http://CisePhysics.homestead.com/files/KazakChevronOilField.pdf">http://CisePhysics.homestead.com/files/KazakChevronOilField.pdf</a>	
		OTHER	1/24/2016	Travel about NE USA	<a href="http://CisePhysics.homestead.com/files/Blizzard2016.pdf">http://CisePhysics.homestead.com/files/Blizzard2016.pdf</a>	
			1/31/2016	Travel around Namibia Africa	<a href="http://CisePhysics.homestead.com/files/Namibia.pdf">http://CisePhysics.homestead.com/files/Namibia.pdf</a>	
		HISTORICAL	8/10/2016	ICE FREE PATH: 12,000 YRS AGO	<a href="http://CisePhysics.homestead.com/files/IceFreeCorridor.pdf">http://CisePhysics.homestead.com/files/IceFreeCorridor.pdf</a>	
			9/14/2016	NW Passage 1848 ship found	<a href="http://CisePhysics.homestead.com/files/NWPassageShipFound.pdf">http://CisePhysics.homestead.com/files/NWPassageShipFound.pdf</a>	
			9/25/2016	NW Passage No Ice NOW	<a href="http://CisePhysics.homestead.com/files/NoIceNowNWPassage.pdf">http://CisePhysics.homestead.com/files/NoIceNowNWPassage.pdf</a>	
			4/6/2018	Viking navigators: sunstones	<a href="http://CisePhysics.homestead.com/files/VikingNavigationSunstones.pdf">http://CisePhysics.homestead.com/files/VikingNavigationSunstones.pdf</a>	
		BIOLOGICAL	11/12/2016	Cuckoo bird migrates 6000 miles	<a href="http://CisePhysics.homestead.com/files/CuckooBirdLongFlights.pdf">http://CisePhysics.homestead.com/files/CuckooBirdLongFlights.pdf</a>	EP & GP 1
2						
<b>MATH</b>	ASTRONOMY	9/26/2016	Earth's largest telescope	<a href="http://CisePhysics.homestead.com/files/ChinasLargestTelescope.pdf">http://CisePhysics.homestead.com/files/ChinasLargestTelescope.pdf</a>	<b>MATH</b>	



**PYTHAGORAS**  
569 - 475 BC

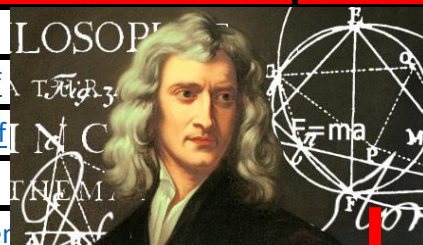


**GALILEO 1564 - 1642**



	<b>ECLIPSE</b>	8/20/2017	70 mi. wide solar eclipse	<a href="http://CisePhysics.homestead.com/files/SolarEclipseSize2017.pdf">http://CisePhysics.homestead.com/files/SolarEclipseSize2017.pdf</a>	
		8/28/2018	MARS WATER FOUND: 2018	<a href="http://CisePhysics.homestead.com/files/WaterOnMars2018.pdf">http://CisePhysics.homestead.com/files/WaterOnMars2018.pdf</a>	
	<b>OTHER</b>	5/3/2016	Math is a piece of Cake	<a href="http://CisePhysics.homestead.com/files/PiMath.pdf">http://CisePhysics.homestead.com/files/PiMath.pdf</a>	
		7/9/2015	14nm to 10 nm to 7 nm chips	<a href="http://CisePhysics.homestead.com/files/14to10to7nmChips.pdf">http://CisePhysics.homestead.com/files/14to10to7nmChips.pdf</a>	
		3/20/2018	Fields Math Medal 2018	<a href="http://CisePhysics.homestead.com/files/FieldsMedal.pdf">http://CisePhysics.homestead.com/files/FieldsMedal.pdf</a>	
	<b>POLITICAL</b>	6/2/2019	Lax Gun Laws More Deaths	<a href="http://CisePhysics.homestead.com/files/LaxGunLawsMoreDeaths.pdf">http://CisePhysics.homestead.com/files/LaxGunLawsMoreDeaths.pdf</a>	
	<b>HISTORY</b>	8/29/2017	3700 YRS. AGO TRIG FOUND	<a href="http://CisePhysics.homestead.com/files/Trig3700YrsAgo.pdf">http://CisePhysics.homestead.com/files/Trig3700YrsAgo.pdf</a>	
	<b>SPORTS/DANCE</b>	1/21/2017	Florida Sports going Metric	<a href="http://CisePhysics.homestead.com/files/MetricInSports.pdf">http://CisePhysics.homestead.com/files/MetricInSports.pdf</a>	
	<b>BIO./MEDICAL</b>	1/12/2018	Medical Imaging Moly-99	<a href="http://CisePhysics.homestead.com/files/technetium99m.pdf">http://CisePhysics.homestead.com/files/technetium99m.pdf</a>	
	<b>KINEMATICS</b>	<b>ASTRONOMY/SPACE</b>	5/10/2005	Mars Polar Lander Crash	
3		2/14/2016	Gravity Waves:Length Change	<a href="http://CisePhysics.homestead.com/files/GWavesChgTunnelLength.pdf">http://CisePhysics.homestead.com/files/GWavesChgTunnelLength.pdf</a>	
		2/25/2016	ISS orbital speed by Astronaut	<a href="http://CisePhysics.homestead.com/files/KellyYearInSpace.pdf">http://CisePhysics.homestead.com/files/KellyYearInSpace.pdf</a>	
		4/5/2016	Earth speed high: Kennedy Sp. Ct	<a href="http://CisePhysics.homestead.com/files/SpaceCenterOceanRise.pdf">http://CisePhysics.homestead.com/files/SpaceCenterOceanRise.pdf</a>	
		10/1/2016	Rosetta Spacecraft falls into 67P	<a href="http://CisePhysics.homestead.com/files/RosettaCrashInto67P.pdf">http://CisePhysics.homestead.com/files/RosettaCrashInto67P.pdf</a>	
		2/20/2017	Hubble: 72 km./s./3.3 M lt. yrs.	<a href="http://CisePhysics.homestead.com/files/ExpandingUniverse.pdf">http://CisePhysics.homestead.com/files/ExpandingUniverse.pdf</a>	
		5/9/2017	Two Stars Collide 1900 yrs ago	<a href="http://CisePhysics.homestead.com/files/TwoStarsCollide.pdf">http://CisePhysics.homestead.com/files/TwoStarsCollide.pdf</a>	
		8/10/2017	40th annaversary:Voyager	<a href="http://CisePhysics.homestead.com/files/Voyager40Years.pdf">http://CisePhysics.homestead.com/files/Voyager40Years.pdf</a>	
	<b>ECLIPSE</b>	8/14/2017	Eclipse shadow size,vertex ratios	<a href="http://CisePhysics.homestead.com/files/Eclipse2017Ratios.pdf">http://CisePhysics.homestead.com/files/Eclipse2017Ratios.pdf</a>	
		11/30/2017	Light Sun Earth time	<a href="http://CisePhysics.homestead.com/files/SaturnMoonTime.pdf">http://CisePhysics.homestead.com/files/SaturnMoonTime.pdf</a>	
		6/14/2018	Black Hole Eats Star	<a href="http://CisePhysics.homestead.com/files/BlackHoleEatsStar.pdf">http://CisePhysics.homestead.com/files/BlackHoleEatsStar.pdf</a>	
	8/10/2018	Parker Solar Probe 2018	<a href="http://CisePhysics.homestead.com/files/ParkerSolarProbeSatelite2018.pdf">http://CisePhysics.homestead.com/files/ParkerSolarProbeSatelite2018.pdf</a>		

		12/31/2018	New Horizon 13 th. yr.	<a href="http://CisePhysics.homestead.com/files/NewHorizons13YrUltimaThuleFlyby.pdf">http://CisePhysics.homestead.com/files/NewHorizons13YrUltimaThuleFlyby.pdf</a>	
		12/11/2018	Voyager300 yrs to Oort cloud	<a href="http://CisePhysics.homestead.com/files/ToOortIn300yrs.pdf">http://CisePhysics.homestead.com/files/ToOortIn300yrs.pdf</a>	
		2/12/2021	Voyager2 reconnected 2021	<a href="http://CisePhysics.homestead.com/files/VoyagerTalking2021.pdf">http://CisePhysics.homestead.com/files/VoyagerTalking2021.pdf</a>	$x = vt$
3.00	<b>STARSHIP</b>	3/30/2021	SpaceX SN10 Lands success	<a href="http://CisePhysics.homestead.com/files/sn10Lands.pdf">http://CisePhysics.homestead.com/files/sn10Lands.pdf</a>	$v^2=v(o)^2+2ax$
3.11	solution example	3/30/2021	SpaceX SN10 Lands:Solution	<a href="http://CisePhysics.homestead.com/files/sn10Lands2.pdf">http://CisePhysics.homestead.com/files/sn10Lands2.pdf</a>	$F = ma$
	<b>Aeronautical</b>	5/13/1999	Arresting Planes off Runway	<a href="http://CisePhysics.homestead.com/files/PlaneRunwayStopCement.pdf">http://CisePhysics.homestead.com/files/PlaneRunwayStopCement.pdf</a>	$v^2=v(o)^2+2ax$
	<b>HISTORICAL</b>	9/24/2016	Bosnia 90 ft. dive into river	<a href="http://CisePhysics.homestead.com/files/StariMost90ftDive.pdf">http://CisePhysics.homestead.com/files/StariMost90ftDive.pdf</a>	
	<b>SPORTS</b>	10/30/2016	92 vs. 102 mph fastballs	<a href="http://CisePhysics.homestead.com/files/FastballHighSpeed.pdf">http://CisePhysics.homestead.com/files/FastballHighSpeed.pdf</a>	
		1/15/2017	Football collisions: 26 g force	<a href="http://CisePhysics.homestead.com/files/BrainAtFootballHits.pdf">http://CisePhysics.homestead.com/files/BrainAtFootballHits.pdf</a>	$v^2=v(o)^2+2ax$
		9/7/2019	800 ft climber fall: rope break	<a href="http://CisePhysics.homestead.com/files/PhysicistFalls800ft.pdf">http://CisePhysics.homestead.com/files/PhysicistFalls800ft.pdf</a>	$v^2=v(o)^2+2ax$
<hr/>					
<b>PROJECTILES</b>					
4	<b>BASKETBALL GAME</b>	1/31/2016	Spur tee shirt shooting	<a href="http://CisePhysics.homestead.com/files/SpurCannon.pdf">http://CisePhysics.homestead.com/files/SpurCannon.pdf</a>	$y = vt + 1/2 gt^2$
	<b>GOLF</b>	2/5/2016	Moon 6 iron golf shot	<a href="http://CisePhysics.homestead.com/files/MoonWalker6.pdf">http://CisePhysics.homestead.com/files/MoonWalker6.pdf</a>	$y = vt + 1/2 gt^2$
	<b>BASKETBALL</b>	3/1/2016	Golden Warriors Curry 3 pts.	<a href="http://CisePhysics.homestead.com/files/CurryThreePointers.pdf">http://CisePhysics.homestead.com/files/CurryThreePointers.pdf</a>	$y = vt + 1/2 gt^2$
	<b>BASKETBALL</b>	3/18/2016	Curry: 330 three pointers	<a href="http://CisePhysics.homestead.com/files/Curry330ThreePointers.pdf">http://CisePhysics.homestead.com/files/Curry330ThreePointers.pdf</a>	$y = vt + 1/2 gt^2$
	<b>BASEBALL</b>	4/1/2016	Denver:Homers made harder	<a href="http://CisePhysics.homestead.com/files/ThinAirBallMotion.pdf">http://CisePhysics.homestead.com/files/ThinAirBallMotion.pdf</a>	$y = vt + 1/2 gt^2$
	<b>SKIING</b>	7/29/2016	Skining off cliff = Death	<a href="http://CisePhysics.homestead.com/files/ExtremeSkierDies.pdf">http://CisePhysics.homestead.com/files/ExtremeSkierDies.pdf</a>	$y = vt + 1/2 gt^2$
	<b>MOTOR CYCLES</b>	9/16/2016	Jump over canyon	<a href="http://CisePhysics.homestead.com/files/KnievelHomage.pdf">http://CisePhysics.homestead.com/files/KnievelHomage.pdf</a>	$y = vt + 1/2 gt^2$
	<b>BASEBALL</b>	10/27/2016	How to hit homeruns	<a href="http://CisePhysics.homestead.com/files/WorldSeries2016.pdf">http://CisePhysics.homestead.com/files/WorldSeries2016.pdf</a>	$y = vt + 1/2 gt^2$
	<b>BASEBALL</b>	4/16/2017	Throw Home to 2nd.base	<a href="http://CisePhysics.homestead.com/files/ThrowToSecond.pdf">http://CisePhysics.homestead.com/files/ThrowToSecond.pdf</a>	$y = vt + 1/2 gt^2$
	<b>JUMPING OVER PEOPLE</b>	4/17/2017	Leaping over 4 persons	<a href="http://CisePhysics.homestead.com/files/EasterInNYC2017.pdf">http://CisePhysics.homestead.com/files/EasterInNYC2017.pdf</a>	$y = vt + 1/2 gt^2$
	<b>BASEBALL</b>	7/9/2017	Home Run Speed & Angle	<a href="http://CisePhysics.homestead.com/files/Homeruns.pdf">http://CisePhysics.homestead.com/files/Homeruns.pdf</a>	$y = vt + 1/2 gt^2$
	<b>HORSE JUMPING</b>	12/8/2017	Winning Horse Jumps	<a href="http://CisePhysics.homestead.com/files/HorseJumping.pdf">http://CisePhysics.homestead.com/files/HorseJumping.pdf</a>	$y = vt + 1/2 gt^2$
	<b>RIFLE SHOOTING</b>	12/17/2017	Best shooter 1972	<a href="http://CisePhysics.homestead.com/files/BestShooter1972.pdf">http://CisePhysics.homestead.com/files/BestShooter1972.pdf</a>	$y = vt + 1/2 gt^2$
	<b>BASEBALL</b>	5/26/2018	Too many Home Runs	<a href="http://CisePhysics.homestead.com/files/TooManyHomeRuns.pdf">http://CisePhysics.homestead.com/files/TooManyHomeRuns.pdf</a>	$y = vt + 1/2 gt^2$
	<b>BASEBALL</b>	7/1/2018	Two run home run	<a href="http://CisePhysics.homestead.com/files/TwoRunHomer.pdf">http://CisePhysics.homestead.com/files/TwoRunHomer.pdf</a>	$y = vt + 1/2 gt^2$

