

2019 Pacing Guide

Course: Science

Grade: 7

<u>Months/Days</u>	<u>UNITS</u>	<u>STANDARDS</u>	<u>CONTENT</u> Topics being covered? What do students need to know? (<i>nouns</i>)	<u>ACTIVITIES</u> w/Integration of Technology & Career Ready Practices	<u>ASSESSMENTS</u> What evidence (formative/summative) is utilized to establish that the content, standards, & skills have been mastered?
43 Days	Unit 1: Intro to Physical Science	6-8.MS-PS1-1 6-8.MS-PS1-1.2 SCI.6-8.MS-PS1-4.2.1 SCI.6-8.MS-PS4-1.1.1 SCI.6-8.MS-PS4-2.6.1	Physical Science Measurement Science Tools Lab Safety Scientific Method Engineering Design Process Qualitative / Quantitative Observations	Introduce vocabulary used to describe physical science -Create Quizlet of unit vocabulary terms. -Apply knowledge of physical science, the scientific method and the engineering design process to conduct lab experiments. -Analyze data collected from lab experiments and informational texts. -Use learned knowledge to predict the outcome of similar scenarios. -Determine whether results apply to all similar scenarios. -Predict misconceptions regarding related and advanced concepts -Guided Notes -Worksheets -Video Clips -Using science tools lab. -Liquid volume stations -Lab safety stations	-Warm-Up -Anticipatory Set -Closure -Graded HW assignments -Surveys -Lab safety quiz -Quizlet Live -Types of observations index card activity -MPA review game (Jeopardy / GimKit) -Metric conversion EdPuzzle -Legends of Learning -Qualitative / Quantitative EdPuzzle -Science Tools EdPuzzle -Qualitative / Quantitative worksheet -Scientific Method worksheet -Independent / dependent worksheet -Graded worksheets: Metric measurements -Benchmark -Marking Period Assessment -Alternate Assessment

				-Penny lab (water on a penny) -Popsicle bridge building lab -Bridge presentations -Chip lab activity -Educational Game: Legends of Learning -Current Event Essays -Post lab questions -Making observations: index card description activity -Measurements around the room lab -Graphing stations	-Monthly Current event -Graphing stations lab -Measurements around the room lab -Unit test: Physical science, lab safety, scientific method, science tools, engineering design process. -Bridge lab -Measurement stations using science tools. -Penny lab: water on a penny.
24 Days	Unit 2: Properties of Matter	6-8.MS-PS1 6-8.MS-PS1-1 6-8.MS-PS1-1.2 6-8.MS-PS1-1.2.1 6-8.MS-PS1-1.PS1.A 6-8.MS-PS1-1.PS1.A.1	Solid Liquid Gas Density Phase change Mass	• Introduce vocabulary used to describe matter • Create Quizlet of Unit Vocabulary Terms • Apply knowledge of matter and its properties to conduct lab experiments • Analyze data collected from lab experiments and informational text • Use learned knowledge to predict the outcome of similar scenarios • Determine whether results apply to all similar scenarios • Predict misconceptions regarding related and advanced concepts	-Warm-Up -Anticipatory Set -Closure -Classifying Matter Quiz -Physical vs Chemical Properties worksheet -Graded HW assignments -Surveys -Classifying Matter flowchart -Density Calculations worksheet -Separating Mixtures Worksheet -Chemical / Physical changes worksheet -States of matter EdPuzzle

				• Guided Notes • Worksheets • Video Clips • Classifying Matter Powerpoint Activity • Classifying Matter • Classifying Matter Flowchart • Separating Mixtures Lab: Water Filtration • Chemical and Physical Changes Lab • Density Practice Problems • Density Column Lab • Phase Change Demonstrations • "Monster Muck" • Pressure Demonstrations • Imploding Can Activity • Legends of Learning Educational Games • Current Event Essays • Post Lab Questions	-Quizlet Live -MPA review game (Jeopardy / GimKit) -Legends of Learning -Benchmark -Marking Period Assessment -Alternate Assessment -Matter Unit test -Density lab post lab questions -Classifying matter post lab questions -Physical and chemical changes post lab questions -Monthly Current event
40 Days	Unit 3: Atoms, Elements, Chemical Bonding and Chemical Reactions	6-8.MS-PS1-6.PS1.B.1 6-8.MS-PS1-5.PS1.B.2 6-8.MS-PS1-3.PS1.B.1 6-8.MS-PS1-1.PS1.A.1 6-8.MS-PS1-1.2.1 6-8.MS-PS1-1.2 6-8.MS-PS1-1	Atoms Molecules Compounds Mixtures/Solutions Atomic Bonding Conservation of mass	• Introduce vocabulary used to describe atoms • Create Quizlet of Unit Vocabulary Terms • Apply knowledge of atoms and their properties to conduct lab experiments • Analyze data collected from lab experiments and informational text • Use learned knowledge to predict the outcome of similar scenarios • Determine whether	-Warm-Up -Anticipatory Set -Closure -Atoms and bonding Quiz -Graded worksheets: Atomic Structure -Graded HW assignments -Surveys -Froot Loop building an atom worksheet -Atoms / Chemical reactions EdPuzzle -Quizlet Live

