

## Mt. Zion High School Curriculum Map

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Department: Science

Subject: Intro. To Physics & Chemistry

Quarter	Essential Skills	Strategies and Activities	CC Standards	Assessments
1 - 4	1. Students will demonstrate appropriate laboratory techniques, and use of equipment while working alone, or in groups.	1. The students will demonstrate appropriate lab/equipment technique/use during all physical science labs including: <ol style="list-style-type: none"> <li>a. Measurement</li> <li>b. Dimensional Analysis</li> <li>c. Density lab.</li> <li>d. Physical/chemical changes labs.</li> <li>e. Moles</li> <li>f. Acids/Bases</li> <li>g. Speed</li> <li>h. Acceleration</li> <li>i. Forces</li> <li>j. Newton's laws</li> <li>k. Energy</li> <li>l. Momentum</li> <li>m. Work</li> <li>n. Power</li> </ol>	1. HS-ETS1-1 HS-ETS1-2 HS-ETS1-3 HS-ETS1-4	1. Physical science labs throughout the year. Ch. 1-25.
1 - 4	2. Students will conduct and evaluate experiments in which variables are measured, analyzed, and controlled.	2. The students will conduct and evaluate experiments throughout the year including labs on: <ol style="list-style-type: none"> <li>a. Measurement</li> <li>b. Dimensional Analysis</li> <li>c. Density lab.</li> <li>d. Physical/chemical changes labs.</li> <li>e. Moles</li> <li>f. Acids/Bases</li> <li>g. Speed</li> <li>h. Acceleration</li> <li>i. Forces</li> <li>j. Newton's laws</li> <li>k. Energy</li> <li>l. Momentum</li> </ol>	2. HS-ETS1-1 HS-ETS1-2 HS-ETS1-3 HS-ETS1-4	2. Physical science homework, labs, and tests throughout the year. Ch. 1-25.

Quarter	Essential Skills	Strategies and Activities	CC Standards	Assessments
1 - 4	3. The students will use mathematical skills in solving problems in Physical Science.	m. Work n. Power  3. The students will use mathematical skills in solving problems throughout the year including problems on: l. Simple machine labs. m. Ohm's law and electric circuit labs. n. Wave, sound & light labs. a. Measurement b. Dimensional Analysis c. Density lab. d. Physical/chemical changes labs. e. Moles f. Acids/Bases g. Speed h. Acceleration i. Forces j. Newton's laws k. Energy l. Momentum m. Work n. Power	3. HS-ETS1-1 HS-ETS1-2 HS-ETS1-3 HS-ETS1-4	3. Physical science homework, labs, and tests throughout the year. Ch. 1-25.
3-4	4. The students will describe, compare, and contrast matter and how it is classified.	4. The students will participate in discussions, group work, labs, projects and problem solving activities to gain an understanding of matter and how it is classified. a. Ch. 10 - Matter & Temperature. b. Ch. 12 - Properties of Matter.	4. HS-PS1-1. HS-PS1-2. HS-PS1-3. HS-PS1-4.	4. Physical science homework, labs, and tests including chapters 10 and 12.
3-4	5. The students will be able to describe the structure and properties of the atom.	5. The students will be able to describe the structure and properties of the atom through participating in discussions, group work, labs, projects and problem solving activities. a. Ch. 14 - Atoms. b. Ch. 15 - Elements and the Periodic Table.	5. HS-PS1-1. HS-PS1-2. HS-PS1-3. HS-PS1-4. HS-PS1-5. HS-PS1-7.	5. Physical science homework, labs, and tests including chapters 14-15.

			HS-PS1-8.	
Quarter	Essential Skills	Strategies and Activities	CC Standards	Assessments
3-4	6. The students will explain how compounds form through the formation of chemical bonds and describe, compare and contrast the different types of chemical bonds and compounds.	6. Through the use of discussions, group work, labs, projects and problem solving activities the students will explain how compounds form through the formation of chemical bonds and describe, compare and contrast the different types of chemical bonds and compounds. a. Ch. 16 - Compounds.	6. HS-PS1-1. HS-PS1-2. HS-PS1-3. HS-PS1-4.	6. Physical science homework, labs, and test including chapter 16.
3-4	7. The students will identify, describe, compare, contrast and predict the products of the different types of chemical and nuclear changes, and explain how energy and mass plays a role in the reactions.	7. The students will participate in discussions, group work, labs, projects and problem solving activities in order to identify, describe, compare, contrast and predict the products of the different types of chemical and nuclear changes, and explain how energy and mass plays a role in the reactions. a. Ch. 17 - Chemical Changes. b. Ch. 18 - Energy and Reactions.	7. HS-PS1-1. HS-PS1-2. HS-PS1-3. HS-PS1-4. HS-PS1-5. HS-PS1-7. HS-PS1-8.	7. Physical science homework, labs, and tests including chapters 17-18.
3-4	8. The students will explain how solutions, acids and bases form, and describe their properties.	8. Through the use of discussions, group work, labs, projects and problem solving activities the students will explain how solutions, acids and bases form, and describe their properties. a. Ch. 19 - Solutions.	8. HS-PS2-1. HS-PS2-2. HS-PS2-3. HS-PS2-4. HS-PS2-5. HS-PS2-6.	8. Physical science homework, labs, and test including chapter 19.
1-2	9. The students will identify, describe and calculate force and net force, explain how the net force determines the motion or behavior of an object, and relate forces and motion to Newton's Laws of Motion.	9. The students will participate in discussions, group work, labs, projects and problem solving activities to gain an understanding of forces and motion. a. Ch. 4 - Motion. b. Ch. 5 - Forces. c. Ch. 6 - Laws of Motion.	9. HS-PS2-1. HS-PS2-2. HS-PS2-3. HS-PS2-4. HS-PS2-5. HS-PS2-6.	9. Physical science homework, labs, and test including chapters 4-6.
1-2	10. The students will explain what work, energy and machines are, describe how energy can be transformed and conserved, and solve problems involving work, energy and simple machines.	10. The students will participate in discussions, group work, labs, projects and problem solving activities to gain an understanding of work, energy and simple machines. a. Ch. 7 - Energy. b. Ch. 8 - Work and Power. c. Ch. 9 - Simple Machines. d. Ch. 11 - Heat	10. HS-PS3-1. HS-PS3-2. HS-PS3-3. HS-PS3-4. HS-PS3-5.	10. Physical science homework, labs, and test including chapters 7-9, & 11.

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