	DARTS	12/29/2018	2019 World Dart Camps	<a href="http://CisePhysics.homestead.com/files/DartChampionship.pdf">http://CisePhysics.homestead.com/files/DartChampionship.pdf</a>	$y = vt + 1/2 gt^2$
	SKATEBOARD JUMP	9/2/2019	NYC Ace Skateboarder	<a href="http://CisePhysics.homestead.com/files/SkateboardNYC.pdf">http://CisePhysics.homestead.com/files/SkateboardNYC.pdf</a>	$y = vt + 1/2 gt^2$
	POLITICAL	6/8/2018	Trump in Singapore	<a href="http://CisePhysics.homestead.com/files/TrumpInSingapore.pdf">http://CisePhysics.homestead.com/files/TrumpInSingapore.pdf</a>	$y = vt + 1/2 gt^2$
	BIOLOGY	7/27/2017	Mushroom Spores Project	<a href="http://CisePhysics.homestead.com/files/FungiProjectiles.pdf">http://CisePhysics.homestead.com/files/FungiProjectiles.pdf</a>	
		3/16/2018	Squirrel's jump 20 ft.	<a href="http://CisePhysics.homestead.com/files/Squirreljump.pdf">http://CisePhysics.homestead.com/files/Squirreljump.pdf</a>	
NEWTON'S 2ND	AUTOMOTIVE	1/31/2016	Auto airbag deaths	<a href="http://CisePhysics.homestead.com/files/AirBagDeath.pdf">http://CisePhysics.homestead.com/files/AirBagDeath.pdf</a>	
5		2/5/2016	Football Collision Forces	<a href="http://CisePhysics.homestead.com/files/FootballCollisions.pdf">http://CisePhysics.homestead.com/files/FootballCollisions.pdf</a>	
		11/18/2017	Tesla's Electric Truck: 2018	<a href="http://CisePhysics.homestead.com/files/TeslaElectricTruck.pdf">http://CisePhysics.homestead.com/files/TeslaElectricTruck.pdf</a>	
	ASTRONOMY/SPACE	3/13/2016	Russian Proton Rocket Liftoff	<a href="http://CisePhysics.homestead.com/files/ExoMars2016.pdf">http://CisePhysics.homestead.com/files/ExoMars2016.pdf</a>	
		4/13/2016	Nanospacecraft to close star	<a href="http://CisePhysics.homestead.com/files/SpaceCraftToAlphaCer">http://CisePhysics.homestead.com/files/SpaceCraftToAlphaCer</a>	
NEWTON'S 2ND		7/2/2016	Jupiter Auroras Charged Particles	<a href="http://CisePhysics.homestead.com/files/JupiterAuroras.pdf">http://CisePhysics.homestead.com/files/JupiterAuroras.pdf</a>	$F(\text{net}) = m a$
	FALCON 9 Booster	4/14/2015	Space X delivers supplies to ISS	<a href="http://CisePhysics.homestead.com/files/FalconAlmostRecovered.pdf">http://CisePhysics.homestead.com/files/FalconAlmostRecovered.pdf</a>	$F(\text{net}) = m a$
	Example Solution	4/14/2015	Solution to above	<a href="http://CisePhysics.homestead.com/files/FalconAlmostRecovered2.pdf">http://CisePhysics.homestead.com/files/FalconAlmostRecovered2.pdf</a>	$F(\text{net}) = m a$
5.10	FALCON9 1st SUCCESS	5/22/2012	SpaceX Dragon to Int Space Sta.	<a href="http://CisePhysics.homestead.com/files/SpaceXFalcon9.pdf">http://CisePhysics.homestead.com/files/SpaceXFalcon9.pdf</a>	$F(\text{net}) = m a$
5.11	Example Solution	5/22/2012	Solution to ABOVE	<a href="http://CisePhysics.homestead.com/files/SpaceXFalcon92.pdf">http://CisePhysics.homestead.com/files/SpaceXFalcon92.pdf</a>	$F(\text{net}) = m a$
5.20	SpaceX Booster Lands	12/21/2015	SpaceX Booster Lands Vertical	<a href="http://CisePhysics.homestead.com/files/SpaceXLandsVertical.pdf">http://CisePhysics.homestead.com/files/SpaceXLandsVertical.pdf</a>	$F(\text{net}) = m a$
5.21	Example Solution	12/21/2015	Solution to ABOVE	<a href="http://CisePhysics.homestead.com/files/SpaceXLandsVertical2.pdf">http://CisePhysics.homestead.com/files/SpaceXLandsVertical2.pdf</a>	$F(\text{net}) = m a$
5.30	SPACE X FALCON 9	9/3/2016	SpaceX Falcon 9 EXPLODES	<a href="http://CisePhysics.homestead.com/files/SpaceXExplodes.pdf">http://CisePhysics.homestead.com/files/SpaceXExplodes.pdf</a>	$F(\text{net}) = m a$
5.31	Solution example	9/3/2016	Falcon 9 EXPLODES Solution	<a href="http://CisePhysics.homestead.com/files/SpaceXExplodes2.pdf">http://CisePhysics.homestead.com/files/SpaceXExplodes2.pdf</a>	$F(\text{net}) = m a$
		9/13/2016	"New Glenn" Rocket	<a href="http://CisePhysics.homestead.com/files/NewGlenn.pdf">http://CisePhysics.homestead.com/files/NewGlenn.pdf</a>	$F(\text{net}) = m a$
		9/24/2016	1969 Ascent from moon	<a href="http://CisePhysics.homestead.com/files/Apollo11AscentLEM.pdf">http://CisePhysics.homestead.com/files/Apollo11AscentLEM.pdf</a>	$F(\text{net}) = m a$
		10/6/2016	New Shepard Capsule Escape	<a href="http://CisePhysics.homestead.com/files/CrewCapsuleEscape.pdf">http://CisePhysics.homestead.com/files/CrewCapsuleEscape.pdf</a>	$F(\text{net}) = m a$
5.40	STARSHIP	4/23/2016	SpaceX Dragon Mars Landing	<a href="http://CisePhysics.homestead.com/files/SpaceLandingOn Mars.pdf">http://CisePhysics.homestead.com/files/SpaceLandingOn Mars.pdf</a>	$F(\text{net}) = m a$
5.41	Solution example	4/23/2016	Dragon Mars Landing: Solution	<a href="http://CisePhysics.homestead.com/files/SpaceLandingOn Mars2.pdf">http://CisePhysics.homestead.com/files/SpaceLandingOn Mars2.pdf</a>	$F(\text{net}) = m a$
		12/2/2016	Soyuz Rocket since 1967	<a href="http://CisePhysics.homestead.com/files/SoyuzRocketSince1967.pdf">http://CisePhysics.homestead.com/files/SoyuzRocketSince1967.pdf</a>	$F(\text{net}) = m a$
		2/16/2017	Space Launch System 2018	<a href="http://CisePhysics.homestead.com/files/SpaceLaunchSystem2017.pdf">http://CisePhysics.homestead.com/files/SpaceLaunchSystem2017.pdf</a>	$F(\text{net}) = m a$
		4/5/2017		<a href="http://CisePhysics.homestead.com/files/BozosNewShepard.pdf">http://CisePhysics.homestead.com/files/BozosNewShepard.pdf</a>	$F(\text{net}) = m a$
		10/26/2017	Bill Nys Solar Sailboat	<a href="http://CisePhysics.homestead.com/files/SolarSailboat.pdf">http://CisePhysics.homestead.com/files/SolarSailboat.pdf</a>	$F(\text{net}) = m a$



5.50	<b>STARSHIP</b>	9/28/2017	Musk's BFR #1 to Mars	<a href="http://CisePhysics.homestead.com/files/MusksBFRtoMars.pdf">http://CisePhysics.homestead.com/files/MusksBFRtoMars.pdf</a>	F(net) = m a	
5.51	Solution example	9/28/2017	Musk's BFR #1 to Mars:Solution	<a href="http://CisePhysics.homestead.com/files/MusksBFRtoMars2.pdf">http://CisePhysics.homestead.com/files/MusksBFRtoMars2.pdf</a>	F(net) = m a	
5.60	<b>SPACE X HEAVY</b>	2/6/2018	Space X Heavy Launch	<a href="http://CisePhysics.homestead.com/files/SpaceXHeavy2018.pdf">http://CisePhysics.homestead.com/files/SpaceXHeavy2018.pdf</a>	F(net) = m a	
5.61	Solution example	2/6/2018	Space X Heavy Launch:Solution	<a href="http://CisePhysics.homestead.com/files/SpaceXHeavy20182.pdf">http://CisePhysics.homestead.com/files/SpaceXHeavy20182.pdf</a>	F(net) = m a	
5.70	<b>Falcon 9 Booster</b>	4/18/2018	SpaceX Booster Returns	<a href="http://CisePhysics.homestead.com/files/SpaceXBoosterReturns.pdf">http://CisePhysics.homestead.com/files/SpaceXBoosterReturns.pdf</a>	F(net) = m a	
5.71	Solution example	4/18/2018	SpaceX Booster Returns:Solution	<a href="http://CisePhysics.homestead.com/files/SpaceXBoosterReturns2.pdf">http://CisePhysics.homestead.com/files/SpaceXBoosterReturns2.pdf</a>	F(net) = m a	
5.80	<b>STARSHIP</b>	3/30/2021	SpaceX SN10 Lands success	<a href="http://CisePhysics.homestead.com/files/sn10Lands.pdf">http://CisePhysics.homestead.com/files/sn10Lands.pdf</a>	$v^2=v(o)^2+2ax$	
5.81	solution example	3/30/2021	SpaceX SN10 Lands:Solution	<a href="http://CisePhysics.homestead.com/files/sn10Lands2.pdf">http://CisePhysics.homestead.com/files/sn10Lands2.pdf</a>	F = ma	
	<b>POLITICAL</b>	6/8/2018	N Korean Solid Rockets	<a href="http://CisePhysics.homestead.com/files/NorthKoreanRocket2018.pdf">http://CisePhysics.homestead.com/files/NorthKoreanRocket2018.pdf</a>	F(net) = m a	
	<b>SPORTS</b>	9/21/2016	Magnetic Hoverboard Hill	<a href="http://CisePhysics.homestead.com/files/Hoverboard2014.pdf">http://CisePhysics.homestead.com/files/Hoverboard2014.pdf</a>		
		3/15/2016	Surfing Amazon River Tide	<a href="http://CisePhysics.homestead.com/files/AmazonSurfing.pdf">http://CisePhysics.homestead.com/files/AmazonSurfing.pdf</a>	F(net) = m a	
		10/26/2014	Smaller soccer Balls-Less F	<a href="http://CisePhysics.homestead.com/files/SoccerBallsSmaller.pdf">http://CisePhysics.homestead.com/files/SoccerBallsSmaller.pdf</a>		
		9/2/2016	Surfing In Austin Texas	<a href="http://CisePhysics.homestead.com/files/SurfingPhysics.pdf">http://CisePhysics.homestead.com/files/SurfingPhysics.pdf</a>	F(net) = m a	
		10/29/2016	Woman Surfing 60 ft. waves	<a href="http://CisePhysics.homestead.com/files/WomanSurfMavericks.pdf">http://CisePhysics.homestead.com/files/WomanSurfMavericks.pdf</a>	F(net) = m a	
		12/28/2016	1963 First WindSurf Board	<a href="http://CisePhysics.homestead.com/files/FirstWindSurfBoard1963.pdf">http://CisePhysics.homestead.com/files/FirstWindSurfBoard1963.pdf</a>	F(net) = m a	
		1/4/2017	Friction down, skier speed +	<a href="http://CisePhysics.homestead.com/files/TuckREducesFriction.pdf">http://CisePhysics.homestead.com/files/TuckREducesFriction.pdf</a>	FBD , F=ma	
		1/4/2017	Surfing 78 ft. high wave	<a href="http://CisePhysics.homestead.com/files/Surfing78ftWave.pdf">http://CisePhysics.homestead.com/files/Surfing78ftWave.pdf</a>	FBD , F=ma	
		1/24/2017	Best way to fall: small F	<a href="http://CisePhysics.homestead.com/files/FallTheRightWay.pdf">http://CisePhysics.homestead.com/files/FallTheRightWay.pdf</a>	FBD , F=ma	
		8/31/2018	Football Concussion force	<a href="http://CisePhysics.homestead.com/files/FootballConcussions2018.pdf">http://CisePhysics.homestead.com/files/FootballConcussions2018.pdf</a>	F(net) = m a	
	<b>OTHER</b>	1/12/2005	Sub Hits Mt. at 35 mph.	<a href="http://CisePhysics.homestead.com/files/SubHitsMtat35mph.pdf">http://CisePhysics.homestead.com/files/SubHitsMtat35mph.pdf</a>	FBD , F=ma	
		6/14/2018	Personal Flying Machine	<a href="http://CisePhysics.homestead.com/files/PersonalFlying.pdf">http://CisePhysics.homestead.com/files/PersonalFlying.pdf</a>	FBD , F=ma	
<b>GRAVITY &amp; KINEMATICS</b>	<b>ASTRONOMY/SPACE</b>	11/14/2016	Landing on Comet 67P	<a href="http://CisePhysics.homestead.com/files/67PLanding.pdf">http://CisePhysics.homestead.com/files/67PLanding.pdf</a>		<b>GRAVITY &amp; KINEMATICS</b>
		9/6/2016	Asteroid Bennu: 7 yr. trip	<a href="http://CisePhysics.homestead.com/files/AsteroidBennu.pdf">http://CisePhysics.homestead.com/files/AsteroidBennu.pdf</a>	$g = G M/R^2$	
6		1/6/2017	Going to Metal Asteroid	<a href="http://CisePhysics.homestead.com/files/GoingToMetalAsteroid.pdf">http://CisePhysics.homestead.com/files/GoingToMetalAsteroid.pdf</a>	$g = G M/R^2$	
		3/10/2017	Saturn Keeler Encke Gaps	<a href="http://CisePhysics.homestead.com/files/SaturnKeelerEnckeGaps.pdf">http://CisePhysics.homestead.com/files/SaturnKeelerEnckeGaps.pdf</a>	$F = G mM/R^2$	
		7/8/2017	Tsunami Quake Changes g	<a href="http://CisePhysics.homestead.com/files/GravityChange04Tsunami.pdf">http://CisePhysics.homestead.com/files/GravityChange04Tsunami.pdf</a>	$W = m g$	

