**ARC Week at Glance – Meena (S1, W 3)**

**Topic: scientific measurement Course: AP chemistry Grade: 9-12 Dates: August 19-23**

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|  | **Learning Target**  **(I am learning …)** | **Criteria for Success**  **(I can…)** | **Activation/ Instruction** | **Collaboration/**  **Guided Practice** | **Independent Learning/ Assessment** |
| *(Include at least one/two formatives\*in any part of the lesson as needed)* | | |
| **Monday** | *I am learning to write numbers in scientific notation.* | *I can…*  *write numbers in scientific notation.*  *Convert standard form to scientific notation and vice versa….* | *Do Now--With a partner, students will solve the following:*  *Which of these statements about units of measurement is not true?*   1. *A unit compares what is being measured with a previously defined quantity.* 2. *A unit is usually preceded by a number.* 3. *Measurements can be compared without knowing their units.*   *The choice of unit depends on the quantity being measured* | *Students will be shown a PowerPoint presentation reviewing the metric system, scientific notation and significant figures. The PowerPoint will also serve as a review of math fundamentals.*  *Students will then complete a worksheet on the metric system, writing significant figures and using scientific notation.*  *-Discussions about accuracy and significant digits*  *-Calculate the number of significant digits in numbers*  *-Round numbers to proper significant digits.* | *Students will write a reflection in their Interactive Chemistry Notebook explaining how to determine the number of significant figures and how to write a number in scientific notation.* |
| **Tuesday** | *I am learning the operations of scientific notatio*n. | *I can add, subtract, multiply and divide any numbers represented in scientific notation* | *Do now—questions related to significant figures…*  *Discuss the answer and recall the rules for expressing the sig figures in a given number and rounding measurements* | *The students will*  *---think pair and share the step by process –calculations involving scientific notation.*  *--differentiate the various steps involved in solving add, subtract, multiply and divide numbers expressed in scientific notation.* | *Exit ticket: write any one concept that interested you today…* |
| **Wednesday** | *I am learning about metric units.* | *I can convert metric units of measurement and explain what makes metric units easy to use* | *Bell ringer to activate student’s prior knowledge and previous days lesson in class – scientific notation.* | *Ed puzzle Video on SI units of metric system.*  *Discuss how SI prefixes are always in increments of ten and can be expressed using scientific notation.*  *Students will predict the meaning of Si prefixes deci, centi and milli* | *Exit ticket: Explain the importance of metric system* |
| **Thursday** | *I am learning about the metric conversions.* | *I can convert between metric units using dimensional analysis or ladder method.* | *Do now--With a partner, students will solve the following:*  *How many seconds are in one year? What steps did you take to solve this problem****?*** | *Students will be shown a PowerPoint presentation dimensional analysis. The PowerPoint will also serve as a review of the summer assignment. Students will then complete a worksheet requiring them to use dimensional analysis to solve problems.* | *Students will write a reflection in their Interactive Chemistry Notebook explaining how to solve a problem using dimensional analysis.* |
| **Friday** | *I am learning about the metric conversions*. | *I can recognize and convert BOTH Customary and Metric Units of Measurement and apply this process to real-world problems and applications-dimensional analysis.* | *Bell-Ringer****:*** *Have students try to solve the problem: “How many seconds are in a year?”*  *Discuss****:*** *What process did you use to solve this problem?*  *Review****:*** *Conversion factors (i.e. 1 day = 24 hours, 1 mile = 5,280 feet, 1 mol NaCl = 58.44 g NaCl, etc.)* | *Students will complete the metric mania lab--gizmo in which they travel to different stations taking measurements and reporting their responses using the metric system, scientific notation, significant figures, and dimensional analysis.* | *Students will answer the metric mania—gizmo –assessment questions.* |

**Additional Info: Literacy Task Minor Grade Major Grade Course materials and resources are available in Canvas.**