				results apply to all similar scenarios • Predict misconceptions regarding related and advanced concepts • Guided Notes • Worksheets • Video Clips • Classifying Candy Activity • Chemical Bonding Stations Honors Lab • Chemistry Online Scavenger Hunt • pHet build an atom • Chemical Reactions Lab • Gummy Bear Bonding Lab • Build an Atom Fruit Loop Activity • Element Project • Legends of Learning Educational Games • Chemical Reactions Demonstrations • Current Event Essays • Post Lab Questions • Law of Conservation of Mass Lab	-MPA review game (Jeopardy / GimKit) -Legends of Learning -Lewis Dot diagram worksheet -Whiteboard Bohr model activity -Benchmark -Marking Period Assessment -Alternate Assessment -Atoms / Chemical reactions Unit test -Element Project -Element Presentation -Chemical bonds with gummy bears lab -Monthly Current event -Chemical reactions post lab questions
46 Days	Unit 4: Force, Motion and Newton's Laws	6-8.MS-PS1 6-8.MS-PS1-1.2 6-8.MS-PS1-1.2.1 6-8.MS-PS1-1.PS1.A 6-8.MS-PS2-1.PS2.A.1 6-8.MS-PS2-2.3.1 6-8.MS-PS2-2.PS2.A.1 6-8.MS-PS2-2.PS2.A.2 6-8.MS-PS2-3.1.1	Force Friction Gravity Weight Newton's Laws Inertia Motion Speed Velocity	• Introduce vocabulary used to describe force, motion, and Newton's laws • Create Quizlet of Unit Vocabulary Terms • Apply knowledge of force, motion, and Newton's Laws and their	-Warm-Up -Anticipatory Set -Closure -Motion Quiz -Wolf Distance and Displacement worksheet -Calculating Net Force worksheet

