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| **Week**  **Of**  **August 29, 2016** | | **Jennings Junior High Lesson Plan Template** | | | | | | |
| **Subject: Scientific Inquiry** | | | | **Grade Level: 7th** | | | **Instructor(s): Jefferson** | |
|  | **Monday** | | **Tuesday** | **Wednesday** | | | **Thursday** | **Friday** |
| **Key Concepts -Learning**  **Targets /Daily Objective** | I will be able to:  Formulate a testable question and hypothesis. | | I will be able to:  Determine the appropriate tools and techniques to collect data | I will be able to:  Use a variety of tools and equipment to gather data (e.g., microscopes, thermometers, analog and digital meters, computers, spring scales, balances, metric rulers, graduated cylinders, stopwatches | | | I will be able to:  Measure length to the nearest millimeter, mass to the nearest gram, volume to the nearest milliliter, force (weight) to the nearest Newton, temperature to the nearest degree Celsius, time to the nearest second | I will be able to:  Measure length to the nearest millimeter, mass to the nearest gram, volume to the nearest milliliter, force (weight) to the nearest Newton, temperature to the nearest degree Celsius, time to the nearest second |
| **Essential Question(s)** | How does a scientist determine the tools or equipment for an investigation?  How has measurement in science improved (technology)?  How are measurement related? (Ex. Density-mass-volume)? | | | | | | | |
| **Common Core**  **Standards** | W.6.1.B, R.1.6.1, S.L.6.4 | | | | | | | |
| **DOK Level(s)** | 2/3 | | 2/3 | | 2/3 | 2/3 | | 2/3 |
| **Vocabulary** | Hypothesis  Independent Variable  Dependent Variable  Testable | | Graduated cylinder  Metric Ruler  Meter-stick  Triple-Beam Balance  Pipette  Compound Microscope  Coverslip  Test tubes  Glass slide  Beakers  Petri dishes  Flask  Funnel  Eye dropper  Thermometer  Ring Clamp  Ring Stand  Spring-Scale | | Graduated Cylinder  Liters  Meniscus  Microscope (compound)  Glass slide  Cover slip  Thermometer  Celsius  Fahrenheit  Kelvin  Digital Meter  Spring Scales  Newton  Force  Metric Rulers  Meters  Centimeters  Millimeters  Kilometers  Computers | Length  Millimeters  Mass  Grams  Volume  Milliliter  Force  Weight  Newton  Temperature  Celsius  Time  Seconds | | Length  Millimeters  Mass  Grams  Volume  Milliliter  Force  Weight  Newton  Temperature  Celsius  Time  Seconds |
| **Class Procedures/Lesson Design** | **Do Now: (3-5 minutes)**  It’s in the Cards Vocabulary | | **Do Now:** (**3-5 minutes)**  Matching instruments used with definitions | | **Do Now:** (**3-5 minutes**  Match instruments with units of measurement | **Do Now:** (**3-5 minutes)**  Its’s in the Cards Vocabulary | | **Do Now:** (**3-5 minutes)**  Constructed Response Questions Uncovering Student’s Ideas”  Paige Keeley  **Birthday Candles** |
| **Whole Group Lesson Anticipatory Set/Objective, including strategies**  Review how to write a hypothesis. Students will view a video rap about hypotheses. They will also watch/take notes on Study Jam Video: hypothesis. | | **Whole Group Lesson Anticipatory Set/Objective, including strategies**  **(12 – 15 minutes)**  Video: Measurement/Rap | | **Whole Group Lesson Anticipatory Set/Objective, including strategies**  **(12 – 15 minutes**  Students rotate to various stations to identify tools and the type of data gathered. | **Whole Group Lesson Anticipatory Set/Objective, including strategies**  **(12 – 15 minutes)**  **Problem Solving/Career Connection/ Culture (STEM**  Students watch video about forensic anthropology.  [http://www.history.com/videos/written-in-bone-forensic-anthropology-tools-and-techniques#written-in-bone-forensic-anthropology-tools-and-techniques](http://www.history.com/videos/written-in-bone-forensic-anthropology-tools-and-techniques%23written-in-bone-forensic-anthropology-tools-and-techniques)  <http://forensics.rice.edu/en/materials/activity_nine.pdf> | | **Whole Group Lesson Anticipatory Set/Objective, including strategies**  **(12 – 15 minutes)**  Kaboot it .com Review of all concepts taught for the week. |