	<b>ECLIPSE</b>	7/31/2017	Sun's gravity deflects light	<a href="http://CisePhysics.homestead.com/files/EinsteinLightBendingProof.pdf">http://CisePhysics.homestead.com/files/EinsteinLightBendingProof.pdf</a>	$\alpha=4GM/c^2R$	
		9/22/2017	Osiris-Rex Earth deflected	<a href="http://CisePhysics.homestead.com/files/OsirisRexEarthDeflected.pdf">http://CisePhysics.homestead.com/files/OsirisRexEarthDeflected.pdf</a>	$F = GmM/r^2$	
		6/20/2018	Japanese craft on Asteroid	<a href="http://CisePhysics.homestead.com/files/Hayabusa2ToRyugu.pdf">http://CisePhysics.homestead.com/files/Hayabusa2ToRyugu.pdf</a>	$g=GM/R^2$	
	<b>SPORTS</b>	5/24/2019	11 Mt. Everest climbers die	<a href="http://CisePhysics.homestead.com/files/EverestDeaths.pdf">http://CisePhysics.homestead.com/files/EverestDeaths.pdf</a>	$U = mgh$	
<b>CENTRIPETAL FORCE</b>	<b>ASTRONOMY/SPACE</b>	1/21/2016	Ninth Planet found:Kepler	<a href="http://CisePhysics.homestead.com/files/NinthPlanet.pdf">http://CisePhysics.homestead.com/files/NinthPlanet.pdf</a>	Kepler's 3rd	<b>CENTRIPETAL FORCE</b>
		2/12/2016	BlackHoles make Gravity Waves	<a href="http://CisePhysics.homestead.com/files/GravitationalWaves.pdf">http://CisePhysics.homestead.com/files/GravitationalWaves.pdf</a>		
		5/13/2015	Train on turn goes off track	<a href="http://CisePhysics.homestead.com/files/TrainOffTracksOnCurve.pdf">http://CisePhysics.homestead.com/files/TrainOffTracksOnCurve.pdf</a>	$m v^2/r$	
		12/4/2015	Toyota 3 wheel personal car	<a href="http://CisePhysics.homestead.com/files/TyotaiRoad.pdf">http://CisePhysics.homestead.com/files/TyotaiRoad.pdf</a>	$m v^2/r$	
		3/15/2016	22,000 mi. high solar Obser.	<a href="http://CisePhysics.homestead.com/files/SolarDynamicObservatory.pdf">http://CisePhysics.homestead.com/files/SolarDynamicObservatory.pdf</a>		
		6/28/2016	Juno circles Jupiter 37 orbits	<a href="http://CisePhysics.homestead.com/files/Juno2017.pdf">http://CisePhysics.homestead.com/files/Juno2017.pdf</a>	Kepler's 3rd	
		7/7/2016	Exoplanet with 3 suns	<a href="http://CisePhysics.homestead.com/files/PlanetWith3Suns.pdf">http://CisePhysics.homestead.com/files/PlanetWith3Suns.pdf</a>	Kepler's 3rd	
		12/9/2015	Japan probe orbits Venus	<a href="http://CisePhysics.homestead.com/files/JapaneseSpaceProbeVenus.pdf">http://CisePhysics.homestead.com/files/JapaneseSpaceProbeVenus.pdf</a>	Kepler's 3rd	
		7/13/2016	New Dwarf Planet RR245	<a href="http://CisePhysics.homestead.com/files/DwarfPlanetRR245.pdf">http://CisePhysics.homestead.com/files/DwarfPlanetRR245.pdf</a>	Kepler's 3rd	
		8/4/2016	Geosynchronous Satellite	<a href="http://CisePhysics.homestead.com/files/MoonRobot_22236Satellite.pdf">http://CisePhysics.homestead.com/files/MoonRobot_22236Satellite.pdf</a>	$GmM/R^2 = mV^2/R$	
		8/24/2016	Planet: 4.3 lt. yrs from earth	<a href="http://CisePhysics.homestead.com/files/Proximab.pdf">http://CisePhysics.homestead.com/files/Proximab.pdf</a>	$GmM/R^2 = mV^2/R$	
		8/16/2016	China's Quantum Satellite	<a href="http://CisePhysics.homestead.com/files/QuantumSatellite.pdf">http://CisePhysics.homestead.com/files/QuantumSatellite.pdf</a>	Kepler's 3rd	
		9/6/2016	Asteroid Benu: 7 yr. trip	<a href="http://CisePhysics.homestead.com/files/AsteroidBenu.pdf">http://CisePhysics.homestead.com/files/AsteroidBenu.pdf</a>	$GmM/R^2 = mV^2/R$	
		9/9/2016	FreddieMercury Asteroid	<a href="http://CisePhysics.homestead.com/files/FreddieMercuryAsteroid.pdf">http://CisePhysics.homestead.com/files/FreddieMercuryAsteroid.pdf</a>		
		9/15/2016	Pluto's moon Charon orbit v	<a href="http://CisePhysics.homestead.com/files/CharonPlutoMoon.pdf">http://CisePhysics.homestead.com/files/CharonPlutoMoon.pdf</a>		
		9/27/2016	Rosetta Spacecraft ends on 67P	<a href="http://CisePhysics.homestead.com/files/RosettaSpacecraftEndsOn67P.pdf">http://CisePhysics.homestead.com/files/RosettaSpacecraftEndsOn67P.pdf</a>		
		10/13/2016	Huge exoplanet 400 lt. yrs away	<a href="http://CisePhysics.homestead.com/files/Exoplanetj1407b.pdf">http://CisePhysics.homestead.com/files/Exoplanetj1407b.pdf</a>		
		10/20/2016	Planet # 9 Possibly found	<a href="http://CisePhysics.homestead.com/files/PlanetNinePossibly.pdf">http://CisePhysics.homestead.com/files/PlanetNinePossibly.pdf</a>		
		10/28/2016	New Horizons to Kuiper Belt	<a href="http://CisePhysics.homestead.com/files/MU69in2020.pdf">http://CisePhysics.homestead.com/files/MU69in2020.pdf</a>		
		10/19/2016	Juno Spacecraft 53 day orbit	<a href="http://CisePhysics.homestead.com/files/Juno53DayPeriod.pdf">http://CisePhysics.homestead.com/files/Juno53DayPeriod.pdf</a>	<b>KEPLER: 1571 - 1630</b>	
		11/21/2016	Jack Weeb Tele. At L-2	<a href="http://CisePhysics.homestead.com/files/JackWebb.pdf">http://CisePhysics.homestead.com/files/JackWebb.pdf</a>	$F = m v^2/R$	
		12/27/2016	Dark Matter Discoverer	<a href="http://CisePhysics.homestead.com/files/DarkMatterDiscoverer.pdf">http://CisePhysics.homestead.com/files/DarkMatterDiscoverer.pdf</a>	$F = m v^2/R$	
		2/11/2016	First Gravity Waves	<a href="http://CisePhysics.homestead.com/files/FirstGravityWaves.pdf">http://CisePhysics.homestead.com/files/FirstGravityWaves.pdf</a>	$F = m v^2/R$	
		8/28/2015	Jupiter mass: from Europa	<a href="http://CisePhysics.homestead.com/files/EuropaJupiterMoon.pdf">http://CisePhysics.homestead.com/files/EuropaJupiterMoon.pdf</a>		

