**Metropolitan Business Academy**

**2019-2020 Chemistry Syllabus**

**Teacher Contact Info:** Mr. Peterhansel(Email: [tyler.peterhansel@nhboe.net](mailto:tyler.peterhansel@nhboe.net), Instagram: @metro\_chemistry)

**Course Description:**

Artist. Inventor. Creator. Mechanic. Problem-solver. A chemist is many things, but most importantly, a chemist uses their understanding of how matter works to create new things. This could be a new recipe at a restaurant, a fix for a problem in your home, or a cure for a deadly disease. Chemistry is also a gateway to skills that will help you thrive in our 21st century society. This class will allow you to practice problem-solving, self-discipline, and analysis. You will heavily rely on these skills throughout your life even if you don’t need to take another chemistry class in the future. I am excited to begin our chemical journey together, so let’s go!

**Units:**

**Unit 1 : Talk Like a Chemist / Think Like a Chemist (How can we develop experiments to understand matter? How do we communicate like a chemist?)**

Unit 2 : Nuclear Chemistry (How does nuclear technology (bombs, medicine, etc.) work and impact our world?)

Unit 3 : Periodic Trends (What are the relationships between atoms?)

**Unit 4 : The Chemist as an Artist (How can we use chemical reactions to create an original piece of art?)**

Unit 5 : Thermodynamics (How can we identify unknown chemicals?)

Unit 6 : Solutions (How can we use lab techniques to prepare and study solutions?)

**Unit 7 : Gases (How does a weather balloon work?)**

**Course Standards:**

1. Asking Questions and Defining Problems 4. Analyzing and Interpreting Data

2. Developing and Using Models 5. Constructing Explanations and Designing Solutions

3. Planning and Carrying out Investigations 6. Obtaining/Evaluating/Communicating Information

**Major Performance Task Chart:**

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| --- | --- | --- |
| **Title of Performance Task** | **Description of Performance Task** | **Course Standards met by Performance Task**  **(numbers)** |
| Matter Study | Design an experiment to help explain why Diet Coke floats and regular Coke sinks in water. | 1,3,4,6 |
| Chemist as an Artist Roundtables | Create an original piece of artwork. Write a placard that describes the chemical processes behind your artwork. These will be presented to teachers and community members in January. | 2,5,6 |
| Balloon Launch Roundtables | Model and explain the scientific laws and principals that govern the flight of a weather balloon for teachers and outside validators. | 2,5,6 |

**How you will be graded:**

Academic: You will be rated on between four to six of the course standards over the course of each trimester. Evidence for these ratings will be primarily taken from major performance tasks. If you are physically and mentally present in class, it will become easy to improve these ratings over the course of the trimester.

Habits of Work: The following habits will also be tracked over the course of each trimester. They make up a small portion of your grade but are extremely important in helping YOU understand how to improve. High academic performance ALMOST ALWAYS follows high habits of work scores:

Classroom conduct: This is a rating based on your willingness to cooperate during class and contribute positively to our community. If this is difficult for you, you need to let me know how I can help you improve this.

On time performance: This is the percentage of DO NOWs that you complete within the first five minutes of class. This measures your ability to come to class on time and prepared.

Homework completion: This is the percentage of homework assignments you completed on time.

At the end of each trimester, your grade will be calculated based on overall points earned during the trimester.

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| --- | --- | --- | --- |
| **Mastery Language Abbreviations** | **Mastery Language** | **Progression to Meeting Standard** | **Standard Grading Equivalent** |
| XE | Exemplary | Exceeds Standard with Distinction | 100 |
| CO/XE | Competent/Exemplary | Exceeds Standard  (revise for exemplary) | 93 |
| CO | Competent | Meets Standard  (revise for exemplary) | 85 |
| EM | Emerging | Approaches Standard  (needs revision) | 70 |
| NY | Novice | Not Yet  (needs revision) | 60 |
| NE | No Evidence | No Evidence of Work Yet | 50 |

**What you need to bring to class each day:**

Pen/pencil

Binder with dividers (get a small one just for chemistry or combine with another class)

Notebook