



By Design

A Journey to Excellence through Science

Physical Science Units

Correlation to By Design Science and VictoryVR, a virtual reality supplemental resource.

Kendall Hunt
publishing company



Unit	Forces & Interactions	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Exp 1	Field Trip 1: San Francisco Street		C13L2-3/PSC10		C12L3-4	
Exp 2	Interactive: Simple Machines: Classify the Machine		C14L2-3/CSC13/PS14		C13L1-4	
Exp 3	Theatre 1: Forces in Motion	PS9	C14L2-3		C13L1-4	
Exp 4	Comic book: Isaac Newton				C12L3-4	
Exp 5	Teacher Demo: Wendy Martin-Game of Billiards		C13L2-3		C12L2-3, C14L2	
Unit	Synthetic Materials					
Exp 1	Field Trip 1: Football Field	C10L1		C11L1, C12L3		C11L1, C13L2
Exp 2	Interactive: [Escape Room]					
Exp 3	Theater 1: Surrounded by Synthetics	C10L1		C11L1, C12L3		C11L1, C13L2
Exp 4	Theatre 2: Thermal Energy		C11L2		C14L3-4	
Exp 5	Teacher Demo - Anatomizing with Wendy*			C11L1, C12L3		C11L1, C13L2
Unit	Waves					
Exp 1	Field Trip 1: Radio Telescope, North Liberty	C9L1	C12L5		C8L3, C11L1, L3	
Exp 2	Interactive: Boulder Roll					
Exp 3	Comic: Hedy Lamarr & Frequency Hopping		C12L1-2		C11L1, L3	
Exp 4	Theatre 2: Waves Are Everywhere		C12L1-3		C11L1, L3-4	
Exp 5	Teacher Demo: Waving With Wendy		C11L2-3, C12L1-2		C11L1, L3-4	

*could be used in a&p lesson



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Unit	Energy	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Exp 1	Field Trip : Stinson Beach, CA		C11L1		C11L2, C14L1-2	
Exp 2	Interactive: Word Search					
Exp 3	Movie Theatre 1: Transformation of Energy		C11L1, C14L1-2			
Exp 4	Movie Theatre 2: Electric & Gravitational Fields	C11L1-2	C12L1	C13L1-2, L4, C14L1-3	C14L1-2	
Exp 5	Teacher Demo: Kitchen Physics with Wendy	C11L1, L3	C11L1-3, C13L1	C13L1-4, C14L2-3	C14L1-2	C14L2-3
Unit	Molecular Interaction					
Exp 1	Field Trip: Backyard Bonfire	C10L5		C11L2, L4		C14L2
Exp 2	Interactive Exp: Boulder Roll					
Exp 3	Comic: Mario Molina	C10L1, L5	C8L1	C11L4, C12L1-2		C8L1, C9L14, C11L1, C12L1-2, C14L1-2
Exp 4	Journey Exp: When Molecules Meet	C10L5		C11L3-4		C13L1-3, C14L1-2
Exp 5	Teacher Demo: Flame Testing with Wendy		C11L2		C14L1-2, L4	C14L2-3
Unit	Properties of Matter					
Exp 1	Field Trip: Reed Gold Mine	C8L1, L3, C10L1		C7L1-3, C11L1-3, C12L1-2		C9L1-2, C11L1, C12L2-3
Exp 2	Interactive Game: [Racing for Answers]					
Exp 3	Movie Theater 1: Matter	C10L1-4		C11L1-4, C12L1-4		C11L1-3, C12L1-5, C13L1-3, C14L1-13
Exp 4	Comic: The First Lady of Physics			C12L1-2		
Exp 5	Teacher Demo: What's Matter? with Wendy	C10L1-2		C11L1-4		C11L1

KEY: C-Chapter, L-Lesson



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HS Unit	Structure & Properties of Matter	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Exp 1	Field Trip: Iowa 80 Trucking Museum	C10L1-5	C13L3, C14L1-3	C11L1-3, C12L2-3	C12L1-3	C11L1-2, C12L1-4
Exp 2	Interactive Trickybeard's Challenge					
Exp 3	Story 1: The Periodic Table of Elements (script)	C10L1-5		C12L1-3		C12L2-4
Exp 4	Story 2: Reality Glue	C10L1-5	C11L2	C11L1-4, C12L1-4, C13L1	C14L3	C12L1-4, C13L1-2, C14L1-3
Exp 5	Teacher Demo: Metals: Alkali Earth vs Alkali with Wendy	C10L5		C12L1-2		C12L1-3

KEY: C-Chapter, L-Lesson