| **Whole Group Instruction/ Modeling and Checking for Understanding, including strategies: (20 Minutes)**  Lab: Carbohydrate/Formulating Hypotheses | | **Whole Group Instruction/ Modeling and Checking for Understanding, including strategies: (20 Minutes)**  Foldable/Notes: Science Tools and Techniques  List of commonly used science tools: <http://teachertech.rice.edu/Participants/louviere/vms/science/labequipment.html>  Card Game: Science Tools  Students match tool with techniques/uses | | **Whole Group Instruction/ Modeling and Checking for Understanding, including strategies: (20 Minutes)**  Foldable/ Notes: Science Tools, Techniques, and Data | **Whole Group Instruction/ Modeling and Checking for Understanding, including strategies: (20 Minutes)**  Foldable/Notes: Measurement | | **Whole Group Instruction/ Modeling and Checking for Understanding, including strategies: (20 Mins)**  Quiz-Tools and Techniques |
| **Practice/Independent/Small Group Instruction, including strategies: (20 Minutes)**  Students test various soft drinks to determine the type of carbohydrates present. They will compare four drinks and formulate hypotheses for each pair. | | **Guided Practice/Independent/Small Group Instruction, including strategies: (20 Minutes**    Students rotate to various stations to learn more about the tools and techniques. Stations will provide students an opportunity to explore tools through a hands-on experience. | | **Guided Practice/Independent/**  **Small Group Instruction, including strategies: (20 Minutes**  Students are assigned three tools to describe the technique and type of data collected. Poster will be presented to the class. | **Guided Practice/Independent/Small Group Instruction, including strategies: (20 Minutes**  Students rotate to five stations to measure, length, mass, temperature, force, and temperature.  Forensic Anthropology: to compare bone length  TOD using Temperature  Measuring the mass and volume : FS Evidence  Spring Scale Friction Lab  (Who Did I?)  <http://web.dsbn.edu.on.ca/~Chris.Brendzy/FOV1-0018EA0C/S098B0D1E.13/1.15%20Sticky-Shoe-Friction-Lab-Activity.pdf> | | **Guided Practice/Independent/Small Group Instruction, including strategies: (20 Minutes**  Students will carry out their investigation and record data in a data table. (teacher will model how to set up a data table)  Students will graph data. (teacher will model how to set up data table)  Enrichment Group: Will set a data table, graph results and carry out their error analysis independently. |
| **Highly Tested GLEs:**  **(MAP Time) Devoted to MAP Skill/Reinforcers (20 Minutes)** | Vocabulary strategies used to help students with concepts (non-linguistic representations) | | Vocabulary strategies used to help students with concepts (non-linguistic representations)  Test- taking practice | | Vocabulary strategies used to help students with concepts (non-linguistic representations)  Test-taking practice | Vocabulary strategies used to help students with concepts (non-linguistic representations)  Test-taking practice | |  |
| **Daily Formative Assessment**  **(5-10 Minutes)** | Exit Slip: Formulate a hypothesis worksheet | | Exit Slip: Determine the appropriate tool and technique for collecting data | | Exit Slip: Determine the tool, technique and type of data collected | Exit Slip: Measuring length, mass, temperature, volume, and force | | Exit Slip:  Write a conclusion for an investigation/determine the % error |
| **Summative Assessment** | Post-Assessment Scientific Inquiry | | | | | | | |
| **Materials and Resources** | Paige Keeley Uncovering Students Misconceptions  Online Resources noted throughout plan | | | | | | | |
| **Unit Planner and Special Notes** |  | | | | | | |