

Curriculum Map

Subject: Physical Science	Grade: 8
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Time Frame	Topic	Content	Resources	Assessments	Standards
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2 Weeks	Scientific Method/Measurement	Students will apply the steps of the scientific method, how to write a lab report, lab safety, science tools and how to use them, and how to use the metric system	Text, Brainpop, Spongebob & Simpson worksheets, bellringers, ppt presentations on graduated cylinder, TBB, rulers, SI	Bellringers, notebooks, lab reports, oral questioning, observations, homework, quizzes, tests	
1 Week	The Properties of Matter	Students will describe matter name different types of matter and their unique physical and chemical properties and describe the physical and chemical changes that matter can undergo.	Text, Brainpop, matter identification lab, bellringers, ppt presentation	Bellringers, notebook, lab reports, oral questioning, socrative/kahoot quizzes, homework, test	
2 Weeks	States of Matter	Students will identify 3 common states of matter and the characteristics of each; explain how gases will behave when subjected to temperature and pressure (Boyle's Law and Charles' Law); describe how matter changes from one state to another	Text, Phet simulations, labs, ppt presentations, bellringers, Brainpop	Bellringers, notebook, lab reports, oral questioning, socrative/kahoot quizzes, homework, test	
2 Weeks	Elements, Compounds and Mixtures	Students will distinguish between elements, compounds and mixtures and how their properties are used to	Text, labs, ppt presentations, bellringers	Bellringers, notebook, lab reports, oral questioning, online	

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		classify the matter		practice quizzes, homework, test	
2 Weeks	Matter in Motion	Students will measure motion and the forces that affect motion; calculate average speed and average acceleration; balanced and unbalanced forces, friction and gravity	Text, labs, ppt presentations, bellringers, videos, Brainpop	Bellringers, notebook, lab reports, oral questioning, online practice quizzes, homework, test	
2 Weeks	Forces and Motion	Students will relate gravity's role in the acceleration of falling objects, in orbiting, and in projectile motion; recognize Newton's laws of motion and calculate momentum and understand the law of conservation of momentum	Text, ppt presentations, labs, videos, Brainpop, bellringers	Bellringers, notebook, lab reports, oral questioning, online practice quizzes, homework, test	
2 Weeks	Work and Machines	Students will describe the relationship between energy and work, the way machines do work, and the different types of simple and compound machines	Text, ppt presentations, labs, bellringers, Brainpop, Rube Goldberg online simulation	Bellringers, notebook, lab reports, oral questioning, online practice quizzes, homework, test	
2 Weeks	Energy and Energy Resources	Students will name energy forms, explain how it's measured and converted from one form to another	Text, ppt presentations, labs, bellringers, Brainpop, Tellagami app	Bellringers, notebook, lab reports, oral questioning, online	

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				practice quizzes, homework, test	
2 Weeks	Introduction to Atoms	Students will explain the development of atomic theory over time and change in models; describe the parts of the atom and the forces that hold an atom together	Text, ppt presentations, labs, bellringers, Brainpop, Nearpod app	Bellringers, notebook, lab reports, oral questioning, online practice quizzes, homework, test	
2 weeks	The Periodic Table	Students will describe the historical development of the periodic table and use it to determine the properties of an element based on its position on the periodic table	Text, ppt presentations, labs, bellringers, Brainpop, Periodic table app, Coloring the Periodic table	Bellringers, notebook, lab reports, oral questioning, online practice quizzes, homework, test	
2 Weeks	Chemical Bonding	Students will describe the role of valence electrons in chemical bonding and describe ionic, covalent and metallic bonding	Text, ppt presentations, labs, videos, Brainpop, bellringers	Bellringers, notebook, lab reports, oral questioning, online practice quizzes, homework, test	
2 Weeks	Chemical Reactions	Students will describe what is involved in a chemical reaction, how they are expressed, what different chemical reactions are and how energy and rates are involved	Text, ppt presentations, labs, videos, Brainpop, bellringers, Chemical Reactions app	Bellringers, notebook, lab reports, oral questioning, online practice quizzes, homework, test	

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2 Weeks	Chemical Compounds	Students will explain the properties of ionic and covalent compounds and acids and bases, explain the pH scale and organic compounds	Text, ppt presentations, labs, Brainpop, bellringers, Chemical Reactions app	Bellringers, notebook, lab reports, oral questioning, online practice quizzes, homework, test	
16 Weeks	Science Fair	Students will complete an experiment based project following the scientific method and present it on paper, poster with oral presentation	ppt presentation, schedule, websites, previous student projects	Paper, poster and oral presentation grade	