

Grade Level:	6 th , 7 th or 8 th
Class Title:	Middle School Physical Science
Subject:	Science
Class Description:	<p>Students in middle school develop understanding of a wide range of topics in Physical Science that build upon science concepts from elementary school. Students will cover the sections of Matter and Its Interactions, Motion and Stability, Energy, Waves and their application in Technology for information transfer.</p> <p>This class will work toward one or more Next Generation Science Standards. This will be a year-long class, spanning the 2022-2023 school year.</p> <p>The estimated instructional hours for this class are ____per week. State Cedars Code: 03239 This remote class is overseen by Julie Rheinschmidt.</p>
Learning Materials:	List all materials.
Learning Goals/ Performance Objectives:	<p>PS1.A: Structure and Properties of Matter</p> <ul style="list-style-type: none"> • Substances are made from different types of atoms, which combine with one another in various ways. Atoms form molecules that range in size from two to thousands of atoms. (MS-PS1-1) • Each pure substance has characteristic physical and chemical properties (for any bulk quantity under given conditions) that can be used to identify it. (MS-PS1-2),(MS-PS1-3) • Gases and liquids are made of molecules or inert atoms that are moving about relative to each other. (MS-PS1-4) • In a liquid, the molecules are constantly in contact with others; in a gas, they are widely spaced except when they happen to collide. In a solid, atoms are closely spaced and may vibrate in position but do not change relative locations. (MS-PS1-4) • Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals). (MS-PS1-1) • The changes of state that occur with variations in temperature or pressure can be described and predicted using these models of matter. (MS-PS1-4) <p>PS1.B: Chemical Reactions</p> <ul style="list-style-type: none"> • Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants. (MS-PS1-2),(MS-PS1-3),(MS-PS1-5) <p>PS3.A: Definitions of Energy</p> <ul style="list-style-type: none"> • The term “heat” as used in everyday language refers both to thermal energy (the motion of atoms or molecules within a substance) and the transfer of that thermal energy from one object to another. In science, heat is used only for this second meaning; it refers to the energy transferred due to the temperature difference between two objects. (<i>secondary to MS-PS1-4</i>) <p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> • A solution needs to be tested, and then modified on the basis of the test results, in order to improve it. (<i>secondary to MS-PS1-6</i>) <p>ETS1.C: Optimizing the Design Solution</p> <ul style="list-style-type: none"> • Although one design may not perform the best across all tests, identifying the characteristics of the design that performed the best in each test can provide useful information for the redesign process - that is, some of the characteristics may be incorporated into the new design. (<i>secondary to MS-PS1-6</i>) <p>A team of certificated teachers who are highly qualified in this subject matter has reviewed this WSLP. This is just a sample of learning goals. Other learning goals are available to view by going to OSPI’s website. https://www.k12.wa.us/student-success/learning-standards-instructional-materials</p>
Learning Activities:	<p>The student will read for 60 minutes for information on a topic each week</p> <p>The student will follow a multistep procedure(CCS) and participate in conducting one experiment each week</p> <p>The student will complete one presentation and share conclusions about a project each month</p>

The student will gather information from multiple sources and cite specific evidence project including technical information displayed in a flowchart, diagram, model, graph, or table when appropriate (CCS) to complete a short research project each month
The student will complete ____pages per week/month in Science workbook
The student will compare and contrast two objects (using a Venn diagram) each month
The student will draw or label a diagram each month
The student will keep a list of vocabulary words for the topic of study each month

The student will keep a portfolio of weekly work samples and any written assessments to present to consultant at face-to-face meetings each month. Monthly assessments will be completed by the consultant/certified teacher. Monthly Progress will be marked satisfactory or unsatisfactory based on the professional judgment of the certified teacher using parent input, work samples, and monthly assessments.

**Progress
Criteria/
Methods of
Evaluation:**

The listed activities will be reviewed each month between the certified teacher/consultant, parent and student. Student's work will be determined satisfactory when the student shows consultant evidence of at least one graded activity each month and one graded extension every three months. Each month the consultant/teacher will use his/her professional judgment to determine if the student will master the objectives by the end of the course.