Curriculum Map Template

Brian K. Wolff MASD HS VT / App. Physics (12th Grade)

Week	Unit Name (Topic)	Lesson	Objectives	Standards and Eligible Content	Resources	Assessments	Adaptations Modifications
1 2	Scientific Methods	Intro. to Physics	Understand and use: The Scientific Method Metric System Graphical Analysis	Explain the parts of a simple system and their relationships Identify patterns as repeating processes Explain scale as a way of relating concepts Identify change as a variable in describing natural systems Explain and apply scientific and technical knowledge Apply process knowledge to make and interpret observations Know & use technical design process to solve problems Describe safe & appropriate use of tools, materials & techniques Use appropriate instruments & apparatus to study materials	Teacher Created Power Points, Lesson Guides, Study Guides, Reviews, Quizzes and Tests	Class Discussion Topic Quizzes Chapter Test Topic Writings Activities / Lab	As Needed Per IEP or 504
3 4 5	Linear Motion	Distance & Time Velocity Acceleration	Scalar vs Vector quantities Distance vs Displacement Relativity of Time Velocity Vectors Acceleration Vectors	Describe the use of models as an application of science Identify & explain principles of force & motion Identify & use elements of scientific inquiry to solve problems Explain and apply scientific and technical knowledge Apply process knowledge to make and interpret observations			

				Know & use technical design process to solve problems			
6 7	**Newton's Laws**	Inertia F=ma Reaction pairs	Causes of change in motion Resistance Forces Interaction pairs Application of Laws of Motion	Explain and apply scientific and technical knowledge Apply process knowledge to make and interpret observations Know & use technical design process to solve problems Describe the use of models as an application of science Identify & explain principles of force & motion Identify & use elements of scientific inquiry to solve problems			
8 9 10	**Energy**	Forms of Energy E-M Spectrum KE vs PE Waves Sound	Energy as an agent of change Conservation of Energy	Identify & use elements of scientific inquiry to solve problems Identify & explain principles of force & motion Explain and apply scientific and technical knowledge Apply process knowledge to make and interpret observations Know & use technical design process to solve problems			
11 12	Heat	Temperature Thermal Energy Heat	Laws of Thermodynamics Entropy	Apply concepts of models as a method to predict and understand Science & Technology Assess and apply patterns in science Evaluate change in physical systems Apply the principles of motion & force			
13 14	Machines	Simple Machines Compound	6 types of Simple Machines Classes of Levers	Assess and apply patterns in science			

		Machines	Types of Pulleys Relationship between Inclined Planes, Wedges & Screws	Evaluate change in physical systems Apply the principles of motion & force Identify & use elements of scientific inquiry to solve problems Explain and apply scientific and technical knowledge			
15 16 17	States of Matter	S. L. G. P. Laws of State	Changes of state Molecular motion & energy levels Boules Law / Charles Law Archimedes Principle Bernoulli Effect	Assess and apply patterns in science Evaluate change in physical systems Apply the principles of motion & force Identify & use elements of scientific inquiry to solve problems Explain and apply scientific and technical knowledge Explain the parts of a simple system and their relationships Identify patterns as repeating processes			
18 19	Energy Sources	Fossil Fuels Nuclear Power Alternative Energy	Coal vs Oil formation & industrial uses Fission vs Fusion Solar, Aerogeneration & Hydropower Hydrogen Engines	Identify & use elements of scientific inquiry to solve problems Identify & explain principles of force & motion Explain and apply scientific and technical knowledge Apply process knowledge to make and interpret observations Know & use technical design process to solve problems			

***Big Idea page will be added**