**Integrated Physical, Earth, & Life Sciences (IPELS)**

**Instructors:** Mrs. Dilgard Mrs. Gorman Mr. Popadiuk

**Email:** edilgard[@mtsd.us](mailto:swesthusin@mtsd.us)cgorman@mtsd.usmpopadiuk@mtsd.us

**Extra Help:** Thursday Rm 2313 Tuesday Rm 2313 Tuesday Rm 2313

**WHAT IS IPELS?**

This course is an introduction to the science practices of experimental design, research, and analysis. Throughout the year, students will focus on the main theme of energy while learning about many aspects of science such as heat, motion, forces, & ecosystems.

**COURSE OBJECTIVES:**

At the end of this course, students will be able to:

1. Identify questions, plan investigations & analyze data
2. Effectively communicate results and conclusions from experiments.
3. Generate scientific representations based on data collected through experiments & research.
4. Work collaboratively with other students to carry out investigations & group designed experiments.

**EXPECTATIONS FOR YOUR BEHAVIOR:**

*Our expectation is that our classroom will be one that fosters positive relationships and an outstanding learning environment.*

This means that you are expected to treat your teachers, peers, and classroom with respect. We WILL NOT tolerate any behavior that will interfere with the learning & well - being of our classroom.

**COURSE MATERIALS:**

* Pencils
* Pens - for self correction on homework/assignments
* A three ring binder *or* notebook/folder for class notes and handouts.
* A scientific calculator.
* Students are encouraged to BYOD (bring your own device)
* **Proper Lab Attire** – On lab days you must arrive to class wearing **shoes that cover your feet completely**. Flip flops, ballet flats, sandals, or open toed shoes with socks or stockings do not meet this requirement. You also need to **confine all loose hair with a hair tie.** Students who come to lab improperly dressed may not be allowed to participate, will not be able to make up the lab after school, and will receive a zero as a grade for that experiment. It is recommended that students keep gym shoes in their locker to use on lab days.

**GRADING:**

Students complete a variety of in-class activities, homework and independent study to build their understanding. The student’s final grade is a weighted average of graded assessments and assignments. Not all assignments will be graded; however, the work we will do together is important and good preparation for success in the course.

Typical Semester Grading Outline:

| Category | Weighting |
| --- | --- |
| Summative Assessments  (Unit Tests) | 50% |
| Classwork (Quizzes, Lab Reports, CER (Claims, Evidence, Reasoning Analysis), Projects, etc…) | 45% |
| Homework (Reflections, Google Classroom Posts, Contributions to Small Group Discussions, etc...) | 5% |

**GOOGLE CLASSROOM:**

Course resources will be posted on Google Classroom as they become relevant. Visit Google Classroom daily. Please let the instructor know if you have trouble accessing Google Classroom or the posted links. Many assignments and submitted work will only be distributed and collected electronically. We will make every effort to minimize paper use as part of our commitment to our environment.

**CLASS DISCUSSION:**

Class discussions are an essential part of this class. The purpose of a class discussion is to promote dialogue about a particular topic or topics. It is through this dialogue and articulation of ideas that true learning of a model can take place. To help get this point across, think of a time when you went to a movie with friends. After the movie was concluded it was likely that you and your friends discussed various aspects of the movie: likes, dislikes, plot-twists, subtle foreshadowing, etc. It is also likely that your friends made an observation that you did not catch. The opposite also probably happened. It was in this process of dialogue and thinking that you and your friends probably learned something new about the movie that you had not thought of prior. That process is what we are doing when we have class discussions.

What this means is that in order to be successful in this class you must *be present* for these discussions. This does not mean just simply being physically present in the room, it is a state of mind when a discussion is happening.

Students have often asked us,“How can I be present in class?” Students who do well are those that are not afraid to ask questions and think about concepts. Students that only think about what is taught in the eighty-four minute time period that we have class typically have trouble come assessment time. As such, it will be our goal throughout this school year to make sure that we give you as much of a chance to think about the concepts. In order to take full advantage of this time we highly recommend that you

1. Ask clarification and probing questions while participating in discussions to build your own mental model and compare it with your peers.
2. Do not fear being wrong in class, instead view it as a learning experience and a way to analyze your own thinking.
3. Constantly self-reflect during class discussions. You may find that this leads to altered habits.
4. Grapple with a problem for the sake of learning how to problem solve, rather than asking for the “correct answer” to take the easy way out.
5. Make as many connections between prior knowledge, new concepts, and real life as possible.

**Please reach out via email if you have questions or concerns throughout the year!**