

**Rocks, Minerals & Geologic Time**  
**(Fall 2020 / Quarter 1)**  
**Richard Aspinall - Team Katahdin**

As part of our Earth Science theme, we will focus on the Earth Systems that have shaped our planet over time. We will learn about the formation of rocks and minerals, how Earth's surface changes over time, and the similarities of fossils in different continents as well as the shapes of the continents.

In this indoor (and possibly outdoor) classroom students will perform occasional outdoor labs & observations in the field to help them have a better understanding of our natural world.

Because of Covid-19, students will only be graded individually, as there will not be any group projects. Students will have a variety of assessments which will include homework assignments, quizzes/tests, labs, presentations, reports & essays, and research web quests.

\*\*\*If we go to a full "at home learning" format, all parts of this class will stay the same, as well as student accountability for work, assignments, etc...

**Essential Questions:**

1. How do the materials in and on Earth's crust change over time?
2. How do Earth's systems shape its past, present & future?

**Next Generation Science Standards Covered**

**MS-ESS2 - Earth's Systems**

MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. [Clarification Statement: Emphasis is on the processes of melting, crystallization, weathering, deformation, and sedimentation, which act together to form minerals and rocks through the cycling of Earth's materials.]

MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales. [Clarification Statement: Emphasis is on how processes change Earth's surface at time and spatial scales that can be large (such as slow plate motions or the uplift of large mountain ranges) or small (such as rapid landslides or microscopic geochemical reactions), and how many geoscience processes (such as earthquakes, volcanoes, and meteor impacts) usually behave gradually but are punctuated by catastrophic events. Examples of geoscience processes include surface weathering and deposition by the

movements of water, ice, and wind. Emphasis is on geoscience processes that shape local geographic features, where appropriate.]

MS-ESS2-3. Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions. [Clarification Statement: Examples of data include similarities of rock and fossil types on different continents, the shapes of the continents (including continental shelves), and the locations of ocean structures (such as ridges, fracture zones, and trenches).]

### **Additional Standards Covered**

Research W.7 Conduct short research projects to answer a question and pose other questions.

Speaking & Listening SL.4 Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development.

### **Class Structure and Grading:**

Labs & Assessments 30%

Some of the work for this class will require students to complete individual and/or group assignments and projects (there will not be any group assignments this quarter). In the future, when students work in groups, they will receive an individual grade. Quizzes and tests will be given from time to time with adequate opportunity for student preparation and study provided.

Homework/Classwork 50%

Homework assignments provide needed background information for activities to follow, and to enhance lab work. Homework is to be turned in on time for credit to be given. Unless due to absence or unforeseen circumstances, late work (passed in on the next respective Black or Gold Day) will only be graded up to a score of 80, afterwards it will not be accepted for credit (N - 50).

Research, Speaking & Listening 20%

Students are expected to research and complete projects that will answer a question and/or pose other questions. They are also required to present their information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development.

## **Class and Work Expectations/HOW Rubric**

Using our HOW (Habits of Work) rubric, students will also be graded on class participation, time management and punctuality, as well as other topics to assist with students' personal growth & learning.

## **Class and Work Expectations**

Students are expected to arrive on time and prepared each day. They are also expected to turn in work on the day it is due, except in the case of absence. If there are special circumstances that will prevent a student from completing work by the due date, it is the student's responsibility to talk to the teacher before the work is due. If a student misses school, it is his/her responsibility to speak to the teacher immediately upon return to school to find out what was missed and when the missed work will be due.