**Classroom Vision and Goals**

**Earth and Environmental Science**

**Mr. Marosy**

*“Here is your country. Cherish these natural wonders, cherish the natural resources, cherish the history and romance as a sacred heritage, for your children and your children's children.”*

*-Theodore Roosevelt*

**My Personal Why: Service-Driven Leadership**

I was raised in a deeply patriotic household, and as a result, I am driven by a sincere and unwavering love for my country.  Despite, or perhaps because of the many issues still plaguing our nation, I believe that those who possess the capability to serve our country in any capacity should do so without hesitation.  Our country has so much to offer, and has provided me with so much, that I believe it would be both selfish and unpatriotic to not give even a portion of my services back to this country.  While there are many ways to serve, and each avenue of service has its own merits, I believe that our nation’s human capital is its single most valuable and under-developed resource.  A plentiful and infinitely renewable resource, human capital has the greatest single effect on the future of our country as compared to any other resource.  The effectiveness, quality, and management of all other resources stem directly from the development of human capital.  National leadership, the future of our country, and the future of this world all stem from the development of our human capital.  At its foundation, the development of human capital encompasses all levels of education; thus I felt it an important decision to become an educator and use my educational experiences to aid in the development of our nation’s human capital.  Our students are the future leaders of not only this country, but also the world, and neglecting those students (or even providing them less that adequate guidance) is a disservice to our entire society.

**Big Goals**

1. All students will demonstrate at least **85% mastery** on all content objectives throughout the year.
2. At least 40% of all students will pass Earth and Environmental Science with an A or B.
3. Percentage of students earning an A, B, or C will increase by 10% from 2014-2015 levels to 2015-2016 levels.

**Key Pillars**

1. Global citizenship
2. Environmental stewardship
3. Service
4. Leadership
5. Perseverance
6. Interdisciplinary learning

**Rigorous Academic Content and Achievement**

Objective Mastery: Students will demonstrate at least **85% mastery** on all content objectives throughout the year.

Through their engagement with rigorous academic content, students will develop a scientific mindset that will prepare them for the remainder of their high school career and beyond, into their post-secondary education. This will be accomplished through a variety of enriching activities.

1. Interdisciplinary Learning
   1. Students will explore more than just earth and environmental science. The world is made up of connections, and students will be exposed to the connections between earth science and politics, legal studies, economics, technology, literature, and humanities, as well as other intersecting disciplines. In an increasingly globalized world, students must be able to draw broad connections between different disciplines.
2. Engagement with academic research
   1. Students will engage with approximately one relevant academic research article per unit. By actively exploring, discussing, and responding to collegiate-level content, students will grow in their scientific thinking.
   2. Students will build critical reading skills.
3. Lab reports will be graded in accordance with an AP-level lab report rubric (Honors only).
   1. Students will develop and improved their scientific and persuasive writing skills.
   2. Students will consistently be held to high academic expectations.
4. Debates and Socratic Seminars
   1. Students will plan and participate in debates and/or Socratic Seminars based on content-specific controversial issues. Through these exercises, students will learn to coherently organize their thoughts, eloquently express their ideas, defend their viewpoints, and consider all sides of an issue. Students will grow intellectually by demonstrating a willingness to adapt and compromise with each other and by learning from their mistakes.
   2. Students will develop and practice eloquent and articulate speech.
   3. Students will build confidence by speaking in front of a group of peers.

**Personal Growth**

In order to demonstrate the importance of Earth and Environmental Science in students’ daily lives, my classroom will revolve around the concepts of **global citizenship**, **environmental stewardship**, and **service**. Through these three key pillars, I believe that a fourth pillar, **leadership** (specifically, environmental leadership), will grow and become evident in each of my students’ thoughts and actions. These pillars will be correlated to the RRHS Code (Respect, Responsibility, Honor, and Service) and will be aligned to the school-based incentives, such as Raven Bucks and Raven Referrals.

1. Global Citizenship (Big Picture)
   1. Students will develop an awareness of their place in our global society.
   2. Students will recognize and explore their role and the responsibilities of global citizenship.
   3. Students will be able to explain, in their own words, what it means to be a citizen of the earth.
2. Environmental Stewardship (More focused; beginning to be tangible)
   1. Students will understand and explore the concept of stewardship, and more specifically, stewardship with respect to the natural environment.
   2. Students will be exposed to examples of environmental stewardship in action, and begin to develop connections between global citizenship and environmental stewardship.
   3. Students will investigate possible avenues of environmental stewardship through individual and collaborative research.
3. Service (Global citizenship and environmental stewardship in action)
   1. Students will participate in a minimum of 4 hours of service during the second semester of the school year.
      1. Based on the results of their individual and collaborative research, students will be empowered to select the service activity (or activities) in which they participate.
4. Leadership
   1. Students will synthesize their role as a citizen of the earth, their role as a steward of the natural environment, and their service experience to develop their own environmental leadership statement/pledge.
   2. This will be the pinnacle of personal growth in this course. Students will demonstrate

**Access and Pathway Opportunities**

As a result of completing the Earth and Environmental Science classroom vision, students will develop the passion and ambition necessary to enroll in and complete AP Environmental Science as a high school senior. From there, students will have the background necessary to pursue a post-secondary education in any of the sciences. This will set students on a track to increased educational opportunities, increased professional opportunities, and a transformational life trajectory. Furthermore, students will be exposed to careers in earth and environmental sciences, meet and interact with professionals in those fields, and explore the pathways to those professions. This will give students networking opportunities and resources through which they may pursue post-secondary education or a career in the sciences.

