Physics Day

Curriculum Matrix

	Goal 11: Understanding the processes of scientific Inquiry and technological design to investigate questions, conduct experiments, and solve problems.									Goal 12: Understand the fundamental concepts, principles and interconnections of the life, physical, and earth/space sciences.				Goal 13: Understand the relationships among sceince, technology, and society in historical and contemporary contexts.
	Know and apply the concepts, principles, and processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems									Know and apply concepts that describe properties of matter and energy, the interactions between them,; and describe force and motion and the principles that explain them.				Know and apply accepted practices of science.
	Middle School					High School				Middle School		High School		High School
Illinois Learning Standards Content Standards	**11.A.3a** Formulate hypotheses that can be tested by collecting data.	**11.A.3c** Collect and record data accurately using consistent measuring and recording techniques and media.	**11.A.3d** Explain the existence of unexpected results in a data set.	**11.A.3f** Interpret and represent results of analysis to produce findings.	**11.A.3g** Report and display the process and results of a scientific investigation.	**11.A.4a** Formulate hypotheses referencing prior research and knowledge.	**11.A.4c** Collect, organize and analyze data accurately and precisely.	**11.A.4d** Apply statistical methods to the data to reach and support conclusions.	**11.A.4f** Using available technology, report, display and defend to an audience conclusions drawn from investigations.	**12.C.3a** Explain interactions of energy with matter including changes of state and con¬servation of mass and energy.	**12.D.3a** Explain and demonstrate how forces affect motion (e.g., action/reaction, equilibrium conditions, free-falling objects).	**12.D.4a** Explain and predict motions in inertial and accelerated frames of reference.	**12.D.5a** Analyze factors that influence the relative motion of an object (e.g., friction, wind shear, cross currents, potential differences).	**13.A.4b** Assess the validity of scientific data by analyzing the results, sample set, sample size, similar previous experimentation, possible misrepresentation of data presented and potential sources of error.
Guide Activities														
Conscious Commuting	X	X		X	X	X	X		X			X	X	
American Eagle	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Batman, *The Ride*	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chubasco	X	X	X	X	X	X	X		X		X	X	X	X
Columbia Carousel	X	X	X	X	X	X	X		X		X	X	X	X
Demon	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Giant Drop	X	X	X	X	X	X	X	X	X		X		X	X
Hometown Fun Machine	X	X	X	X	X	X	X		X		X	X	X	X
Dark Knight/Ragin' Cajun	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Iron Wolf	X	X	X	X	X	X	X	X	X	X	X	X	X	X
King Chaos	X	X	X	X	X	X	X		X		X	X	X	X
Loggers Run	X	X	X	X	X	X	X	X	X	X	X	X	X	X
The Orbit	X	X	X	X	X	X	X		X		X	X	X	
Raging Bull	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Revolution	X	X	X	X	X	X	X		X		X	X	X	X
River Rocker	X	X	X	X	X	X	X		X		X	X	X	
Rue Le Dodge	X	X		X	X	X	X		X	X	X			X
Sky Trek Tower	X	X	X	X	X	X	X		X	X	X	X		X
Superman Ultimate Flight	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vertical Velocity	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Viper	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Whirligig	X	X	X	X	X	X	X		X		X	X	X	X
Whizzer	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mind Bogglers	X	X	X	X	X	X	X	X	X	X	X	X	X	X