**PAULA HEDBAVNY SCHOOL PS/MS 278**

**CURRICULUM MAPS GRADE 7 2015-2016**

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| **MONTH** | **MATH** | **SCIENCE** | **HUMANITIES** |
|  |  | **Webpage: PSMS278JACKSON.WEEBLY.COM** | **Webpage: PS278middleschoolhistory** |
| **SEPTEMBER** | **Unit 1 The Number System**   * Adding and Subtracting Integers * Multiplying and Dividing Integers | **UNIT: Scientific method**   * **Interpreting & analyzing Scientific data** * **Designing Experiments**   **Essential questions**  **What are some key components of a good scientific investigation?**  **What are the main differences between independent and dependent variables?**  **Vocabulary:** Hypothesis, independent variable, dependent variable, control group, data, trial and reliability of an experiment. | * *Summer non-fiction/fiction reports, “Sucker”* * *Summer news presentation analysis*   **UNIT 1: BIOGRAPHY: Significant Choices**  **NARRATIVE WRITING**   * **How do we analyze our choices to weigh best significance/ impacts of our actions?** * **Who were the peacemakers in the Age of Exploration?** * **Social Scientific Method: economic forces, cultures and norms** * **Creating and testing a research** HYPOTHESIS |
| **OCTOBER** | **Unit 1: The Number System (Cont.)**   * Operations with fractions and decimals and signed numbers   **Unit 2: Ratios and Proportions**   * Calculate the unit rate, constant rate of change. * Identify proportional relationships in graphs, tables and equations. | **UNIT: Atoms & Periodic Table**   * **Structure of atoms.**   **Essential questions**   * **What are the features of the main sub atomic particles: protons, electrons & neutrons?** * **What are the main differences between Mixtures and Compounds?** * **How are Elements organized in the Modern Periodic Table?** * **How do we calculate the number of each sub atomic particle?**   **Vocabulary:** Atom, Element, Mixture, Compound, Atomic mass, Atomic number, Periodic Table, and Chemical formula. | **UNIT 1: BIOGRAPHY: Significant Choices**  continued   * Codex: Sotomoyor, biographical poems   Unit vocabulary word wall sheet provided.  **SS Concepts:** Europe/1st Nation Encounter,  primary & secondary source comparisons  Cortez, De Las Casas, Champlain, Hudson    **Geography:** World continents, countries, directions, climate zones, latitude/longitude |
| **NOVEMBER** | **Unit 2: Ratios and Proportions**   * Calculate percent increase and decrease * Calculate the discount, gratuity, sales price of items etc. | **UNIT: Properties of Matter**   * **Density, solubility, pH etc.** * **Phase Change** * **Physical and chemical change**   **Essential questions**   * **How do we distinguish Between Physical and chemical changes?** * **How can we calculate the density of a regular/ irregular solid and liquids?** * **What are the main differences and characteristics of Acids and bases?** * **What are the main features of a phase change diagram?**   **Vocabulary:** Solubility, Density, Acids, Bases, Phase change, Physical properties, Physical change, chemical change | **UNIT 2: RIGHTS and RESPONSIBILITIES**  **PERSUASIVE WRITING**   * **How well do we know our rights and responsibilities?** * **What best persuades others to get rights?** * **Do we have a right to a job and economic security?**   Codex: Sojourner Truth, Voting fines, Whisper  of AIDS. 12 Angry Men Constitution,  Declaration, Supreme Court Decisions  Unit vocabulary word wall sheet provided. |
| **DECEMBER** | **Unit 3 Expressions, Equations, and Inequalities**   * Writing Expressions * Combine like terms * Solving one step equations with rational coefficients * Solving multi-step equations with the variable on one side of the equation | **UNIT: Weather and Climate**   * **Elements of Weather** * **Interpreting Weather Maps**   **Essential questions**  **1) What are the distinguishing features of weather and climate**  **2) What are the main elements of weather and how are they measured?**  **3) What information/data can be determined by viewing the various symbols on a weather map?**  **4) How does the location of a place influence its weather and climate?**  **Vocabulary:** weather, climate, barometer, Humidity, relative humidity, latitude and longitude. | **UNIT 2: RIGHTS and RESPONSIBILITIES**  Continued.  **SS Concepts:** Colonial democracies compared,  Zenger Trial, Quakers, Proclamation 1763,  Iroquois influences American government,  French & Haitian Revolution, Bolivar  **Geography:** natural land forms vs. political borders, regions of world export and import markets today, latitude, longitude  **Economics:**  “Barter Day,” games about global economies, export/import global trade maps |
| **JANUARY** | **Unit 3 Expressions, Equations, and Inequalities**   * Solving and graphing one step & two step inequalities   **Unit 4 Circumference, Area of a Circle**   * Calculating the circumference and area of a circle. * Working backwards with the circumference and area of a circle to find the radius or diameter of a circle | **UNIT: Weather and Climate**   * **Air masses** * **Weather Fronts** * **Weather Related Disasters**   **Essential questions**  **1) What are the distinguishing features of weather fronts?**  **2) What are the main types of air mass and how do they affect the weather?**  **3) What are the main causes and effects of some common related weather disasters?**  **4) compare and contrast high and low pressure systems**  **Vocabulary:** weather, climate, barometer, Humidity, relative humidity, latitude and longitude, air pressure, and isobars. | **UNIT 3: EXPANSION Was it better to live in the**  **West or in the rising cities of the East?**  **LITERARY ANALYSIS/COMPARISON**   * **How did settlers survive natural disasters?** * **Are women as strong as men? How do we know?**   Thousand Pieces of Gold, Orphan Train letters & immigrant stories, (research tasks) ,  economics articles on immigration policy,  current events articles on partner abuse,  Unit vocabulary word wall sheet provided.  **SS Concepts:** Research immigrant lives. Emma  Willard, Chinese exclusion, Indian Wars,  Mexican-American War |