While it is my sincere hope that the above pathway applies to all students. I am also aware that not every student will fall in love with the sciences in the way that some students do. For those who do not identify with the sciences as an educational or professional pathway, it is my goal to expose all students to a variety of disciplines throughout the year, and provide appropriate resources and knowledge for students expressing further interest in any of those areas. I believe that discovering what one does not want to do is just as important as discovering what exactly it is that one wants to do. A student who is challenged by this course and grows both personally and academically, but does not wish to pursue the sciences beyond the minimum requirements will ultimately be on a clearer pathway towards their post-secondary education or professional career than before this course.

**Socio-political and Cultural Consciousness**

Students will begin to explore and learn about the racial and gender inequities in STEM fields. After reading and discussing articles and research about the racial and gender inequalities in STEM fields, students will look at profiles of notable STEM professionals/pioneers/other important figures that overcame obstacles on their path to success. Students will receive both mirrors and windows of scientists who demonstrated **perseverance** in the face of challenges to change the world in which we live. Students will write responses to the inequities discussed and identify actions necessary to emulate the perseverance demonstrated. These reflections will be a part of the students’ grades throughout the semester.

**Positive Relationship Building**

After my first year in the classroom, I have identified positive relationship building both as one of my greatest strengths and an area upon which I want to continually improve. I believe that achieving a transformational classroom culture begins with establishing and fostering genuine and positive relationships with every single student. This is a process that takes a great deal of time, but is essential to creating authentic engagement and motivation in the classroom. Students need to trust and respect the person for whom they are working before they will give you their best. I have made a great deal of progress in this area (as measured rather subjectively): four students have asked me to be their Junior/Senior Academic Advisor and my classroom is rarely empty after the bell rings at the end of the day. Despite these successes, my classroom is not where it could be and my culture is not where I want it to be. I believe that building these relationships across the board will help me achieve these visions that I have for my classroom.

**Updates: 2015-2016 Academic Year**

I have continued to build strong relationships with my students, but that is an ongoing process that I now see needs to be front-loaded at the expense of content in the beginning of the semester. Content can be made up; relationships, however, are much more difficult to make up. I have reset my management and procedures in two out of three classes (my honors class is consistently meeting and exceeding academic and behavioral expectations -- they are very close to achieving 85% mastery as a class and are fully invested in meeting that goal). I individualized my consequence hierarchy for my second and third blocks; those students were able to give input on consequences, rewards, and incentive systems. For example, 2nd block chose to work for class points, while 3rd block chose to work for table points. I hope that using both strategies will be helpful in planning for next semester’s classroom management and procedures.

Personally, I am adapting to the “controlled chaos” classroom theory in which things are not 100% silent 100% of the time (an education fantasy that I believe I concocted in my mind). I believe that is a big step for me towards meeting my students where they are (individually, socially, and developmentally) and creating a student-centered classroom environment. I am taking notes on what works and what works less effectively and keeping these things in mind for my new students next semester.

After experiencing a full year of teaching and reflecting upon what works, what doesn't, and what my students truly need, I have come to a number of valuable conclusions that I hope will impact my classroom immediately in the second semester. The first, and most important, is that my students need to develop a healthy work ethic in their first year of high school. More than learning how to speak, read, write, think, etc. I believe that my role as an Earth and Environmental Science teacher can be to instill a work ethic in my students that will carry them successfully through high school. My students need to learn how to put distractions aside, focus on the task at hand, and get their work done. This seems simple, but it is applicable to all parts of life and all subjects, and is an extremely valuable life lesson. I also believe that with this work ethic, an increased understanding of Earth and Environmental Science will follow, and my students will come even closer to achieving our Big Goal.

Another conclusion I came to was that explaining the “whys” in my classroom go a long way towards increasing student compliance and investment. Explaining the why behind each rule, procedure, and lesson helps students understand the reason for being present and attentive that day. Furthermore, students seem to appreciate rules and procedures more if they know why each rule and procedure exists. I have begun explaining everything that I do in the classroom and relating it to student success or something that is relevant to my students. I am hopeful that these small adjustments go a long way in setting my students up for future success and towards reaching our Big Goal as a class.