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	1/25/2017	Statory Orbit Satellite	<a href="http://CisePhysics.homestead.com/files/WeatherSatellite2017.pdf">http://CisePhysics.homestead.com/files/WeatherSatellite2017.pdf</a>		
	2/3/2017	1st. Geosynchronous Satellite	<a href="http://CisePhysics.homestead.com/files/FirstSyncomSatellite.pdf">http://CisePhysics.homestead.com/files/FirstSyncomSatellite.pdf</a>		
	2/9/2017	Comet 45P orbits Sun 5.25 yrs	<a href="http://CisePhysics.homestead.com/files/Comet45P2017.pdf">http://CisePhysics.homestead.com/files/Comet45P2017.pdf</a>		
	2/22/2017	40 Lt Yrs.: Trappist Star Planets	<a href="http://CisePhysics.homestead.com/files/TrappistStarPlanets.pdf">http://CisePhysics.homestead.com/files/TrappistStarPlanets.pdf</a>		
	3/10/2017	M(Saturn) from Pan moon	<a href="http://CisePhysics.homestead.com/files/SaturnMoonsPanDaphnis.pdf">http://CisePhysics.homestead.com/files/SaturnMoonsPanDaphnis.pdf</a>	1473 -1543	
	9/10/2016	M(Sun) from Swift-Tuttle Comet	<a href="http://CisePhysics.homestead.com/files/PerseidsMeteorShower.pdf">http://CisePhysics.homestead.com/files/PerseidsMeteorShower.pdf</a>	$GmM/R^2 = mV^2/R$	
	7/13/2016	M(Sun) from New Dwarf Planet	<a href="http://CisePhysics.homestead.com/files/NewDwarfPlanet.pdf">http://CisePhysics.homestead.com/files/NewDwarfPlanet.pdf</a>	$GmM/R^2 = mV^2/R$	
	6/20/2017	M(Exoplanet) KOI-961	<a href="http://CisePhysics.homestead.com/files/EarthSizePlanets.pdf">http://CisePhysics.homestead.com/files/EarthSizePlanets.pdf</a>	$GmM/R^2 = mV^2/R$	
	5/26/2017	JUNO's Apogee Speed	<a href="http://CisePhysics.homestead.com/files/EqualAreasInEqualTimes.pdf">http://CisePhysics.homestead.com/files/EqualAreasInEqualTimes.pdf</a>	$A/t = A/t$	
	6/6/2006	Earth Mass from Moon R & T	<a href="http://CisePhysics.homestead.com/files/EarthMassUsingMoon.pdf">http://CisePhysics.homestead.com/files/EarthMassUsingMoon.pdf</a>	$GmM/R^2 = mV^2/R$	
	8/7/2017	Sun mass from MU69 orbit	<a href="http://CisePhysics.homestead.com/files/MU69Object.pdf">http://CisePhysics.homestead.com/files/MU69Object.pdf</a>	$GmM/R^2 = mV^2/R$	
	2/9/2017	Sun mass from comet 45P orbit	<a href="http://CisePhysics.homestead.com/files/Comet45P.pdf">http://CisePhysics.homestead.com/files/Comet45P.pdf</a>	$GmM/R^2 = mV^2/R$	
	8/18/2017	Eclipse Shadow speed: 1470 mph	<a href="http://CisePhysics.homestead.com/files/EclipseSpeedAug21_2017.pdf">http://CisePhysics.homestead.com/files/EclipseSpeedAug21_2017.pdf</a>	$v = [GM/R]^{\wedge}1/2$	
Great video here =	10/16/2017	Neutron Stars Crash = Grav.waves	<a href="http://CisePhysics.homestead.com/files/NeutronStarsCollide.pdf">http://CisePhysics.homestead.com/files/NeutronStarsCollide.pdf</a>	$M=(4\pi^2/G)(R^3/T^2)$	
	10/27/2017	Object from outside Solar System	<a href="http://CisePhysics.homestead.com/files/FromOutsideSolarSystem.pdf">http://CisePhysics.homestead.com/files/FromOutsideSolarSystem.pdf</a>	$v^2 = GM/R$	
	11/7/2017	Moon Mass: Gordon orbits Moon	<a href="http://CisePhysics.homestead.com/files/Apollo12_1969.pdf">http://CisePhysics.homestead.com/files/Apollo12_1969.pdf</a>	$M=(4\pi^2/G)(R^3/T^2)$	
	11/16/2017	11 ltyr from earth star: exoplanet	<a href="http://CisePhysics.homestead.com/files/NearbyPlanetRoss128.pdf">http://CisePhysics.homestead.com/files/NearbyPlanetRoss128.pdf</a>	$M=(4\pi^2/G)(R^3/T^2)$	
	12/12/2017	Tiny Moon circles MU69	<a href="http://CisePhysics.homestead.com/files/MU69TinyMoon.pdf">http://CisePhysics.homestead.com/files/MU69TinyMoon.pdf</a>	$M=(4\pi^2/G)(R^3/T^2)$	
	3/26/2018		<a href="http://CisePhysics.homestead.com/files/ChinaSpaceStationFalls.pdf">http://CisePhysics.homestead.com/files/ChinaSpaceStationFalls.pdf</a>	$M=(4\pi^2/G)(R^3/T^2)$	
	2/18/2018	Wfirst at L2 w Webb	<a href="http://CisePhysics.homestead.com/files/DarkEnergyFinder.pdf">http://CisePhysics.homestead.com/files/DarkEnergyFinder.pdf</a>	$GmM/R^2 = mV^2/R$	
	11/10/2011	Russian atempt to Mars	<a href="http://CisePhysics.homestead.com/files/RussiansToMars2011.pdf">http://CisePhysics.homestead.com/files/RussiansToMars2011.pdf</a>	$GmM/R^2 = mV^2/R$	
	11/22/2017	Chang: NYT Space writer	<a href="http://CisePhysics.homestead.com/files/ChangTheSpaceWriter.pdf">http://CisePhysics.homestead.com/files/ChangTheSpaceWriter.pdf</a>	$GmM/R^2 = mV^2/R$	
7.10	SPACEX FALCON 9	4/16/2018	Tess: Finding exoplanets	<a href="http://CisePhysics.homestead.com/files/TessApril2018.pdf">http://CisePhysics.homestead.com/files/TessApril2018.pdf</a>	$GmM/R^2 = mV^2/R$
7.11	Solution Example	4/16/2018	Tess: Finding exoplanets	<a href="http://CisePhysics.homestead.com/files/TessApril20182.pdf">http://CisePhysics.homestead.com/files/TessApril20182.pdf</a>	$GmM/R^2 = mV^2/R$
		5/10/2018	Asteroid 2004EW95: Sun Mass	<a href="http://CisePhysics.homestead.com/files/Asteroid2004EW95.pdf">http://CisePhysics.homestead.com/files/Asteroid2004EW95.pdf</a>	$GmM/R^2 = mV^2/R$
		5/21/2018	Captured Asteroid 2015 BZ509	<a href="http://CisePhysics.homestead.com/files/AsteroidRetrogradeOrbit.pdf">http://CisePhysics.homestead.com/files/AsteroidRetrogradeOrbit.pdf</a>	$GmM/R^2 = mV^2/R$
		7/5/2018	SUM:7% LESS SOLAR INTENSITY	<a href="http://CisePhysics.homestead.com/files/EarthSunDistanceBiggest.pdf">http://CisePhysics.homestead.com/files/EarthSunDistanceBiggest.pdf</a>	$I \sim 1/R^2$
		12/4/2018	Osiris-Rex Bennu Arrival 2019	<a href="http://CisePhysics.homestead.com/files/BennuArrival2019.pdf">http://CisePhysics.homestead.com/files/BennuArrival2019.pdf</a>	$GmM/R^2 = mV^2/R$
		12/31/2018	Mother of Hubble Telescope	<a href="http://CisePhysics.homestead.com/files/HubbleMother.pdf">http://CisePhysics.homestead.com/files/HubbleMother.pdf</a>	$GmM/R^2 = mV^2/R$
		12/31/2018	Outside Kuiper Belt: Sedna	<a href="http://CisePhysics.homestead.com/files/OutsideKuiperBelt_SEDNA.pdf">http://CisePhysics.homestead.com/files/OutsideKuiperBelt_SEDNA.pdf</a>	$GmM/R^2 = mV^2/R$
		12/23/2017	First Space Walk 1984	<a href="http://CisePhysics.homestead.com/files/FirstSpaceWalk1984.pdf">http://CisePhysics.homestead.com/files/FirstSpaceWalk1984.pdf</a>	$GmM/R^2 = mV^2/R$




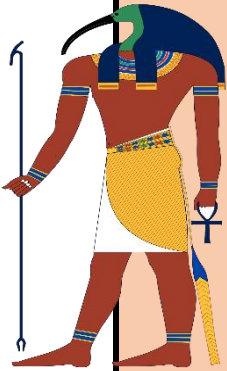

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	CHINA SPACE STATION	11/3/2011	China's own Space Station	<a href="http://CisePhysics.homestead.com/files/ChinaSpaceProgram.pdf">http://CisePhysics.homestead.com/files/ChinaSpaceProgram.pdf</a>	$GmM/R^2 = mV^2/R$	
	2025 to Titan/Saturn	6/27/2019	DragonFly Drone to Titan	<a href="http://CisePhysics.homestead.com/files/TitanExplored.pdf">http://CisePhysics.homestead.com/files/TitanExplored.pdf</a>	$M=(4\pi^2/G)(R^3/T^2)$	
	Exoplanet Sauron	6/14/2019	Exoplanet Sauron Confirmed	<a href="http://CisePhysics.homestead.com/files/ExoplanetHD17156bNOWSauron.r">http://CisePhysics.homestead.com/files/ExoplanetHD17156bNOWSauron.r</a>	$M=(4\pi^2/G)(R^3/T^2)$	
7.20	HEAVY FALCON 9	4/11/2019	Stationary Satellite @ 22,000 mi.	<a href="http://CisePhysics.homestead.com/files/FalconHeavyToGeosynchronousOr">http://CisePhysics.homestead.com/files/FalconHeavyToGeosynchronousOr</a>	$M=(4\pi^2/G)(R^3/T^2)$	
7.21	Solution Example	4/11/2019	Stationary Satellite @ 22,000 mi.	<a href="http://CisePhysics.homestead.com/files/FalconHeavyToGeosynchronousOrbit2.pdf">http://CisePhysics.homestead.com/files/FalconHeavyToGeosynchronousOrbit2.pdf</a>	$M=(4\pi^2/G)(R^3/T^2)$	
	POLITICS	4/10/2017	Calipso & A Train Satellites	<a href="http://CisePhysics.homestead.com/files/CalipsoAtmospherSatellite.pdf">http://CisePhysics.homestead.com/files/CalipsoAtmospherSatellite.pdf</a>	$GmM/R^2 = mV^2/R$	
	IRAN CENTRIFUGES	12/8/2017	Slinging Bullets (in Israel)	<a href="http://CisePhysics.homestead.com/files/PoliticalSling.pdf">http://CisePhysics.homestead.com/files/PoliticalSling.pdf</a>	$F(\text{net})=mv^2/R$	
		4/20/2018	Gaza Sling Shots	<a href="http://CisePhysics.homestead.com/files/GazaSlingShot.pdf">http://CisePhysics.homestead.com/files/GazaSlingShot.pdf</a>	$v = R \omega$	
		3/28/2019	India shoots own Satellite	<a href="http://CisePhysics.homestead.com/files/IndiaShootsDownOwnSatellite.pdf">http://CisePhysics.homestead.com/files/IndiaShootsDownOwnSatellite.pdf</a>	$GmM/R^2 = mV^2/R$	
		11/3/2011	U235 separation from 238	<a href="http://CisePhysics.homestead.com/files/U235Separation.pdf">http://CisePhysics.homestead.com/files/U235Separation.pdf</a>	$F=mv^2/R$	
	HISTORY	3/21/2018	Hawking/JJThomson e/m	<a href="http://CisePhysics.homestead.com/files/HawkingJJThomson.pdf">http://CisePhysics.homestead.com/files/HawkingJJThomson.pdf</a>	$F(\text{net})=mv^2/R$	
	SPORTS/DANCE	2/8/2016	Linsey Vonn Ski Turns	<a href="http://CisePhysics.homestead.com/files/SuperG2016.pdf">http://CisePhysics.homestead.com/files/SuperG2016.pdf</a>	$m v^2/r$	
		3/17/2016	Dancing in circles needs F Cent.	<a href="http://CisePhysics.homestead.com/files/PTaylorModernDance.pdf">http://CisePhysics.homestead.com/files/PTaylorModernDance.pdf</a>		
		1/27/2017	Snowboard Backflips & Spins	<a href="http://CisePhysics.homestead.com/files/Snowboard4Backflips.pdf">http://CisePhysics.homestead.com/files/Snowboard4Backflips.pdf</a>	$a = V^2/R$	
		1/27/2017	Same Length & mass Golf Clubs	<a href="http://CisePhysics.homestead.com/files/SameLengthGolfClubs.pdf">http://CisePhysics.homestead.com/files/SameLengthGolfClubs.pdf</a>	$a = V^2/R$	
		3/13/2017	Motorcycle TURN at 37 degrees	<a href="http://CisePhysics.homestead.com/files/MotorcycleTurn2.pdf">http://CisePhysics.homestead.com/files/MotorcycleTurn2.pdf</a>	$F = m v^2/R$	
		1/26/2017	Snowboarder does 5 spins	<a href="http://CisePhysics.homestead.com/files/Five360DegreeFlips.pdf">http://CisePhysics.homestead.com/files/Five360DegreeFlips.pdf</a>	$a = V^2/R$	
		12/20/2017	Shiffrin Wins GS Again	<a href="http://CisePhysics.homestead.com/files/ShiffrinWinsGS.pdf">http://CisePhysics.homestead.com/files/ShiffrinWinsGS.pdf</a>	$F = m v^2/R$	
		10/27/2017	Snow boarding sand dunes	<a href="http://CisePhysics.homestead.com/files/SandDuneSnowboard.pdf">http://CisePhysics.homestead.com/files/SandDuneSnowboard.pdf</a>	$F = m v^2/R$	
	Every Day Life	5/17/2017	Train takes turn too fast	<a href="http://CisePhysics.homestead.com/files/TrainTooFast.pdf">http://CisePhysics.homestead.com/files/TrainTooFast.pdf</a>	$F = m v^2/R$	
		12/18/2017	Another train: Fast turn	<a href="http://CisePhysics.homestead.com/files/TrainCrashOnTurn.pdf">http://CisePhysics.homestead.com/files/TrainCrashOnTurn.pdf</a>	$F = m v^2/R$	
		12/2/2013	MetroNorth turn too fast	<a href="http://CisePhysics.homestead.com/files/HudsonHarlemSharpTurn.pdf">http://CisePhysics.homestead.com/files/HudsonHarlemSharpTurn.pdf</a>	$F = m v^2/R$	
WORK-ENERGY- POWER:LINEAR	POLITICAL	1/15/2016	Rivers for power	<a href="http://CisePhysics.homestead.com/files/MoreWaterPower.pdf">http://CisePhysics.homestead.com/files/MoreWaterPower.pdf</a>	$P = m g h/t$	WORK-ENERGY
		3/3/2016	Tycoon crashes car into bridge	<a href="http://CisePhysics.homestead.com/files/TycoonCrash.pdf">http://CisePhysics.homestead.com/files/TycoonCrash.pdf</a>	$1/2mv^2=Fx$	POWER:LINEAR
8						
	AUTOMOTIVE	1/22/2016	Chevy Volt Electric Car	<a href="http://CisePhysics.homestead.com/files/Volt2016Efficient.pdf">http://CisePhysics.homestead.com/files/Volt2016Efficient.pdf</a>		
	car 2	1/29/2016	Jaguar XF 2016 Efficiency	<a href="http://CisePhysics.homestead.com/files/JaguarXF2016.pdf">http://CisePhysics.homestead.com/files/JaguarXF2016.pdf</a>		