| **FEBRUARY** | **Unit 5 Statistics**   * Populations and Samples * Making inferences from a random sample * Generating Random Samples * Comparing data displayed in box plots * Using mean, median, mode, range, standard deviation to compare populations | **UNIT: Weather and Climate**  **Weather Related Disasters…….Project based.**  **Essential questions**   1. **What are the main causes and effects of some common related weather disasters?** 2. **What are some safety precautions for some of the common weather related disasters mentioned below?**   **Vocabulary: Cyclone, hurricane, air pressure, Tornado, tropical depression.**   * **Review for Mid Terms**   **All topics covered since start of the school year** | **UNIT 3: EXPANSION Was it better to live in the**  **west or in the rising cities of the East?**  Continued  **Geography:** cultural and physical regionalism, capitals, spread of transportation routes  **Economics:**  How immigrants help and hurt the U.S. economy. Games and readings on wages, salaries, strikes, GDP, GNP, the 1% & the 99% |
| **MARCH** | **Unit 6 Probability**   * Find the probability of Simple Events * Find the experimental probability of simple and compounded events * Making predictions with experimental & theoretical probability * Find the theoretical Probability of simple and compounded events. | **UNIT: Earth Science**   * **Earth’s Structure** * **Plate tectonics** * **Rock Cycle**   **Essential questions**   1. **How can rocks be transformed from one type into another?** 2. **How are rocks classified?** 3. **What evidence is there to suggest that Pangaea once existed?**   **4) Compare and contrast the layers of the Earth in terms of: composition, thickness, temperature and location.**  **Vocabulary;** minerals, igneous rock, metamorphic rock, sedimentary rock, weathering, erosion, crust, core, mantle, convection current, hydrosphere, lithosphere. | **UNIT 4: POETRY**  **LITERARY ANALYSIS/COMPARISON**   * **How does poetry mean differently from other genres?** * **What makes good poetry, great poetry, and junk poetry?**   Codex: Hughes, Angelou, Shakespeare,  Giovanni, Yeats, Dickinson, Whitman  Unit vocabulary word wall sheet provided.  *Revise/publish a portfolio piece.*  *Extra emphasis on grammar applied to portfolio pieces and publishing pieces to a wider audience.* |
| **APRIL** | **Review for the State Test** | **UNIT: Earth Science**  **ROCKS AND MINERALS**   * **Physical and chemical properties of minerals** * **Lessons from Fossils** * **Interpreting Topographic maps & Profiles**   **Essential questions**   1. **How do we interpret and construct topographic maps and profiles?** 2. **What important lessons can be learned from studying fossils?** 3. **What are some important physical tests to distinguish between types of minerals?**   **Vocabulary;** minerals, streak, hardness, Moh’s scale,  Chemical reaction, luster, and cleavage. | **Review for the State Test**  **UNIT 5: SLAVERY and the CIVIL WAR**  **PERSUASIVE ESSAY**   * **What were peaceful ways slavery could have been stopped?** * **Which is better, radical or gradual change?**   Frederick Douglass Autobiography, Incidents in the Life of a Slave Girl, To Be A Slave ,  Unit vocabulary word wall sheet provided.  **SS Concepts:** Nat Turner, John Brown, Sojourner Truth, NY and Slavery, Missouri Compromise, Fugitive Slave Act  **Geography:** North/ South regions, developing countries vulnerable to human trafficking. |
| **MAY** | **Unit 7: Modeling Geometric Figures**   * Identify cross sections of 3D figures. * Identify if three sides or angles can form a triangle * Calculate the surface area and volume of 3D figures. | **UNIT: Forces & Motion**   * **Newton’s laws of motion** * **Overview of types of simple and compound machines.** * **Review for Grade 7 assessment**   **Essential questions**   1. **What are the main features and applications of Newton’s 3 laws of motion?** 2. **What are the main types of simple machines and their uses in our daily lives?** 3. **Interpreting speed related graphs** 4. **Application of Formula for force and momentum.**   **Vocabulary;** inertia, velocity, machine, lever, force, motion, momentum, balance and unbalanced force | **UNIT 6: Civil War:**  **HISTORICAL NARRATIVE WITH RESEARCH**   * **Why gets people to change their mind about prejudices and stereotypes?** * **How extensive is human trafficking today?**   With Every Drop of Blood, Gettysburg Address,  2nd Inaugural Address  Unit vocabulary word wall sheet provided.  **SS Concepts:**  Dred Scott, Bleeding Kansas, secession, Harper’s Ferry, Emancipation Proclamation, Total War  Research: war impact of women, children, blacks  **Geography: “**Free Soil” and slave states, territories, areas of modern civil wars  **Economics:** Supply, demand graphs. |
| **JUNE** | **Unit 7: Modeling Geometric Figures**   * Angle Relationships | **UNIT: Forces & Motion**   * **Calculations /Graphs based on speed and momentum** * **Interpreting speed related graphs** * **END OF YEAR FINALS** | *Complete and present research projects.*  *Revise/publish a portfolio piece.* |
| **SKILLS** |  | **LAB SKILLS; Measurement, Microscope , Triple beam Balance**  **Math connection: Graphs, calculations with formulas**  **Technology: PowerPoint, Excel, Newsletters, research**  **ELA connection: Unit essays, Analyze, close reading, compare and contrasts, evaluate, cite evidence, supporting details**  **Vocabulary: quizlet.com: >>>>>>>>>Jackson278** |  |