CHEMISTRY											
3											
4	Structure and Properties of Matter	Indicator	UNIT	Vocab	Labs/Activitites/Simulations						
5	HS-PS1-1	Use the periodic table as a model to predict the relative prop electrons in the outermost energy level of atoms.	Unit 3	nucleus, proton, neutron, electron	model-						
6			Unit 10	groups, periods, valence electrons, electronegativiy, ionization energy							
7	HS-PS1-3	Plan and conduct an investigation to gather evidence to com to infer the strength of electrical forces between particles.	Unit 4	Coulomb's Law,	Lab- Pogil activity						
8	HS-PS1-8	Develop models to illustrate the changes in the composition released during the processes of fission, fusion, and radioact	Unit 3	fission, fusion, radioactive decay							
9	HS- PS2-6	Communicate scientific and technical information about why t	Unit 3	steel, plastics							
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12	Chemical Reactions										
13	HS-PS1-6	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.		equiibrium, Le Chatlier's Principle							
14	HS-PS1-4	Develop a model to illustrate that the release or absorption of depends upon the changes in total bond energy.	Unit 9	total bond energy	Model- molecular drawings, diagrams of reacionts, graphs energy						
15	HS-PS1-5	Apply scientific principles and evidence to provide an explan temperature or concentration of the reacting particles on the	Unit 11	collision theory- Unit 11							
16	HS-PS1-2	Construct and revise an explanation for the outcome of a sim electron states of atoms, trends in the periodic table, and kno	Unit 4, Unit 5, Unit 10	valence electrons, ionization energy, electronegativity, combustion reaction							
17	HS-PS1-7	Use mathematical representations to support the claim that a a chemical reaction.	Unit 2, Unit 5, Unit 7	Law of conservation of mass	Lab- Law of conservation of mass						
18											
19	Forces and Interactions										
20	HS- PS2-4	Use mathematical representations of Newton's Law of Gravit the gravitational and electrostatic forces between objects.	Unit 3	Coulomb's Law, electrostatic force	Pogil- Coulomb's Law						
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22	Energy										
23	HS-PS3-1	Create a computational model to calculate the change in the change in energy of the other component(s) and energy flow	Unit 9	kinetic energy, exothermic, endothermic	Computational model-						
24	HS-PS3-2	Develop and use models to illustrate that energy at the macr combination of energy associated with the motions of particle relative position of particles (objects)	Unit 9	kinetic energy, potential energy	Model-						
25	HS-PS3-4	Plan and conduct an investigation to provide evidence that th components of different temperature are combined within a c distribution among the components in the system (second la	Unit 9	thermal energy, closed system	Lab- Specific Heat						
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27											
28	Waves and Electromagnetic Radiation										
29	HS-PS4-1	Use mathematical representations to support a claim regardi	Unit 3	wavelength, frequency, speed of light							
30	HS-PS4-3	Evaluate the claims, evidence, and reasoning behind the ide	Unit 3	electromagnetic wave							
31	HS-PS4-4	Evaluate the validity and reliability of claims in published mat	Unit 3								
32											
33											
34	Engineering Design										
35	HS-ETS1-1	Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.									
36	HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.									
37	HS-ETS1-3	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.									
38	HS- ETS1-4	Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.									
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