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| **COURSE DESCRIPTION:** *This is an overview of the course. The course should be committed to the following culturally relevant, empowering, and coherence-driven tenets:*  *-has students learn valuable and engaging ideas about themselves and about others. (Identity)*  *-covers skills/standards that support college/career preparation, creative, and personal development. (Skills)*  *-has students become smarter about academic challenges, their lives, and the world around them. (Intellect)*  *-engages students about power, discrimination & oppression personally, locally, and nationally/globally (Criticality)*  *-allows for access, success and support both in-school and remotely (Coherent Methodology)*  *-allows for success and support collaboratively and independently (Diverse Platforms & Methodology)* |
| The Regents chemistry course presents a modern view of chemistry suitable for students with a wide range of skills and abilities.  The course discusses the basic principles of chemistry together with their related facts.  These principles are integral to people’s understanding of their chemical environment and preparation for the New York State Regents Chemistry examination.  Specific areas of study include matter, energy, mathematics of chemistry, the gas laws, chemical kinetics and thermodynamics, acid-base reactions, oxidation/reduction reactions, organic chemistry and nuclear chemistry. |
| **ENDURING UNDERSTANDINGS/QUESTIONS:** *Please state the most important ideas and/or questions for the course. Please name valuable and empowering ideas about themselves and about others. (Identity) Critical and valuable ideas about power, discrimination, oppression and authority in the material, in their lives, and in communities and the world. (Criticality)* |
| |  | | --- | | * How can matter be explained in terms of stability and change? | | * How is the structure of an atom like other systems models? | | * Why is this alternative energy source so controversial? Is this really an alternative energy source? | | * Why do some atoms form chemical bonds to form stable compounds and others do not? | | * What are the trends in the Periodic Table of Elements as you go from left to right and top to bottom? What are the factors that determine each of the trends you see? * What is the purpose of knowing the amounts of substances involved in chemical equations? How can this knowledge inform the work of chemical engineers? * How is the equilibrium of a chemical system the same as homeostasis in living things? A balance of vectors in engineering? * How can we make electrochemistry work for us? * What are the changes that have occurred in the last 50 years due to the increased use of carbon-based products? Do the benefits outweigh the environmental risks? | |

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| **SPECIFIC ACADEMIC SKILLS**: *These are the most important skills for the course, including: those that support college/career preparation, creative, and personal development (Skills); and those that help students become smarter about academic challenges, their lives, and the world around them. (Intellect)* |
| * Hypothesizing |
| * Testing a Hypothesis/ Experimenting |
| * Constructing Graphs |
| * Collecting and Organizing Data |
| * Analyzing and Interpreting Data * Forming Conclusions * Researching Information * Estimating * Reading Scales and Instruments * Applying Formulas * Interpreting Scientific Illustrations * Sequencing * Identifying Properties * Evaluating * Identifying Cause and Effect Relationships |

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| **CCL STANDARDS:** *These are the important Common Core Learning Standards (in short form) that will drive the curriculum and connect to units of study and academic skills. No need to list every one!* |
| * RST.9-10.7: Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words |
| * WHST.9–12.2: Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes |
| * WHST.9–12.9: Draw evidence from informational texts to support analysis, reflection, and research. |
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| **ASSESSMENTS OF SKILLS/STANDARDS**: *These are the major formative and summative measures that will be used to assess student progress on the specific skills, understandings and standards listed above. Please be specific!* |
| * Do nows &Exit Slips |
| * Kahoot/Plickers |
| * End of unit exams & interim exams |
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**UNITS OF STUDY:** *These are the titles/descriptions of the primary units covered during the course. These units should develop identity, skills, intellect, and criticality, as described above.*

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| 1. The Physical Nature of Matter |  | 5. Periodicity |
| 2. Atomic Concepts |  | 6. Moles/Stoichiometry |
| 3. Nuclear Chemistry |  | 7. Kinetics & Equilibrium |
| 4. Chemical Bonding |  | 8. Acids & Bases  9. Oxidation & Reduction  10. Carbon and Organic Chemistry |

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| **TEXTS/MEDIA:** *This is a sampling texts, media, materials covered/utilized in the course. These resources are diverse, relevant, empowering and easily accessible and usable both in-school and remotely.* |
| Khan Academy  Edpuzzle  Google Classroom  Others- TBA |

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| **COURSE RULES AND GUIDELINES:** *These are the mechanisms that will manage the class and if followed result in student success for this course. These rules/guidelines should be fair, democratic, coherent, sustainable and able to implemented both in-school and remotely, collaboratively and independently.* |
| * Show up to class on time |
| * You should listen when someone is talking. Always show respect to others. Disruption is not permitted. |
| * All school rules will apply to our classroom ( like, no screen recording or screen shots of teacher no obscene or vulgar language, etc) |
| * Hand in all assignments |
| * Ask clarifying questions |

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| **COURSE HOMEWORK POLICY:** *This is an overview of homework distribution schedule and the process for completion and collection. This policy is consistent with the school-wide policy (to-be-finalized) and hold students accountable but also supports them, and does so both in-school and remotely.* |
| Homework will be given once a week at the beginning of the week and due on Wednesday evenings. Students will receive homework support Wednesdays during class time. |