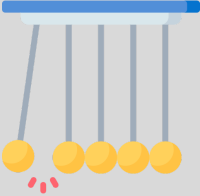


Physical Science Curriculum- 8th grade

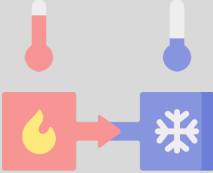
Unit	Standards	Big Ideas	Activities/Resources
Science Process Skills 	Interdependence of Science, Engineering, and Technology	Getting to Know You Classroom Procedures	- Getting to Know You Activity  Role & Share - Review Syllabus and Procedures  Back to School..  Back to School.. stations - All about you...  All about YOU
		Lab Safety Common Lab Equipment	- Lab safety  Lab Safety Doodles- 8TH GRADE Zombie College: 5 Rules of Lab Safety  Lab Safety Chat Student Handouts 9 1-...  Lab Safety Chat Lab safety basics answ...  lab chat chemical safety.pdf  lab chat chemical safety student page.p... - Lab Equipment Scavenger Hunt and Practice Activities  Identifying Science Tools.pdf  QUIZ Lab Equipment - EDITABLE QUES...  Lab Equipment
		Metric System	 PowerPoint Presentation.pdf

		Review	○ Download update!!!! ● Metric system doodle notes
		Measuring in Science	● Measuring Length, Volume, Mass, and Weight Notes ○  10 - Mass vs Weight Doodle Notes.pdf ○ ● Measuring Length 80s Party Activity ○  MeasuringLengthActivity.pdf ● Graduated Cylinder Color Magic Measuring Lab ○ Look into this... ● Graduated Cylinder Rainbow Rack Challenge ○  measuring_the_rainbow.pdf ● Measuring Mass ○ mass vs. weight mini-lab ○ ○  Measurement Activity ■ Edit.. change to be just mass?
		Graphing in Science	● Lucky Charms Cereal Data Analysis and Graphing Project ●  Graphing notes.pdf ●  GRAPH STATION INSTRUCTIONS.pdf ○  GraphingStation KEY.pdf

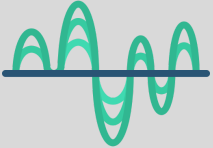
			CER- introduction — ???
	Standards	Big Ideas	Activities
Motion & Forces	MS-PS2-1, Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects. MS-PS2-2, Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. MS-PS2-4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the	Intro to Motion	☰ KEY 8th Grade Unit 1 Module 1 Vocabulary

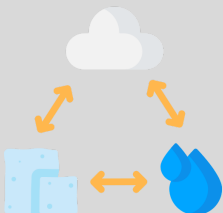
	masses of interacting objects.		
		Speed and Velocity	• Module 1 Pages 22-26 8th Grade • Distance vs displacement ○ distance vs displacement worksheet gr... ○ – type instructions.. • Speed and Velocity Doodle Notes • Speed Walking Mini-Lab (bonus materials) • Toy Car Motion Lab (bonus materials)
		Acceleration Graphing Motion Forces	• Acceleration Doodle Notes • Speed, Velocity, and Acceleration Abracadabra Pixel Art • Graphing Motion ○ Graphs- Distance vs Time & Speed vs. ... ○ Speed vs Time Graphs worksheet with ... ○ GraphingMotion-1.pdf ○ • Forces Doodle Notes • Types of Friction Worksheet (bonus materials) • force & motion task cards.pdf
		Newton's Laws of Motion	• • • • Force - Word Search Puzzle.pdf • Newton's Second Law f = ma ws.pdf • Newton's Laws of Motion Doodle Notes or Structured

			Notes - Newton's Laws of Motion Discovery Stations - Newton's Second Law PhET Simulation Lab
		Newton's Laws of Motion	- Newton's Laws of Motion Demonstration Project - Identifying Newton's Laws of Motion Abracadabra Pixel Art  Copy of ANSWERS Newton's Laws of Motion Abra...  Answers Chart Art: Newton's Laws of Motion  Copy of Newton's Laws of Motion Abracadabra Pi...  Student Chart Art: Newton's Laws of Motion
		Gravity Orbital Motion Projectile Motion	- Gravity and Weight Doodle Notes - Gravity and Orbits PhET Virtual Lab - Projectile Motion Flying Objects PhET Simulation Lab (bonus materials)
		Motion and Forces Review	- Motion and Forces Mad Lib Task Cards - Motion and Forces Escape Room Game
		Simple Machines Motion and Forces Cumulative Project	- Simple Machines Eureka! Series Video Lesson and Graphic Organizer - Design and Build a Mousetrap Car Engineering Project

