

Grade Level:	6th, 7th or 8th
Class Title:	Middle School Earth Science
Subject:	Science
Class Description:	<p>Students in middle school develop understanding of a wide range of topics in Earth and space science that build upon science concepts from elementary school. Students will cover the sections of Earth’s place in the universe, Earth’s Systems, and Earth and Human Activity.</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>Earth’s Place in the Universe</p> <p>ESS1.A: The Universe and Its Stars</p> <ul style="list-style-type: none"> • Patterns of the apparent motion of the sun, the moon, and stars in the sky can be observed, described, predicted, and explained with models. (MS-ESS1-1) • Earth and its solar system are part of the Milky Way galaxy, which is one of many galaxies in the universe. (MS-ESS1-2) <p>ESS1.B: Earth and the Solar System</p> <ul style="list-style-type: none"> • The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them. (MS-ESS1-2),(MS-ESS1-3) • This model of the solar system can explain eclipses of the sun and the moon. Earth’s spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilt and are caused by the differential intensity of sunlight on different areas of Earth across the year. (MS-ESS1-1) • The solar system appears to have formed from a disk of dust and gas, drawn together by gravity. (MS-ESS1-2) <p>ESS1.C: The History of Planet Earth</p> <ul style="list-style-type: none"> • The geologic time scale interpreted from rock strata provides a way to organize Earth’s history. Analyses of rock strata and the fossil record provide only relative dates, not an absolute scale. (MS-ESS1-4) <p>Earth’s Systems</p> <p>ESS1.A: The Universe and Its Stars</p> <ul style="list-style-type: none"> • Patterns of the apparent motion of the sun, the moon, and stars in the sky can be observed, described, predicted, and explained with models. (MS-ESS1-1) • Earth and its solar system are part of the Milky Way galaxy, which is one of many galaxies in the universe. (MS-ESS1-2) <p>ESS1.B: Earth and the Solar System</p> <ul style="list-style-type: none"> • The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them. (MS-ESS1-2),(MS-ESS1-3) • This model of the solar system can explain eclipses of the sun and the moon. Earth’s spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilt and are caused by the differential intensity of sunlight on different areas of Earth across the year. (MS-ESS1-1) • The solar system appears to have formed from a disk of dust and gas, drawn together by gravity. (MS-ESS1-2) <p>ESS1.C: The History of Planet Earth</p> <ul style="list-style-type: none"> • The geologic time scale interpreted from rock strata provides a way to organize Earth’s history. Analyses of rock strata and the fossil record provide only relative dates, not an absolute scale. (MS-ESS1-4) <p>Earth and Human Activity</p> <p>ESS3.A: Natural Resources</p> <ul style="list-style-type: none"> • Humans depend on Earth’s land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as

a result of past geologic processes. (MS-ESS3-1)

ESS3.B: Natural Hazards

- Mapping the history of natural hazards in a region, combined with an understanding of related geologic forces can help forecast the locations and likelihoods of future events. (MS-ESS3-2)

ESS3.C: Human Impacts on Earth Systems

- Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to Earth's environments can have different impacts (negative and positive) for different living things. (MS-ESS3-3)
- Typically as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise. (MS-ESS3-3),(MS-ESS3-4)

ESS3.D: Global Climate Change

- Human activities, such as the release of greenhouse gases from burning fossil fuels, are major factors in the current rise in Earth's mean surface temperature (global warming). Reducing the level of climate change and reducing human vulnerability to whatever climate changes do occur depend on the understanding of climate science, engineering capabilities, and other kinds of knowledge, such as understanding of human behavior and on applying that knowledge wisely in decisions and activities. (MS-ESS3-5)

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>

Learning Activities:

- The student will read for 60 minutes for information on a topic each week
- The student will follow a multistep procedure(CCS) and participate in conducting one experiment each week
- The student will complete one presentation and share conclusions about a project each month
- 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

**Progress Criteria/
Methods of Evaluation:**

- 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.
- 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.