WORK-ENERGY-  
POWER:LINEAR

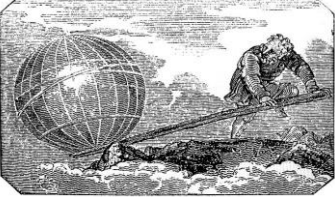
	1/5/2016	BMW 40e Electric Efficiency	<a href="http://CisePhysics.homestead.com/files/BMW40eEfficiency.pdf">http://CisePhysics.homestead.com/files/BMW40eEfficiency.pdf</a>	
car 5	2/12/2016	RCFLexus Efficiency 2016	<a href="http://CisePhysics.homestead.com/files/RCFLexus2016.pdf">http://CisePhysics.homestead.com/files/RCFLexus2016.pdf</a>	
	2/19/2016	Lincoln MKX Efficiency	<a href="http://CisePhysics.homestead.com/files/2016LincolnMKX.pdf">http://CisePhysics.homestead.com/files/2016LincolnMKX.pdf</a>	
	2/26/2016	Land Rover Diesel Turbo	<a href="http://CisePhysics.homestead.com/files/LandRoverSportTd6.pdf">http://CisePhysics.homestead.com/files/LandRoverSportTd6.pdf</a>	
	11/20/2016	Turbo Kia Optima 2016	<a href="http://CisePhysics.homestead.com/files/KiaOptima2016.pdf">http://CisePhysics.homestead.com/files/KiaOptima2016.pdf</a>	
	8/24/2014	Car Convertible to a Plane	<a href="http://CisePhysics.homestead.com/files/CarsFlying.pdf">http://CisePhysics.homestead.com/files/CarsFlying.pdf</a>	
car 10	12/4/2016	2016 Honda Pilot Efficiency	<a href="http://CisePhysics.homestead.com/files/HondaPilot2016.pdf">http://CisePhysics.homestead.com/files/HondaPilot2016.pdf</a>	
	3/15/2016	VW Golf 2015 Car of Year	<a href="http://CisePhysics.homestead.com/files/2015Golf.pdf">http://CisePhysics.homestead.com/files/2015Golf.pdf</a>	
	3/10/2016	Gal. gas burned = 25 lb. CO2	<a href="http://CisePhysics.homestead.com/files/CarEfficiencySlowing.pdf">http://CisePhysics.homestead.com/files/CarEfficiencySlowing.pdf</a>	
car 15	3/10/2016	BMW 750i xDrive Efficiency	<a href="http://CisePhysics.homestead.com/files/BMW750ixDrive.pdf">http://CisePhysics.homestead.com/files/BMW750ixDrive.pdf</a>	
	3/18/2016	Lexus RX350 2016 Efficiency	<a href="http://CisePhysics.homestead.com/files/LexusRX350.pdf">http://CisePhysics.homestead.com/files/LexusRX350.pdf</a>	
	3/25/2016	Honda Civic 2016 efficiency	<a href="http://CisePhysics.homestead.com/files/HondaCivic2016.pdf">http://CisePhysics.homestead.com/files/HondaCivic2016.pdf</a>	
	4/1/2016	Volvo XC90 T8 2016 efficiency	<a href="http://CisePhysics.homestead.com/files/VolvoXC90T8.pdf">http://CisePhysics.homestead.com/files/VolvoXC90T8.pdf</a>	
	4/15/2016	Porsche Macan 2016 efficiency	<a href="http://CisePhysics.homestead.com/files/MacanPorsche2016.pdf">http://CisePhysics.homestead.com/files/MacanPorsche2016.pdf</a>	
car 20	6/10/2016	Porsche 911 2017 efficiency	<a href="http://CisePhysics.homestead.com/files/2017Porsche911.pdf">http://CisePhysics.homestead.com/files/2017Porsche911.pdf</a>	
	6/24/2016	Lamborghini Huracan 580: 2017	<a href="http://CisePhysics.homestead.com/files/Huracan2017.pdf">http://CisePhysics.homestead.com/files/Huracan2017.pdf</a>	
	7/1/2016	Hyundai Sonata 2016 efficiency	<a href="http://CisePhysics.homestead.com/files/HyundaiSonata2016.pdf">http://CisePhysics.homestead.com/files/HyundaiSonata2016.pdf</a>	$K = 1/2 m v^2$
	8/5/2016	2016 Prius: ~ 53 % Efficient	<a href="http://CisePhysics.homestead.com/files/Prius2016.pdf">http://CisePhysics.homestead.com/files/Prius2016.pdf</a>	
	7/29/2016	503 HP Sporty Mercedes GTS	<a href="http://CisePhysics.homestead.com/files/MercedesAMG_GTS2016.pdf">http://CisePhysics.homestead.com/files/MercedesAMG_GTS2016.pdf</a>	
car 25	8/12/2016	661 HP Ferrari 488 GTB 2016	<a href="http://CisePhysics.homestead.com/files/Ferrari488GTB2016.pdf">http://CisePhysics.homestead.com/files/Ferrari488GTB2016.pdf</a>	$P = F v = C v^3$
	8/11/2016	2017 GM Acadia: 700 lb. less	<a href="http://CisePhysics.homestead.com/files/Acadia2017LessWeight.pdf">http://CisePhysics.homestead.com/files/Acadia2017LessWeight.pdf</a>	
	9/22/2016	Formula E (electric) New York	<a href="http://CisePhysics.homestead.com/files/FormulaE.pdf">http://CisePhysics.homestead.com/files/FormulaE.pdf</a>	$P = F x/t = p'V/t$
	7/30/2016	Died attempting > 300 mph	<a href="http://CisePhysics.homestead.com/files/motorcycleLandSpeedRecords.pdf">http://CisePhysics.homestead.com/files/motorcycleLandSpeedRecords.pdf</a>	
	10/13/2016	Variable Compression Engine	<a href="http://CisePhysics.homestead.com/files/VariableCompressionEngine.pdf">http://CisePhysics.homestead.com/files/VariableCompressionEngine.pdf</a>	
car 30	10/3/2016	McLaren 570GT: 562 HP	<a href="http://CisePhysics.homestead.com/files/McLaren570GT2017.pdf">http://CisePhysics.homestead.com/files/McLaren570GT2017.pdf</a>	
	11/11/2016	Buick Envision: 252 HP	<a href="http://CisePhysics.homestead.com/files/BuickEnvision2017.pdf">http://CisePhysics.homestead.com/files/BuickEnvision2017.pdf</a>	
	11/17/2016	Kia Cadenza 2017: 40 % eff	<a href="http://CisePhysics.homestead.com/files/Cadenza2017.pdf">http://CisePhysics.homestead.com/files/Cadenza2017.pdf</a>	
	10/28/2016	Ford Fusion Hybrid:48% ef	<a href="http://CisePhysics.homestead.com/files/FordFusionHybrid2017.pdf">http://CisePhysics.homestead.com/files/FordFusionHybrid2017.pdf</a>	
	12/9/2016	Buick LaCrosse 2017: 310 HP	<a href="http://CisePhysics.homestead.com/files/BuickLaCrosse2017.pdf">http://CisePhysics.homestead.com/files/BuickLaCrosse2017.pdf</a>	
	1/6/2017	Kia Soul Exclaim 2017: 40 %	<a href="http://CisePhysics.homestead.com/files/KiaSoulExclaim2017.pdf">http://CisePhysics.homestead.com/files/KiaSoulExclaim2017.pdf</a>	
	2/9/2017	2017 Porsche Panamera 550 HP	<a href="http://CisePhysics.homestead.com/files/PorschePanamera2017.pdf">http://CisePhysics.homestead.com/files/PorschePanamera2017.pdf</a>	

car 35	1/27/2017	2017 Honda CR-V: 190 HP	<a href="http://CisePhysics.homestead.com/files/HondaCRV2017.pdf">http://CisePhysics.homestead.com/files/HondaCRV2017.pdf</a>	Wolfgang Goethe			
	1/13/2017	2017 Volvo S90 Sedan	<a href="http://CisePhysics.homestead.com/files/VolvoS90.pdf">http://CisePhysics.homestead.com/files/VolvoS90.pdf</a>	1749 - 1832			
	3/31/2017	2017 NSX Acura Honda	<a href="http://CisePhysics.homestead.com/files/NSX573HP.pdf">http://CisePhysics.homestead.com/files/NSX573HP.pdf</a>	Knowing is not enough;			
	5/25/2017	2017 Cadillac CT6: 2Turbo	<a href="http://CisePhysics.homestead.com/files/CadillacCT6_2017.pdf">http://CisePhysics.homestead.com/files/CadillacCT6_2017.pdf</a>	We must apply,			
	6/9/2017	2017 Hyundai Ioniq: 50%	<a href="http://CisePhysics.homestead.com/files/HyundaiIoniq2017.pdf">http://CisePhysics.homestead.com/files/HyundaiIoniq2017.pdf</a>	Willing is not enough;			
	car 40	6/15/2017	2017 Chevy Diesel Silverado	<a href="http://CisePhysics.homestead.com/files/ChevySilveradoDiesel.pdf">http://CisePhysics.homestead.com/files/ChevySilveradoDiesel.pdf</a>	We must do.		
		6/23/2017	2017 Toyota Prius Prime Hybrid	<a href="http://CisePhysics.homestead.com/files/PriusPrimeHybrid.pdf">http://CisePhysics.homestead.com/files/PriusPrimeHybrid.pdf</a>			
		7/7/2017	2017 Volvo V90:	<a href="http://CisePhysics.homestead.com/files/VolvoV902017.pdf">http://CisePhysics.homestead.com/files/VolvoV902017.pdf</a>			
		6/30/2017	2017 Ferrari Lusso	<a href="http://CisePhysics.homestead.com/files/FerrariLusso2017.pdf">http://CisePhysics.homestead.com/files/FerrariLusso2017.pdf</a>			
	car 45	5/31/2018	No Plug in Cars: motion to emf	<a href="http://CisePhysics.homestead.com/files/NoPlugCars.pdf">http://CisePhysics.homestead.com/files/NoPlugCars.pdf</a>			
	HISTORICAL	4/23/2016	1792:Paterson NJ Great Falls	<a href="http://CisePhysics.homestead.com/files/PatersonGreatFalls.pdf">http://CisePhysics.homestead.com/files/PatersonGreatFalls.pdf</a>			
	WORK-ENERGY- POWER:LINEAR	ASTRONOMY/SPACE	4/17/2016	Hypersonic Glide Vehicle Weapon	<a href="http://CisePhysics.homestead.com/files/HypersonicGlideVehicle.pdf">http://CisePhysics.homestead.com/files/HypersonicGlideVehicle.pdf</a>		
			6/28/2016	Juno Apogee Speed & Energy	<a href="http://CisePhysics.homestead.com/files/JunoTotalEnergy.pdf">http://CisePhysics.homestead.com/files/JunoTotalEnergy.pdf</a>	U= -GmM/R	2425
		6/20/2016	Stratolaunch Plane 4 Rockets	<a href="http://CisePhysics.homestead.com/files/StratolaunchPlane2016.pdf">http://CisePhysics.homestead.com/files/StratolaunchPlane2016.pdf</a>	$f=1/2C_p A v^2$		
		10/15/2016	ESA Mars Lander: Oct. 2016	<a href="http://CisePhysics.homestead.com/files/EuropeanLandingOnMars.pdf">http://CisePhysics.homestead.com/files/EuropeanLandingOnMars.pdf</a>	$W = \Delta K + \Delta U$		
		10/18/2016	ESA Lander Thrusters: 10/19/16	<a href="http://CisePhysics.homestead.com/files/ESAMarsLanding.pdf">http://CisePhysics.homestead.com/files/ESAMarsLanding.pdf</a>	$W = \Delta K + \Delta U$		
		7/30/2014	Earth energy Transfers to moon	<a href="http://CisePhysics.homestead.com/files/MoonMomentumEnergy.pdf">http://CisePhysics.homestead.com/files/MoonMomentumEnergy.pdf</a>	$W = \Delta K + \Delta U$		
		11/17/2016	Asteroid Hit Yucatan 65 M yr ago	<a href="http://CisePhysics.homestead.com/files/AsteroidHitsYucatan65MyrsAgo.pdf">http://CisePhysics.homestead.com/files/AsteroidHitsYucatan65MyrsAgo.pdf</a>	$KE = 1/2 m v^2$		
		1/1/2017	3 sun mass = Grav. Wave Energy	<a href="http://CisePhysics.homestead.com/files/LIGOGravityWaves.pdf">http://CisePhysics.homestead.com/files/LIGOGravityWaves.pdf</a>	$E = m c^2$		
		9/16/2016	Bennu ASTEROID: "hit earth ?"	<a href="http://CisePhysics.homestead.com/files/NASAToAsteroidBennu.pdf">http://CisePhysics.homestead.com/files/NASAToAsteroidBennu.pdf</a>	$KE = 1/2 m v^2$		
		6/15/2016	2nd.Colliding Black Hole Waves	<a href="http://CisePhysics.homestead.com/files/SecondCollidingBlackHoles.pdf">http://CisePhysics.homestead.com/files/SecondCollidingBlackHoles.pdf</a>	$E = m c^2$		
		2/7/2017	600 lb. Meteor: v = 38,000 mph	<a href="http://CisePhysics.homestead.com/files/Meteor600lb38000mph.pdf">http://CisePhysics.homestead.com/files/Meteor600lb38000mph.pdf</a>	$KE = 1/2 m v^2$		
		5/3/2017	Cassini orbital Energy constant	<a href="http://CisePhysics.homestead.com/files/CassiniLastEllipticalOrbits.pdf">http://CisePhysics.homestead.com/files/CassiniLastEllipticalOrbits.pdf</a>	$E = U + K$		
		6/1/2017	2 Black Holes Collide: G. Wave	<a href="http://CisePhysics.homestead.com/files/ThirdBlackHoleSmashup.pdf">http://CisePhysics.homestead.com/files/ThirdBlackHoleSmashup.pdf</a>	$E=mc^2$		
		8/6/2017	40th anniversary:Voyager 1 & 2	<a href="http://CisePhysics.homestead.com/files/Voyagers1977_2017.pdf">http://CisePhysics.homestead.com/files/Voyagers1977_2017.pdf</a>	$v = [2GM/R]^{1/2}$		
		11/22/2017	Asteroid Onmuamua	<a href="http://CisePhysics.homestead.com/files/AsteroidOnmuamua.pdf">http://CisePhysics.homestead.com/files/AsteroidOnmuamua.pdf</a>	$KE = 1/2 m v^2$		
		6/23/2018	Asteroid Day:Hits earth	<a href="http://CisePhysics.homestead.com/files/AsteroidDay.pdf">http://CisePhysics.homestead.com/files/AsteroidDay.pdf</a>	$KE = 1/2 m v^2$		
	SPORTS/DANCE	3/20/2016	Leaping dancer's work + force	<a href="http://CisePhysics.homestead.com/files/DanceLeap.pdf">http://CisePhysics.homestead.com/files/DanceLeap.pdf</a>			

