

## Earth Science Newsletter – December, 2019

(Mr. Williams – Rm. C-423)

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Dear Parents/Families:

I would like to start by wishing all of you a happy holiday season with friends and family. There are only three weeks until the holiday recess! The Rocks and Minerals Unit Exam will be the first exam grade for the second quarter, and it will be administered this Wednesday (for Honors classes) and Thursday (for Academic classes). Students should study their notes, but there is very little memorization required for this unit. This exam is much more about carefully reading the questions, and understanding how to use information from the Earth Science Reference Tables (ESRT) to find the correct answers. As a bonus for being loyal readers of this newsletter, I am going to give you three “clues” to help with the exam (pay especially close attention to the underlined terms):

- 1) The physical properties of a mineral are determined by the mineral’s internal arrangement of atoms (students will know this as “IAOA”).
- 2) Syracuse is called the Salt City. When the shallow sea covering this area evaporated, large amounts of salt were left behind to become a part of our bedrock.
- 3) As the cooling time for an igneous rock increases, the size of its interlocking crystals also increases.

Later this week, after the unit exam, academic students will begin work on their 2<sup>nd</sup> quarter literacy project (10% of their 2<sup>nd</sup> quarter grade). Students will examine ore samples from an actual proposed iron mine site in Iron County, Wisconsin. They will then work in teams to determine the iron content of the ore, and mathematically estimate the potential value of the mine. In lieu of a lab report, students will fill the role of an “industry consultant” and write a mock letter to the county executive outlining the information needed to decide whether or not to grant the mining permits. The intention of this project is to show that rocks and minerals have importance in the real world, not just in the classroom. It

will also promote critical thinking as students will need to evaluate the economic and environmental costs/benefits of the proposed mining operations. Honors students will also engage with this activity as a 2-credit laboratory assignment.

Once the iron mining project is complete, we will spend the remaining time before the Holiday break studying the processes of weathering and erosion. Students know how rocks form, and now they will learn how they are broken apart by the forces of nature.

Honors Earth Science Only:

Symposium article outlines are due on Monday, December 9<sup>th</sup>, and students will begin working on their articles in class on that day. The first draft of the article is due on Thursday, December 19<sup>th</sup>. Don't procrastinate.

Happy Holiday to All!

Mr. Williams