**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

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| **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 DecisionsUnit 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 AddressUnit vocabulary word wall sheet provided.**SS Concepts:**  Dred Scott, Bleeding Kansas, secession, Harper’s Ferry, Emancipation Proclamation, Total WarResearch: 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** |   |