12/6/2015	Work & Power : Trek to N Pole	<a href="http://CisePhysics.homestead.com/files/TrekToNorthPole.pdf">http://CisePhysics.homestead.com/files/TrekToNorthPole.pdf</a>		
4/19/2016	Bike cheating: + 25 watts	<a href="http://CisePhysics.homestead.com/files/SecretBikeMotor.pdf">http://CisePhysics.homestead.com/files/SecretBikeMotor.pdf</a>		
10/7/2008	Football player leaps 6 ft.	<a href="http://CisePhysics.homestead.com/files/FootballLeaps.pdf">http://CisePhysics.homestead.com/files/FootballLeaps.pdf</a>		
7/30/2016	Skydiver survives 25 K fall	<a href="http://CisePhysics.homestead.com/files/SkydiverSurvivesFreeFall.pdf">http://CisePhysics.homestead.com/files/SkydiverSurvivesFreeFall.pdf</a>	$K + U = W$	
10/8/2016	82 mile Record swim	<a href="http://CisePhysics.homestead.com/files/SwimDistanceRecord.pdf">http://CisePhysics.homestead.com/files/SwimDistanceRecord.pdf</a>	$P = F v$	
12/8/2016	Paddleboard Atlantic 4600 mi.	<a href="http://CisePhysics.homestead.com/files/PaddleboardAtlantic4600miles.pdf">http://CisePhysics.homestead.com/files/PaddleboardAtlantic4600miles.pdf</a>	$P = F v$	
4/30/2016	<b>Weightlifting</b>	<a href="http://CisePhysics.homestead.com/files/WeightliftingChamp.pdf">http://CisePhysics.homestead.com/files/WeightliftingChamp.pdf</a>	$U = mgh$	
3/31/2017	<b>Shot-putt champ</b>	<a href="http://CisePhysics.homestead.com/files/ShotPutRecord75feet.pdf">http://CisePhysics.homestead.com/files/ShotPutRecord75feet.pdf</a>	$K + U = W$	
4/24/2017	<b>HS Pole-Vault:19 ft 4"</b>	<a href="http://CisePhysics.homestead.com/files/17yearOldPoleVault.pdf">http://CisePhysics.homestead.com/files/17yearOldPoleVault.pdf</a>	$K + U = W$	
5/17/2017	<b>HP to climb Everest</b>	<a href="http://CisePhysics.homestead.com/files/EverestHPtoClimb.pdf">http://CisePhysics.homestead.com/files/EverestHPtoClimb.pdf</a>	$P = W/t$	
6/6/2017	3000 ft. vertical climb:4 hrs	<a href="http://CisePhysics.homestead.com/files/ElCapitan3000ftIN4hrs.pdf">http://CisePhysics.homestead.com/files/ElCapitan3000ftIN4hrs.pdf</a>	$P = W/t$	
2/18/2014	9000 ft. Rainier climb: 3.5 hrs	<a href="http://CisePhysics.homestead.com/files/ChadKelloggSpeedClimber.pdf">http://CisePhysics.homestead.com/files/ChadKelloggSpeedClimber.pdf</a>	$P = W/t$	
11/9/2017	Bobsled Energy & friction	<a href="http://CisePhysics.homestead.com/files/BobsledEnergy.pdf">http://CisePhysics.homestead.com/files/BobsledEnergy.pdf</a>	$K + U = W$	
11/22/2017	Gold Med Weightlifter Power	<a href="http://CisePhysics.homestead.com/files/TurkMedalsCleanNJerk.pdf">http://CisePhysics.homestead.com/files/TurkMedalsCleanNJerk.pdf</a>	$P = W/t$	
12/1/2017	Power: Coconut Tree Climb	<a href="http://CisePhysics.homestead.com/files/CoconutTreeClimbing.pdf">http://CisePhysics.homestead.com/files/CoconutTreeClimbing.pdf</a>	$P = W/t$	
12/15/2017	<b>Record 27 ft. BMX AIR</b>	<a href="http://CisePhysics.homestead.com/files/27ftRecordBMXAir.pdf">http://CisePhysics.homestead.com/files/27ftRecordBMXAir.pdf</a>	$K + U = W$	
9/20/2011	<b>P up 2 percent v up 1</b>	<a href="http://CisePhysics.homestead.com/files/Pup2percentVup1Percent.pdf">http://CisePhysics.homestead.com/files/Pup2percentVup1Percent.pdf</a>	$P = W/t$	
4/16/2018	No Oxygen: Everest Top	<a href="http://CisePhysics.homestead.com/files/NoOxygenToEverestTop.pdf">http://CisePhysics.homestead.com/files/NoOxygenToEverestTop.pdf</a>	$P = W/t$	
6/8/2018	Falling down stairs Danger	<a href="http://CisePhysics.homestead.com/files/FallingDownStairsDanger.pdf">http://CisePhysics.homestead.com/files/FallingDownStairsDanger.pdf</a>	$U = m g h$	
6/22/2018	Lightweightlifter Champ	<a href="http://CisePhysics.homestead.com/files/Small123poundWeightLifter.pdf">http://CisePhysics.homestead.com/files/Small123poundWeightLifter.pdf</a>	$U = m g h$	
7/5/2018	Pole Vaulting Champ 2018	<a href="http://CisePhysics.homestead.com/files/VaulterKendricks2018.pdf">http://CisePhysics.homestead.com/files/VaulterKendricks2018.pdf</a>	$K \text{ to } U$	
<b>WORK-ENERGY- POWER:LINEAR</b>	<b>OTHER</b>			
	1/22/2016	Regenerative Electric Power	<a href="http://CisePhysics.homestead.com/files/SubwayElectricEnergy.pdf">http://CisePhysics.homestead.com/files/SubwayElectricEnergy.pdf</a>	$P = W/t$
	10/6/2014	2 HP plowing fields force	<a href="http://CisePhysics.homestead.com/files/TwoHorsePower.pdf">http://CisePhysics.homestead.com/files/TwoHorsePower.pdf</a>	$P = W/t = F x/t$
	3/27/2016	Power+Force: Ox,horse,man	<a href="http://CisePhysics.homestead.com/files/OxPower.pdf">http://CisePhysics.homestead.com/files/OxPower.pdf</a>	$P = F v$
	6/18/2016	NASA Electric Plane	<a href="http://CisePhysics.homestead.com/files/ElectricPlane.pdf">http://CisePhysics.homestead.com/files/ElectricPlane.pdf</a>	$P = F v$
	7/29/2016	Babies dropped 30 ft & OK	<a href="http://CisePhysics.homestead.com/files/BabiesPlunge30feet.pdf">http://CisePhysics.homestead.com/files/BabiesPlunge30feet.pdf</a>	$K = 1/2mv^2$
	8/6/2016	LHC(Geneva): 6.5 Tev protons	<a href="http://CisePhysics.homestead.com/files/7TrillionElectronVolts.pdf">http://CisePhysics.homestead.com/files/7TrillionElectronVolts.pdf</a>	$E = m C^2$
	3/28/2017	Fusion: Tritium + Deuterium	<a href="http://CisePhysics.homestead.com/files/Fusion2017.pdf">http://CisePhysics.homestead.com/files/Fusion2017.pdf</a>	$E = m C^2$
	6/19/2017	Higgs Boson mass in Kg.	<a href="http://CisePhysics.homestead.com/files/SuperSymmetryParticle.pdf">http://CisePhysics.homestead.com/files/SuperSymmetryParticle.pdf</a>	$E = m C^2$
	7/6/2017	New Particle:XiccPlusPlus	<a href="http://CisePhysics.homestead.com/files/DoubleCharmParticle.pdf">http://CisePhysics.homestead.com/files/DoubleCharmParticle.pdf</a>	$E = m C^2$

GUN BULLET ENERGY	6/30/2017	Gun Stunt Causes Death	<a href="http://CisePhysics.homestead.com/files/StuntCausesDeath.pdf">http://CisePhysics.homestead.com/files/StuntCausesDeath.pdf</a>	$K = 1/2mv^2$		
	9/5/2017	Hurricane Irma's Energy	<a href="http://CisePhysics.homestead.com/files/IrmaPath.pdf">http://CisePhysics.homestead.com/files/IrmaPath.pdf</a>	$K = 1/2mv^2$		
	11/10/2017	Michelangelo Bow Energy	<a href="http://CisePhysics.homestead.com/files/MichelangeloBowEnergy.pdf">http://CisePhysics.homestead.com/files/MichelangeloBowEnergy.pdf</a>	$1/2 mv^2 = 1/2kx^2$		
	HAMMER ENERGY	6/12/2019	Hammer Sparks: Cal. Fire	<a href="http://CisePhysics.homestead.com/files/HammerEnergyStartsFire.pdf">http://CisePhysics.homestead.com/files/HammerEnergyStartsFire.pdf</a>		$K = 1/2mv^2$
	LHC	12/25/2018	Large Hadron Collider Energy	<a href="http://CisePhysics.homestead.com/files/LHC2019Recess.pdf">http://CisePhysics.homestead.com/files/LHC2019Recess.pdf</a>		$E = m C^2$
	POLITICAL	6/17/2017	M16 Bullet speed & energy	<a href="http://CisePhysics.homestead.com/files/M16Energy.pdf">http://CisePhysics.homestead.com/files/M16Energy.pdf</a>		$K = 1/2mv^2$
		4/13/2018	Sling shots used to protest	<a href="http://CisePhysics.homestead.com/files/GazaSlingShots.pdf">http://CisePhysics.homestead.com/files/GazaSlingShots.pdf</a>		$W = \Delta K + \Delta U$
		5/28/2018	French Migrant Saves Child	<a href="http://CisePhysics.homestead.com/files/MigrantClimbsSavesChild.pdf">http://CisePhysics.homestead.com/files/MigrantClimbsSavesChild.pdf</a>		$U = W = m g h$
	6/8/2018	Trump in Singapore 2018	<a href="http://CisePhysics.homestead.com/files/TrumpInSingapore.pdf">http://CisePhysics.homestead.com/files/TrumpInSingapore.pdf</a>	$mgh = 1/2mv^2$		
	5/24/2019	Energy climbing Mt Everest	<a href="http://CisePhysics.homestead.com/files/EverestDeaths.pdf">http://CisePhysics.homestead.com/files/EverestDeaths.pdf</a>	$U = -GMm/R$		
HAVING FUN	6/19/2016	Highest Roller Coasters:2016	<a href="http://CisePhysics.homestead.com/files/RollerCoasters2016.pdf">http://CisePhysics.homestead.com/files/RollerCoasters2016.pdf</a>	$mgh = 1/2mv^2$		
	8/5/2016	531 ft. high observation tower	<a href="http://CisePhysics.homestead.com/files/i360Tower.pdf">http://CisePhysics.homestead.com/files/i360Tower.pdf</a>	$P = W/t$		
MOMENTUM: Linear	SPORTS	11/5/2017	Big Kick Legs = Long Kicks	<a href="http://CisePhysics.homestead.com/files/BigLegBigPunts.pdf">http://CisePhysics.homestead.com/files/BigLegBigPunts.pdf</a>	Mom. Conservation	
9						
STATICS	POLITICAL	2/26/2016	Jerusalem Wall Climbing	<a href="http://CisePhysics.homestead.com/files/ClimbWall.pdf">http://CisePhysics.homestead.com/files/ClimbWall.pdf</a>	$\Sigma F = 0$	STATICS
		4/7/2017	Russians Bosphorus Bridge	<a href="http://CisePhysics.homestead.com/files/RussianShipsToSyria.pdf">http://CisePhysics.homestead.com/files/RussianShipsToSyria.pdf</a>	$\Sigma F = 0$	
		4/19/2018	\$17 NYC Toll Bridge High	<a href="http://CisePhysics.homestead.com/files/NYCBridgeTollTooMuch.pdf">http://CisePhysics.homestead.com/files/NYCBridgeTollTooMuch.pdf</a>	$\Sigma F = 0$	
		5/4/2018	Gaza Kite weapon	<a href="http://CisePhysics.homestead.com/files/GazaKites2018.pdf">http://CisePhysics.homestead.com/files/GazaKites2018.pdf</a>	$\Sigma F = 0$	
		6/8/2018	More Gaza Kites	<a href="http://CisePhysics.homestead.com/files/GazaKites.pdf">http://CisePhysics.homestead.com/files/GazaKites.pdf</a>	$\Sigma F = 0$	
	ARTS & DANCE	3/21/2016	Dancers in Static Equilibrium	<a href="http://CisePhysics.homestead.com/files/WolfInTheRiver.pdf">http://CisePhysics.homestead.com/files/WolfInTheRiver.pdf</a>	$\Sigma F = 0$	
	Sports	9/10/2016	Best Wheelchair Wheel	<a href="http://CisePhysics.homestead.com/files/BestWheelchair.pdf">http://CisePhysics.homestead.com/files/BestWheelchair.pdf</a>	$\Sigma F = 0$	



