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

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **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.**