

Wyoming Department of Education Required Virtual Education Course Syllabus

Park County School District # 1

Program Name	Park #1 Online	Content Area	Science
Course ID	OL5320	Grade Level	9th-12th
Course Name	FVS Physics I (S1)	# of Credits	0.5
SCED Code	03151G0.5012	Curriculum Type	Science

COURSE DESCRIPTION

Semester-long course purchased through Florida Virtual and used for our district students. In each module of Physics I, students discover the contributions of scientific geniuses like Galileo, Newton, and Einstein. Through their work, students learn the concepts, theories, and laws that govern the interaction of matter, energy, and forces. From tiny atoms to galaxies with millions of stars, the universal laws of physics are explained through real-world examples. Using laboratory activities, simulations, images, and interactive elements, students follow in the footsteps of some of the world's greatest thinkers.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
WY.1	Concepts and Processes
SC11.1	Earth and Space Systems, Geochemical Cycles
WY.2	Science as Inquiry
SC11.2	Students use research scientific information and present findings through appropriate means, Students use inquiry to conduct scientific investigations
WY.3	History and Nature of Science in Personal and Social Decisions
SC11.3	Students examine the nature and history of science, Students examine how scientific information is used to make decisions
WY.RST	Reading Standards for Literacy in Science and Technical Subjects
	Key Ideas and Details, Craft and Structure, Integration of Knowledge and Ideas, Range of Reading and Level of Text Complexity
WY.WHST	Writing Standards for Literacy in Science and Technical Subjects
	Text Types and Purposes, Production and Distribution of Writing, Research to Build and Present Knowledge, Range of Writing

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
01.02 Math Inventory	SC11.2 RST WHST	How do you take inventory?
01.03 Learning Styles Inventory	SC11.2 RST WHST	What are some different learning styles?
01.04 Petals Around a Rose	SC11.2 RST WHST	
01.05 TOLT Activity	SC11.2 RST WHST	
01.06 Introduction to Graphing	SC11.2 RST WHST	What is graphing?
01.07 Graphing Techniques	SC11.2 RST WHST	What are some graphing techniques?
01.08 Graphing Data	SC11.2 RST WHST	How do you graph data?
01.09 Exploring Graph Line Shapes	SC11.2 RST WHST	What are some graph line shapes?
01.10 Graphs and Equations	SC11.2 RST WHST	How do you use graphs and equations together?
01.11 Analyzing Your Graphs	SC11.2 RST WHST	How do you analyze a graph effectively?
01.12 Installing Graphical Analysis	SC11.2 RST WHST	How do you install graphical analysis?
01.13 Graphical Analysis Tutorial	SC11.2 RST WHST	
01.14 Using Graphical Analysis	SC11.2 RST WHST	How do you use graphical analysis?

01.15 Measurement	SC11.2 RST	What is measurement?
01.16 Measurement Tips	SC11.2 RST WHST	What are some measuring techniques?
01.17 Using the Vernier Caliper	SC11.2 RST WHST	How do you use the vernier caliper?
01.18 M&Ms® Lab	SC11.2 RST WHST	
01.19 Circle Lab	SC11.2 RST WHST	
01.20 Lab Tips	SC11.2 RST WHST	What are some lab tips?
01.21 Student Designed Lab	SC11.2 RST WHST	What does your lab look like?
01.22 Discussion-Based Assessment	SC11.2 RST WHST	
01.23 Student Lab Report	SC11.2 RST WHST	
02.01 Speed Tutorial	SC11.2 RST WHST	What is speed?
02.02 The Physics 400	SC11.2 RST WHST	What is the Physics 400?
02.03 Introduction to Speed Problems	SC11.2 RST WHST	What are some speed problems?
02.04 Problem-Solving Methods	SC11.2 RST WHST	What are some problem-solving methods?
02.05 Speed Problems	SC11.2 RST WHST	How do you calculate speed?
02.06 Introduction to Motion Graphs	SC11.2 RST WHST	What are motion graphs?
02.07 Exploring Our World in Motion	SC11.2 RST WHST	How is our world in motion?
02.08 Matching Motion Graphs	SC11.2 RST WHST	How do you match motion graphs?
02.09 Introduction to Scalar and Vector Quantities	SC11.2 RST WHST	What are vector and scalar quantities?
02.10 Exploring Scalar and Vector Quantities	SC11.2 RST WHST	How can you explore vector and scalar quantities?
02.11 Vectors Everywhere	SC11.2 RST WHST	Where are vectors?
02.12 Exploring Manipulation of Equations	SC11.2 RST WHST	How do you manipulate equations?
02.13 Helpful Hints for Manipulating Equations	SC11.2 RST WHST	What are some hints for manipulating equations?
02.14 Manipulating Equations	SC11.2 RST WHST	Can you manipulate equations?
02.15 What Do You Know About Velocity?	SC11.2 RST WHST	What do you know about velocity?
02.16 Introduction to Velocity	SC11.2 RST WHST	What is velocity?
02.17 Solving Velocity Problems?	SC11.2 RST WHST	How do you solve velocity problems?
02.18 Paul Hewitt's Linear Motion 2-1	SC11.2 RST WHST	What is Paul Hewitt's linear motion 2-1?
02.19 Exploring Acceleration	SC11.2 RST WHST	What is acceleration?
02.20 Acceleration Problems	SC11.2 RST WHST	What problems can occur with acceleration?
02.21 Acceleration Lab	SC11.2 RST WHST	
02.22 Another Look at Motion Graphs	SC11.2 RST WHST	What do you remember about motion graphs?