	ARCHITECTURE	3/13/2016	Venetian Bridge at Rest	<a href="http://CisePhysics.homestead.com/files/VenetianBridge.pdf">http://CisePhysics.homestead.com/files/VenetianBridge.pdf</a>	$\Sigma F=0$	
		1/11/2017	Met Great Hall Arch	<a href="http://CisePhysics.homestead.com/files/TheMetGreatHall.pdf">http://CisePhysics.homestead.com/files/TheMetGreatHall.pdf</a>	$\Sigma F=0$	
		6/7/2017	Bridge to Statin Island	<a href="http://CisePhysics.homestead.com/files/NJBridgeConstruction.pdf">http://CisePhysics.homestead.com/files/NJBridgeConstruction.pdf</a>	$\Sigma F=0$	
		12/13/2017	St Louis Arch	<a href="http://CisePhysics.homestead.com/files/StLouisArch.pdf">http://CisePhysics.homestead.com/files/StLouisArch.pdf</a>	$\Sigma F=0$	
		9/6/2018	Genoa Bridge Collapse	<a href="http://CisePhysics.homestead.com/files/GenoaBridgeCollapse.pdf">http://CisePhysics.homestead.com/files/GenoaBridgeCollapse.pdf</a>	$\Sigma F=0$	
		8/30/2019	BrooklynQueens Bridge	<a href="http://CisePhysics.homestead.com/files/BrooklynQueensBridge.pdf">http://CisePhysics.homestead.com/files/BrooklynQueensBridge.pdf</a>	$\Sigma F=0$	
ROTATIONAL EQUILIBRIUM	SPORTS & DANCE	3/3/2016	Olymoic 49erFX sailboat	<a href="http://CisePhysics.homestead.com/files/49erFXsailboat.pdf">http://CisePhysics.homestead.com/files/49erFXsailboat.pdf</a>	$\Sigma T = 0$	ROTATIONAL EQUILIBRIUM
		6/17/2017	AC45 Americas Race 2017	<a href="http://CisePhysics.homestead.com/files/AmericasCup2017.pdf">http://CisePhysics.homestead.com/files/AmericasCup2017.pdf</a>	$\Sigma T = 0$	
11		11/19/2018	Big Apple Circus Equilibrium	<a href="http://CisePhysics.homestead.com/files/BigAppleEquilibrium.pdf">http://CisePhysics.homestead.com/files/BigAppleEquilibrium.pdf</a>		
		12/21/2018	Ballerina Equilibrium	<a href="http://CisePhysics.homestead.com/files/RavenWilkinsonBallerina.pdf">http://CisePhysics.homestead.com/files/RavenWilkinsonBallerina.pdf</a>		
		5/6/2016	AC45 Catamaran Hydrofoil	<a href="http://CisePhysics.homestead.com/files/AC45Catamaran.pdf">http://CisePhysics.homestead.com/files/AC45Catamaran.pdf</a>		
		4/15/2019	Suite For Five: Spring 2019	<a href="http://CisePhysics.homestead.com/files/SuiteForFive.pdf">http://CisePhysics.homestead.com/files/SuiteForFive.pdf</a>		
	Politics/Business	9/17/2016	Wells Fargo 100M Penalty	<a href="http://CisePhysics.homestead.com/files/WellsFargoScam.pdf">http://CisePhysics.homestead.com/files/WellsFargoScam.pdf</a>	$\Sigma T = 0$	Archimedes 287 - 212 BC
	PRIEST STATUE TOPPLED	5/10/2019	Polish protests	<a href="http://CisePhysics.homestead.com/files/PolishProtests.pdf">http://CisePhysics.homestead.com/files/PolishProtests.pdf</a>	$\Sigma T = 0$	
	OTHER	1/19/2016	Triple Beam Balance	<a href="http://CisePhysics.homestead.com/files/HotDogEquilibrium.pdf">http://CisePhysics.homestead.com/files/HotDogEquilibrium.pdf</a>		
		9/2/2016	Interesting Mobile	<a href="http://CisePhysics.homestead.com/files/AnbangInsurance.pdf">http://CisePhysics.homestead.com/files/AnbangInsurance.pdf</a>	$\Sigma T = 0$	
		7/30/2016	Mobile to Learn	<a href="http://CisePhysics.homestead.com/files/JustLetThemLearn.pdf">http://CisePhysics.homestead.com/files/JustLetThemLearn.pdf</a>	$\Sigma T = 0$	
	ART & Structures	12/23/2016	Suspended Sculptures	<a href="http://CisePhysics.homestead.com/files/SnelsonSculpture.pdf">http://CisePhysics.homestead.com/files/SnelsonSculpture.pdf</a>	$\Sigma T = 0$	
		1/12/2017	Sculpture in Equilibrium	<a href="http://CisePhysics.homestead.com/files/DowntownArtists.pdf">http://CisePhysics.homestead.com/files/DowntownArtists.pdf</a>	$\Sigma T = 0$	
		3/19/2017	Unique Art Table	<a href="http://CisePhysics.homestead.com/files/UniqueTable.pdf">http://CisePhysics.homestead.com/files/UniqueTable.pdf</a>	$\Sigma T = 0$	
		4/28/2017	New NYC "K" Bridge 2017	<a href="http://CisePhysics.homestead.com/files/NYCNNew2017Bridge.pdf">http://CisePhysics.homestead.com/files/NYCNNew2017Bridge.pdf</a>	$\Sigma T = 0$	
		3/16/2018	Fla. Bridge fall	<a href="http://CisePhysics.homestead.com/files/FlaBridgeFall.pdf">http://CisePhysics.homestead.com/files/FlaBridgeFall.pdf</a>	$\Sigma T = 0$	
	BIOLOGY	5/18/2017	T Rex Dinosaur bite: 7800 lb.	<a href="http://CisePhysics.homestead.com/files/DinosaurJaws.pdf">http://CisePhysics.homestead.com/files/DinosaurJaws.pdf</a>	$\Sigma T = 0$	

12	ROTATIONAL	BIOLOGY	10/6/2016	Nobel Prize: Nano machines	<a href="http://CisePhysics.homestead.com/files/NanoMachines.pdf">http://CisePhysics.homestead.com/files/NanoMachines.pdf</a>	$V = R \omega$	ROTATIONAL
	MOTION & DYNAMICS & ANGULAR MOMENTUM	SPORTS & DANCE	3/6/2016	Snowboarding Physics	<a href="http://CisePhysics.homestead.com/files/SnowboardingDecrease.pdf">http://CisePhysics.homestead.com/files/SnowboardingDecrease.pdf</a>	$I\omega = \text{constant}$	MOTION & DYNAMICS & ANGULAR MOMENTUM
			9/16/2015	Angular Mom. Con.: Dance	<a href="http://CisePhysics.homestead.com/files/StreetDancers.pdf">http://CisePhysics.homestead.com/files/StreetDancers.pdf</a>	$I\omega = \text{constant}$	
				4/5/2016	DeChambeau same clubs	<a href="http://CisePhysics.homestead.com/files/GolferDeChambeau.pdf">http://CisePhysics.homestead.com/files/GolferDeChambeau.pdf</a>	
				6/17/2016	Ballet Spinning Fouettes	<a href="http://CisePhysics.homestead.com/files/FouettesInBallet.pdf">http://CisePhysics.homestead.com/files/FouettesInBallet.pdf</a>	$I\omega = \text{constant}$
				4/4/2018	Tiger's club V: 130 mph	<a href="http://CisePhysics.homestead.com/files/Tiger2018.pdf">http://CisePhysics.homestead.com/files/Tiger2018.pdf</a>	$V = R \omega$
				11/7/2017	High wire big Moment Inertia	<a href="http://CisePhysics.homestead.com/files/WallendasAreBack.pdf">http://CisePhysics.homestead.com/files/WallendasAreBack.pdf</a>	$I = [1/12]mL^2$
POLITICS	5/25/2019	Farm Prices Fall: Trump Tariffs	<a href="http://CisePhysics.homestead.com/files/FarmPricesFallwithTrump.pdf">http://CisePhysics.homestead.com/files/FarmPricesFallwithTrump.pdf</a>	$V = R \omega$			
OTHER	8/18/2016	WIND Turbine Motion	<a href="http://CisePhysics.homestead.com/files/DanishWindTurbine.pdf">http://CisePhysics.homestead.com/files/DanishWindTurbine.pdf</a>	$V = R \omega$			
	4/23/2018	Windmills make electricity	<a href="http://CisePhysics.homestead.com/files/Windmills.pdf">http://CisePhysics.homestead.com/files/Windmills.pdf</a>	$K = 1/2 I \omega^2$			
	Astronomy/Space	7/30/2014	Earth Angular mom. to moon	<a href="http://CisePhysics.homestead.com/files/MoonMovesAway.pdf">http://CisePhysics.homestead.com/files/MoonMovesAway.pdf</a>	$I\omega = \text{constant}$		
		8/4/2017	Boca Chica Tx. SpacePort	<a href="http://CisePhysics.homestead.com/files/BocaChicaSpacePort.pdf">http://CisePhysics.homestead.com/files/BocaChicaSpacePort.pdf</a>	$V = R \omega$		
13	FLUIDS	POLITICAL	1/13/2016	Submarines	<a href="http://CisePhysics.homestead.com/files/AttackSub.pdf">http://CisePhysics.homestead.com/files/AttackSub.pdf</a>	Archimede	FLUIDS
			4/21/2016	Huge Russian subs: Murmansk	<a href="http://CisePhysics.homestead.com/files/MurmanskSubs.pdf">http://CisePhysics.homestead.com/files/MurmanskSubs.pdf</a>	Archimede	
			10/15/2016	Korean Balloons deliver North	<a href="http://CisePhysics.homestead.com/files/KoreanBalloonWar.pdf">http://CisePhysics.homestead.com/files/KoreanBalloonWar.pdf</a>	Archimede	
		GLOBAL WARMING	4/24/2016	Antarctica+Greenland melt:260'	<a href="http://CisePhysics.homestead.com/files/Possible260ftOceanRise.pdf">http://CisePhysics.homestead.com/files/Possible260ftOceanRise.pdf</a>	$\rho = m/V$	
			3/31/2016	W Antarctica Melts = + 12'	<a href="http://CisePhysics.homestead.com/files/WAISMelts.pdf">http://CisePhysics.homestead.com/files/WAISMelts.pdf</a>	$\rho = m/V$	
			4/21/2017	600 Icebergs 2017: Unusal	<a href="http://CisePhysics.homestead.com/files/IceBergsOnly10PercentSeen.pdf">http://CisePhysics.homestead.com/files/IceBergsOnly10PercentSeen.pdf</a>		
			9/15/2017	IRMA: Pressure = $1/v^2$	<a href="http://CisePhysics.homestead.com/files/IrmaHighSpeedLowPressure.pdf">http://CisePhysics.homestead.com/files/IrmaHighSpeedLowPressure.pdf</a>	Bernoulli	
			7/12/2017	Delaware size flat iceberg	<a href="http://CisePhysics.homestead.com/files/DelawareSizeIceberg.pdf">http://CisePhysics.homestead.com/files/DelawareSizeIceberg.pdf</a>	Archimede	
			4/20/2018	Greenland & Antarctica Melt	<a href="http://CisePhysics.homestead.com/files/WhenGreenlandMelts.pdf">http://CisePhysics.homestead.com/files/WhenGreenlandMelts.pdf</a>	$\rho = m/V$	
			6/14/2018	1992-2017:3 trill melt = 0.3"	<a href="http://CisePhysics.homestead.com/files/IceMeltingFast.pdf">http://CisePhysics.homestead.com/files/IceMeltingFast.pdf</a>	$\rho = m/V$	
		GEOLOGY	4/9/2017	18 TON Meteorite in China	<a href="http://CisePhysics.homestead.com/files/18TonMeteoriteChina.pdf">http://CisePhysics.homestead.com/files/18TonMeteoriteChina.pdf</a>	$\rho = m/V$	