		6-8.MS-PS2-4.PS2.B.1 6-8.MS-PS2-5.PS2.B.1 6-8.MS-PS3-1 6-8.MS-PS3-1.3.1 6-8.MS-PS3-1.4.1 6-8.MS-PS3-1.PS3.A.1 6-8.MS-PS3-2.PS3.A.1 6-8.MS-PS3-2.PS3.C.1 6-8.MS-PS3-3.6.1 6-8.MS-PS3-3.PS3.A.1	Acceleration Distance Displacement	properties to conduct lab experiments • Analyze data collected from lab experiments and informational text • Use learned knowledge to predict the outcome of similar scenarios • Determine whether results apply to all similar scenarios • Predict misconceptions regarding related and advanced concepts • Guided Notes • Worksheets • Video Clips • Bubble Gum Speed Lab • Speed and Velocity Lab • Acceleration Lab • Acceleration Lab Part 2: Graphing Data • Escape the room • Force and Motion Webquest • Graphing Wolf Motion Lab • The Kinematics of the NFL Video and Discussion • Friction Lab • Goosechase: Newton's Laws • Legends of Learning Educational Games • Current Event Essays • Newton's Laws Lab Stations • Newton's Laws Demonstrations	-Graded HW assignments -Calculating Speed and Velocity -Surveys -Calculating Acceleration worksheet -Creating and interpreting motion graphs -Motion EdPuzzle -Quizlet Live -MPA review game (Jeopardy / GimKit) -Legends of Learning -Force / Friction Quiz -Friction EdPuzzle -Benchmark 0x • Marking Period Assessment -Alternate Assessment -Force, Friction and Newtons Laws Unit test -Speed lab post lab questions -Monthly Current event -Acceleration lab post lab questions -Newtons Laws Lab Stations Post lab questions -Newtons Cradle Project -Rocket project
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				• Post Lab Questions • Constructing a Newton's Cradle • Constructing and Launching a Rocket • Rocket Launching Online Simulation • Gimkit / Kahoot • Informational Text: 4 Forces on a Rocket	
16 Days	Unit 5: Waves, Energy, Magnets and Circuits	6-8.MS-PS1 6-8.MS-PS1-1.2 6-8.MS-PS1-1.2.1 6-8.MS-PS1-1.PS1.A 6-8.MS-PS3-1.PS3.A.1 6-8.MS-PS3-2.PS3.A.1 6-8.MS-PS3-2.PS3.C 6-8.MS-PS3-2.PS3.C.1 6-8.MS-PS3-3.5.1 6-8.MS-PS3-3.PS3.B.1 6-8.MS-PS3-4.PS3.A.1 6-8.MS-PS3-4.PS3.B.1 6-8.MS-PS3-5.5.1 6-8.MS-PS3-5.PS3.B.1 6-8.MS-PS4 6-8.MS-PS4-1 6-8.MS-PS4-1.PS4.A.1 6-8.MS-PS4-2 6-8.MS-PS4-2.PS4.A.1 6-8.MS-PS4-2.PS4.B.1 6-8.MS-PS4-2.PS4.B.2 6-8.MS-PS4-2.PS4.B.3 6-8.MS-PS4-2.PS4.B.4 6-8.MS-PS4-3.8.1 6-8.MS-PS4-3.PS4.C.1	Work Power Energy Waves Electromagnetic magnetism Electricity Circuits Amplitude Frequency Wavelength Pitch Circuits Kinetic/Potential energy Thermal energy Law of Conservation of Energy	• Introduce vocabulary used to describe Work, power, energy, and waves • Create Quizlet of Unit Vocabulary Terms • Apply knowledge of energy and waves and their properties to conduct lab experiments • Analyze data collected from lab experiments and informational text • Use learned knowledge to predict the outcome of similar scenarios • Determine whether results apply to all similar scenarios • Predict misconceptions regarding related and advanced concepts • Guided Notes • Worksheets • Video Clips • Ice Cream Lab • Circuits Webquest • Hearing Test Demonstration	-Warm-Up -Anticipatory Set -Closure -Waves EdPuzzle -Light and Color EdPuzzle -Graded HW assignments -Surveys -Potential / Kinetic Energy Worksheet -Labeling a wave worksheet -Quizlet Live -Doodle-notes: Waves and light -MPA review game (Jeopardy / GimKit) -Legends of Learning -Benchmark -Marking Period Assessment -Alternate Assessment -Ice Cream lab post lab questions -Monthly Current event -Circuits WebQuest

				• Light and Wave Demonstrations • Legends of Learning Educational Games • Current Event Essays • Post Lab Questions • Gimkit / Kahoot	
11 Days	Unit 6: Astronomy	6-8.MS-PS1 6-8.MS-PS1-1.2 6-8.MS-PS1-1.2.1 6-8.MS-PS1-1.PS1.A.1	Big Bang Theory Universe Solar System Galaxy Planets Milkyway Stars Moon Phases	• Introduce vocabulary used to describe the universe • Create Quizlet of Unit Vocabulary Terms • Apply knowledge of the universe and its properties to conduct space gallery walk • Analyze data collected from lab experiments and informational text • Use learned knowledge to predict the outcome of similar scenarios • Determine whether results apply to all similar scenarios • Predict misconceptions regarding related and advanced concepts • Guided Notes • Worksheets • Video Clips • PlanetARY app • Moon Phases Oreo Lab • Field Trip to Rowan Planetarium • Legends of Learning Educational Games • Current Event Essays	-Warm-Up -Anticipatory Set -Closure -Graded HW assignments -Surveys -Netflix Documentary: One Strange Rock video questions -Phases of the moon worksheet -Quizlet Live -MPA review game (Jeopardy / GimKit) -Legends of Learning -Benchmark -Marking Period Assessment -Alternate Assessment -Space Gallery Walk -Rocket Documentary -Monthly Current event

				• Post Lab Questions • Gimkit / Kahoot	
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