Unit	Standards	Big Ideas	Activities
Energy 	MS-PS3-3, Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer. MS-PS3-5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	Types of Potential and Kinetic Energy Transformations	• Types of Energy and Energy Transformations Doodle Notes • Types of Energy Quiz • Vocab •  Potential and Kinetic Energy • Generation Genius- Potential & Kinetic Energy •  kinetic & potential energy notes p. 112-136 • Hyperdoc.. Use after notes •  08 - Potential and Kinetic Energy Doodle Notes.pdf • – use after chemical & thermal.. •  ANSWER KEY of Ch 4- Energy Digital Notebook •  scan_anngraniczny_2023-10-17-08-42-29.pdf • Two truths & 1 lie potential/kinetic energy •  Potential & Kinetic Energy Mini Hyperdoc • Energy Skate Park: Basics 1.1.30 • file:///C:/Users/AnnGraniczny/Downloads/Energy%20Skate%20Park%20Lab%20Updated.pdf • energy skate park docs • file:///C:/Users/AnnGraniczny/Downloads/ReadingEnergyTransformationsinCars-1.pdf •  REDO Energy Forms and Transformations Digital ... • file:///C:/Users/AnnGraniczny/Downloads/PRINTABLEEnergyTransferTransformationConservationREADINGANDCROSSWORD-1.pdf • file:///C:/Users/AnnGraniczny/Downloads/EnergyFormsandTransformationsDigitalGoogleSlidesandPrintActivities-1.pdf

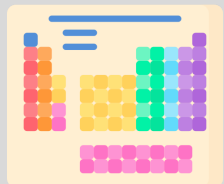
		Thermal Energy Measuring Temperature Energy Assessment	- Heat Hands-On Inquiry Stations  energy transformation ws color.pdf - NOVA Making Stuff Colder Video and Worksheet - Heat Quiz - Energy Study Guide and Test
		Renewable Nonrenewable	ESP Materials
		Conservation of Natural Resources	
Unit	Standards	Big Ideas	Activities
Electricity & Magnetism 	MS-PS2-3 , Ask questions about data to determine the factors that affect the strength of electric and magnetic forces. MS-PS2-5 Conduct an investigation and evaluate the experimental design to provide evidence that fields exist	Electricity	 Key Electricity Articles CK12 Circuit builder virtual lab
		Magnetism	 06 - Electromagnetism Doodle Notes (NGSS Ali...  Copy of Magnet Stations Close Reading.pdf - Earth & Magnetism  scan_anngraniczny_2023-11-29-10-27-44.pdf - Real world uses of magnets

	between objects exerting forces on each other even though the objects are not in contact		
			•
			•
Unit	Standards	Big Ideas	Activities
Waves 	MS-PS4-1 , Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave. MS-PS4-2 , Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials MS-PS4-3 Integrate	Intro to Mechanical Waves (Transverse and Longitudinal Waves)	• Waves PhET Simulation Lab • Mechanical Waves Doodle Notes • Wave Speed and Frequency Abracadabra Pixel Art
		Sound Waves	• Vocab- • GG video & ws.. •  Properties of Waves Interactive Activities •  Characteristics of Waves-Virtual Lab • – “plunger lab”... related to wave pool •  KEY-Characteristics of Waves-Virtual Lab •  Waves Lesson 2 •  KEY- Waves Lesson 2 •  Wave Simulations • – change questions...

	qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.		●  sound packet reading passages.pdf ●  sound packet questions.pdf
		Analog and Digital Signals	●
		Electromagnetic Waves Light Waves	● Electromagnetic Doodle Notes ●  EM spectrum review .pdf
			●
Unit	Standards	Big Ideas	Activities
Properties and States of Matter 	MS-PS1-2, Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. MS-PS1-4, Develop a model that predicts and describes	Classifying Matter	● ● Elements, Compounds, and Mixtures Doodle Notes ● Classifying Matter Petri Dishes Activity (http://sunrisescience.blog/using-manipulatives-to-teach-chemistry-concepts/) ● Elements, Compounds, and Mixtures Abracadabra Pixel Art
		Properties of Matter Physical and Chemical Changes Density Intro	● Physical and Chemical Properties of Matter Cut and Paste Activity ● Physical/Chemical Properties and Changes Quiz

	changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed. MS-PS1-6 Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.	Density Floating and Sinking	- Density Cornell Doodle Notes - Fruits and Roots Density Modeling Activity - Density Mini-Labs - Density Abracadabra Pixel Art
		Density Assessment States of Matter	- Density Escape Room Game - Density Study Guide and Quiz - States of Matter Jigsaw Activity
		Kinetic Molecular Theory Phase Changes of Matter	- Heat and Matter Investigation Demonstration - States of Matter/Particle Motion PhET Simulation Lab (http://sunrisescience.blog/engaging-the-5e-explore-phase-with-phet-virtual-labs/ and bonus materials) - Phase Changes and Heat Energy / States of Matter Cornell Doodle Notes
		Endothermic and Exothermic Reactions	- States of Matter Quiz - Endothermic and Exothermic Processes Cornell Doodle Notes - Endothermic and Exothermic Reactions Lab
		Melting/Freezing Point Boiling Point	- Melting (Freezing) Point and Boiling Point Thermometer Coloring Activity - Boiling Point Cornell Doodle Notes
		Gas Laws Matter Assessment	- Gas Laws PhET Simulation Lab (http://sunrisescience.blog/engaging-the-5e-explore-phase-with-phet-virtual-labs/) - Gas Laws Cornell Doodle Notes - Matter Test Study Guide and Test
Unit	Standards	Big Ideas	Activities

Atoms & the Periodic Table



MS-PS1-1.

Develop models to describe the atomic composition of simple molecules and extended structures.

MS-PS1-3

Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

Atomic Theory The Atom

- Atomic Theory Timeline Project
- Atoms and Reading the Periodic Table Cornell Doodle Notes
- Get to Know the Elements Periodic Table in Pictures Scavenger Hunt
- Atomic Structure Quiz

Periodicity Metals, Nonmetals, and Metalloids The Periodic Table

- Periodic People Activity (<http://sunrisescience.blog/favorite-way-introduce-periodic-table/> and bonus materials)
- Metals, Nonmetals, and Metalloids Properties Inquiry Lab
- Periodic Table Cornell Doodle Notes
- Periodic Personalities of the Periodic Table
- Periodic Table Quiz

Modeling Atoms Isotopes The Elements

- Bohr Diagrams Cornell Doodle Notes
- Eggium Isotopes Lesson
- Buy My Element Project

Element Families

- Bohr Diagrams Manipulatives Activity
- Element Families Informational Text Activity
- Design Your Own Periodic Table Project

Atoms and the Periodic Table Review

- Reading the Periodic Table Abracadabra Pixel Art
- Atoms and the Periodic Table Mad Lib Task Cards
- Alien Periodic Table Activity (bonus materials)
- Atoms and the Periodic Table Study Guide and Test

Unit

Standards

Big Ideas

Activities

Bonding &

MS-PS1-1.

Develop models

Chemical Formulas

- Understanding Chemical Formulas Worksheets

Chemical Reactions



to describe the atomic composition of simple molecules and extended structures.

MS-PS1-2,

Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

MS-PS1-5

Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.

Electronegativity

(bonus materials)

- Counting Atoms in Chemical Formulas Abracadabra Pixel Art
- Calculating the Oxygen Production and Carbon Dioxide Absorption of Trees Activity
- Valence Electrons Cornell Doodle Notes
- Electronegativity Lesson (bonus materials)

Covalent Bonding
Ions

Ionic Bonding

- Covalent Bonding Cornell Doodle Notes
- Covalent Bonding Manipulative Puzzle Activity
- Ions and Ionic Bonding Cornell Doodle Notes
- Ionic Bonding Manipulative Puzzle Activity

Ionic Compounds
Naming Chemical
Compounds

- Ionic Compound Cubes Practice Activity
- Naming Molecular and Ionic Compounds Worksheets
- Chemical Compounds in Everyday Products Research Project

Balancing Equations
Chemical Reactions
Conservation of
Mass

- Modeling Chemical Reactions Google Slides Digital Activity
- Balancing Equations Cornell Doodle Notes
- Chemical Reactions Cornell Doodle Notes
- Conservation of Mass Station Lab