02.23 Motion Graph Tutorial	SC11.2 RST WHST	
02.24 The Graph Told Me!	SC11.2 RST WHST	What did the graph tell you?
02.25 Gravity and Discussion-Based Assessment	SC11.1 SC11.2 SC11.3 RST WHST	What is gravity?
02.26 Paul Hewitt's Free Fall 2-1	SC11.1 SC11.2 RST WHST	What is Paul Hewitt's free fall 2-1?
02.27 Free Fall Problems	SC11.1 SC11.2 RST WHST	What are some free fall problems?
02.28 The Law of Falling Bodies Lab	SC11.1 SC11.2 RST WHST	
03.01 Newton's 1st Law	SC11.1 SC11.2 SC11.3 RST WHST	What is Newton's 1st law?
03.02 Pulleys	SC11.1 SC11.2 RST WHST	What are pulleys?
03.03 Newton's Second Law	SC11.1 SC11.2 RST WHST	What is Newton's 2nd law?
03.04 Tutorial & Paul Hewitt's Concept Development 5-2	SC11.1 SC11.2 RST WHST	What is Paul Hewitt's concept development 5-2?
03.05 Newton's Second Law	SC11.1 SC11.2 RST WHST	What is Newton's 2nd law?
03.06 Newton's Third Law	SC11.1 SC11.2 RST WHST	What is Newton's 3rd law?
03.07 Tutorial & Paul Hewitt's Concept Development 6-1	SC11.1 SC11.2 RST WHST	What is Paul Hewitt's concept development 6-1?
03.08 Newton's Third Law Revisited	SC11.1 SC11.2 RST WHST	What is Newton's 3rd law?
03.09 Particle Accelerator and Fundamental Forces	SC11.1 SC11.2 SC11.3 RST WHST	What is a particle accelerator and fundamental forces?
03.10 Universal Gravitation and Coulomb's Law	SC11.1 SC11.2 RST WHST	What is universal gravitation and Coulomb's law?
03.11 Newton's Law of Universal Gravitation & Coulomb's Law	SC11.1 SC11.2 RST WHST	What relation do Newton's law of gravitation and Coulomb's law have?
03.12 Force Diagram Tutorial and Free Body	SC11.1 SC11.2 RST WHST	What is a force diagram and free body?
03.13 Force Diagrams	SC11.1 SC11.2 RST WHST	What are force diagrams?
03.14 Exploring Mass and Weight	SC11.1 SC11.2 RST WHST	What is mass and weight?
03.15 Mass and Weight Tutorial	SC11.1 SC11.2 RST WHST	
03.16 Discussion-Based Assessment	SC11.1 SC11.2 SC11.3 RST WHST	
03.17 A First Look at Uniform Circular Motion	SC11.1 SC11.2 RST WHST	What is uniform circular motion?
03.18 Uniform Circular Motion Tutorial	SC11.1 SC11.2 RST WHST	
03.19 Uniform Circular Motion Problems	SC11.1 SC11.2 RST WHST	What are some uniform circular motion problems?
03.20 Uniform Circular Motion Project	SC11.2 SC11.3 RST WHST	
03.21 Newton's Second Law Revisited	SC11.1 SC11.2 RST WHST	What is Newton's 2nd law?
03.22 Conservation of Momentum	SC11.1 SC11.2 RST WHST	What is momentum?

03.23 Conservation of Momentum Lab	SC11.1 SC11.2 RST WHST	
03.24 Angular Momentum Tutorial	SC11.1 SC11.2 RST WHST	What is angular momentum?
03.25 Conservation of Angular Momentum Lab	SC11.1 SC11.2 RST WHST	