	4/19/2018	Pressure 400 mi. in earth	<a href="http://CisePhysics.homestead.com/files/MeteoriteDiamonds.pdf">http://CisePhysics.homestead.com/files/MeteoriteDiamonds.pdf</a>	$P = \rho g h$
	6/7/2018	Pressure under 2000 ft ice	<a href="http://CisePhysics.homestead.com/files/NewYorkIceAge.pdf">http://CisePhysics.homestead.com/files/NewYorkIceAge.pdf</a>	$P = \rho g h$
	5/29/2018	740,000 psi: synth diamonds	<a href="http://CisePhysics.homestead.com/files/SyntheticDiamonds3.pdf">http://CisePhysics.homestead.com/files/SyntheticDiamonds3.pdf</a>	$P = \rho g h$
	8/15/2019	Diamonds made in Mantle	<a href="http://CisePhysics.homestead.com/files/GeologyDiamonds.pdf">http://CisePhysics.homestead.com/files/GeologyDiamonds.pdf</a>	$P = \rho g h$
AUTOMOTIVE	9/9/2016	Jaguar F-Pace SUV:Fording H2O	<a href="http://CisePhysics.homestead.com/files/JaguarFPace.pdf">http://CisePhysics.homestead.com/files/JaguarFPace.pdf</a>	Archimede
ASTRONOMY/SPACE	4/8/2016	Inflatable Space Module	<a href="http://CisePhysics.homestead.com/files/InflatableModule.pdf">http://CisePhysics.homestead.com/files/InflatableModule.pdf</a>	
	3/22/2016	Pluto H2O Ice floats on Nit.	<a href="http://CisePhysics.homestead.com/files/PlutosNitrogenAndH2oIce.pdf">http://CisePhysics.homestead.com/files/PlutosNitrogenAndH2oIce.pdf</a>	Archimede
	4/14/2017	Enceladus Plumes 7 mi. high	<a href="http://CisePhysics.homestead.com/files/EnceladusGeysers2017.pdf">http://CisePhysics.homestead.com/files/EnceladusGeysers2017.pdf</a>	Bernoulli
	4/30/2018	Mars Inside: Insight Spacecraft	<a href="http://CisePhysics.homestead.com/files/MarsInside.pdf">http://CisePhysics.homestead.com/files/MarsInside.pdf</a>	$\rho = m/V$
	5/11/2018	<b>Mars Helicopter</b>	<a href="http://CisePhysics.homestead.com/files/MarsCopter.pdf">http://CisePhysics.homestead.com/files/MarsCopter.pdf</a>	Bernoulli
<b>FLUIDS</b>				
BIOLOGY	7/1/2016	Frigatebirds: Large wings	<a href="http://CisePhysics.homestead.com/files/Frigatebirds.pdf">http://CisePhysics.homestead.com/files/Frigatebirds.pdf</a>	
	5/24/2017	Big Blue Whales:380,000 lb	<a href="http://CisePhysics.homestead.com/files/BigBlueWhales.pdf">http://CisePhysics.homestead.com/files/BigBlueWhales.pdf</a>	$\rho = m/V$
	6/9/2018	Pressure on fish:200 ft depth	<a href="http://CisePhysics.homestead.com/files/WaterPressureOnFish.pdf">http://CisePhysics.homestead.com/files/WaterPressureOnFish.pdf</a>	$P = \rho g h$
Aeronautical	7/28/2016	<b>Solar Impulse 2</b>	<a href="http://CisePhysics.homestead.com/files/SolarImpulse2.pdf">http://CisePhysics.homestead.com/files/SolarImpulse2.pdf</a>	
	6/21/2017	Planes need air density	<a href="http://CisePhysics.homestead.com/files/RecordHighTemperature.pdf">http://CisePhysics.homestead.com/files/RecordHighTemperature.pdf</a>	$1/2 C_p A V^2$
SPORTS	5/3/2016	DEEPEST FREE DIVE: 407 ft.	<a href="http://CisePhysics.homestead.com/files/FreeDive407feet.pdf">http://CisePhysics.homestead.com/files/FreeDive407feet.pdf</a>	$p = D h$
OTHER	7/31/2016	Hot Air Balloon Crash: Texas	<a href="http://CisePhysics.homestead.com/files/HotAirBalloonCrash.pdf">http://CisePhysics.homestead.com/files/HotAirBalloonCrash.pdf</a>	
	8/9/2016	<b>Huge ship pier Floats</b>	<a href="http://CisePhysics.homestead.com/files/Pier57Floats.pdf">http://CisePhysics.homestead.com/files/Pier57Floats.pdf</a>	$B = wt. H_2O$
	5/18/2017	N Mex Winning Balloonist Dies	<a href="http://CisePhysics.homestead.com/files/WinningBalloonistDies.pdf">http://CisePhysics.homestead.com/files/WinningBalloonistDies.pdf</a>	$B = wt. H_2O$
	9/16/2016	<b>Concrete Tombs Float</b>	<a href="http://CisePhysics.homestead.com/files/ConcreteTombsFloat.pdf">http://CisePhysics.homestead.com/files/ConcreteTombsFloat.pdf</a>	$B = wt. H_2O$
				<b>HEAT</b>
<b>HEAT</b>				
GLOBAL WARMING	1/18/2016	<b>Ocean Vol. Expansion</b>	<a href="http://CisePhysics.homestead.com/files/OceanRise.pdf">http://CisePhysics.homestead.com/files/OceanRise.pdf</a>	$\Delta V = \beta V \Delta t$
14	2/19/2016	China's Glaciers Melting	<a href="http://CisePhysics.homestead.com/files/ChinaIceMelts.pdf">http://CisePhysics.homestead.com/files/ChinaIceMelts.pdf</a>	
	7/9/2017	plus 1 C = sea Heat up 94	<a href="http://CisePhysics.homestead.com/files/CoralReefsDie.pdf">http://CisePhysics.homestead.com/files/CoralReefsDie.pdf</a>	
14.0	EXCELLENT application	1/19/2017	0.5 F 2013 16 = 400K Abombs/day	<a href="http://CisePhysics.homestead.com/files/HalfDegreeFWarmer.pdf">http://CisePhysics.homestead.com/files/HalfDegreeFWarmer.pdf</a>



14.11	EXAMPLE SOLUTION	1/19/2017	solution to above	<a href="http://CisePhysics.homestead.com/files/HalfDegreeFWarmer2.pdf">http://CisePhysics.homestead.com/files/HalfDegreeFWarmer2.pdf</a>		
		3/16/2018	Ulan Bator pollution 40F=40C	<a href="http://CisePhysics.homestead.com/files/UlanBator.pdf">http://CisePhysics.homestead.com/files/UlanBator.pdf</a>		
		5/17/2018	Arctic Ice is Less Thick	<a href="http://CisePhysics.homestead.com/files/ArcticHasLessOldIce.pdf">http://CisePhysics.homestead.com/files/ArcticHasLessOldIce.pdf</a>		
	BIOLOGY	5/4/2018	Bears can't sleep due to T	<a href="http://CisePhysics.homestead.com/files/Bear2018.pdf">http://CisePhysics.homestead.com/files/Bear2018.pdf</a>		
		4/18/2016	Middle ages ocean depth down	<a href="http://CisePhysics.homestead.com/files/OceansExpandingWithT.pdf">http://CisePhysics.homestead.com/files/OceansExpandingWithT.pdf</a>		Sadi Carnot 1796 - 1832
		9/4/2016	Oceans rise ~ 3.3 mm./yr.	<a href="http://CisePhysics.homestead.com/files/OceansRise.pdf">http://CisePhysics.homestead.com/files/OceansRise.pdf</a>		$\Delta V = \beta V \Delta t$
		9/15/2016	Oceans absorb 90% all heat	<a href="http://CisePhysics.homestead.com/files/OceansAbsorbHeat.pdf">http://CisePhysics.homestead.com/files/OceansAbsorbHeat.pdf</a>		$\Delta Q = cm \Delta t$
		12/4/2016	Oceans absorb 92 % global heat	<a href="http://CisePhysics.homestead.com/files/OceansHave92PercentHeat.pdf">http://CisePhysics.homestead.com/files/OceansHave92PercentHeat.pdf</a>		$\Delta Q = cm \Delta t$
		1/19/2017	0.027 C/3 years earth T increase	<a href="http://CisePhysics.homestead.com/files/HalfDegreeFWarmer.pdf">http://CisePhysics.homestead.com/files/HalfDegreeFWarmer.pdf</a>		$\Delta Q = cm \Delta t$
		3/23/2017	470,000 mi.^2 Less Arctic Ice	<a href="http://CisePhysics.homestead.com/files/LessArcticIce.pdf">http://CisePhysics.homestead.com/files/LessArcticIce.pdf</a>		$L = Q/m$
		4/26/2017	Tasmanian sea rise = 8 inch	<a href="http://CisePhysics.homestead.com/files/TasmanianOceanRise.pdf">http://CisePhysics.homestead.com/files/TasmanianOceanRise.pdf</a>		$\Delta V = \beta V \Delta t$
		3/23/2018	0.8 million sq. mi. less ice	<a href="http://CisePhysics.homestead.com/files/LessArcticIce2018.pdf">http://CisePhysics.homestead.com/files/LessArcticIce2018.pdf</a>		$L m = C m \Delta t$
	SPORTS	12/18/2016	Swimming in ice water	<a href="http://CisePhysics.homestead.com/files/IceSwimmers.pdf">http://CisePhysics.homestead.com/files/IceSwimmers.pdf</a>		$\Delta Q = cm \Delta t$
		12/6/2017	Making Bronze Trophy	<a href="http://CisePhysics.homestead.com/files/BronzeHeismanTrophy.pdf">http://CisePhysics.homestead.com/files/BronzeHeismanTrophy.pdf</a>		$\Delta Q = cm \Delta t$
	OTHER	1/1/2016	Cooling Servers with Ocean	<a href="http://CisePhysics.homestead.com/files/CoolingServers.pdf">http://CisePhysics.homestead.com/files/CoolingServers.pdf</a>		
		12/27/2016	Layered clothing = warmth	<a href="http://CisePhysics.homestead.com/files/LayersAndStayWarm.pdf">http://CisePhysics.homestead.com/files/LayersAndStayWarm.pdf</a>		$\Delta Q = cm \Delta t$
		9/21/2016	Absolute Zero Scientist Dies	<a href="http://CisePhysics.homestead.com/files/DrJinAbsoluteZero.pdf">http://CisePhysics.homestead.com/files/DrJinAbsoluteZero.pdf</a>		
		7/3/2017	Sticky Ice to Touch	<a href="http://CisePhysics.homestead.com/files/IceStickyToTouch.pdf">http://CisePhysics.homestead.com/files/IceStickyToTouch.pdf</a>		$\Delta Q = L m$
		9/14/2017	Wind Chill Temperature	<a href="http://CisePhysics.homestead.com/files/WindChillTemperature.pdf">http://CisePhysics.homestead.com/files/WindChillTemperature.pdf</a>		
						GAS LAW
	SPORTS	1/22/2016	Patriot's Deflategate Issue	<a href="http://CisePhysics.homestead.com/files/CoolingServers.pdf">http://CisePhysics.homestead.com/files/CoolingServers.pdf</a>		$PV = NkT$
	WAVES	1/13/2005	Quake waves (S): v = 3-4 km/s	<a href="http://CisePhysics.homestead.com/files/SQuakeWaves2005.pdf">http://CisePhysics.homestead.com/files/SQuakeWaves2005.pdf</a>		$X = V T$ WAVES
15		6/19/2018	San Francisco & Richter Scale	<a href="http://CisePhysics.homestead.com/files/SFEarthquakes.pdf">http://CisePhysics.homestead.com/files/SFEarthquakes.pdf</a>		$M(l) = \log. (l/l[0])$



Sadi Carnot  
1796 - 1832

$\Delta V = \beta V \Delta t$   
 $\Delta Q = cm \Delta t$   
 $\Delta Q = cm \Delta t$   
 $\Delta Q = cm \Delta t$   
 $\Delta Q = cm \Delta t$   
 $L = Q/m$   
 $\Delta V = \beta V \Delta t$   
 $L m = C m \Delta t$

GAS LAW

$PV = NkT$

$X = V T$

$M(l) = \log. (l/l[0])$

WAVES