

Instructional Timeframe:	Learning Goals	Suggested Learning Support
<p>Unit 1 Policies, Procedures, Lab Safety and Process Standards</p> <p>3 weeks</p>	<p>Overarching learning goals: <i>By the end of this unit students will be able to</i></p> <ul style="list-style-type: none"> • Demonstrate their understanding of the science safety rules and procedures • Apply the parts of the scientific method/ Science and Engineering Practices to answer a research question • Identify correct tool and units of measure using the metric system • Understand the nature of science <p>Overarching language goals: <i>By the conclusion of this unit, students will be able to:</i></p> <ul style="list-style-type: none"> • Communicate the rules, goals, objectives and procedures of the classroom using personal student trackers, class trackers, and physically demonstrating appropriate actions and behavior • Identify sources of possible danger in a lab using images and describing those images • Be able to describe through writing a multistep process as part of a lab • Construct hypothesis using independent and dependent variables • Describe something’s empirical properties through observations • Be able to identify parts of an experiment in a written paragraph 	<p>Type here</p> <p>http://designlabnysci.wordpress.com/design-activities/ (Design starter activities from NY-Sci Design Lab)</p> <p>http://designlabnysci.wordpress.com/lessons/ (Extended design activities from NY-Sci Design Lab)</p> <p>http://spaceplace.nasa.gov/science-standards/en/ (Science and Engineering Practices from NASA)</p> <p>http://www.accessexcellence.com/AE/ (Teacher-developed labs from Access Excellence)</p> <p>http://sciencespot.net/Pages/startersgensci.html (Teacher developed general science activities)</p> <p>http://sciencespot.net/Pages/classmetric.html (Metric Mania- great resource for teaching metrics)</p> <p>http://cmase.uark.edu/teacher/workshops/AIMS-lessons/mini-metrics.pdf (Metric Olympics from AIMS)</p> <p>http://www.lewiscenter.org/AE/Departments/Science/Teaching-the-Next-Generations-Science/ (Lewis Center- short videos that discuss and explain the 8 Science and Engineering Standards)</p> <p>http://www.stevespanglerscience.com/lab/experiments (Steve Spangler’s Science Experiments)</p> <p>http://www.biologycorner.com/physics/ (The Nature of Science)</p>
<p>OASS/ PASS Content Standards</p>	<p>2011 Pass- Process Standard 1: Observe and Measure Process Standard 3: Experimental design Process Standard 4: Interpret and Communicate Process Standard 5: Inquiry</p> <p>OASS-Science and Engineering Practices</p>	

OKCPS 8th Grade – Science- Unit 1-
Learning Topics- Lab Safety, Measurements, Experimental Design



<p>PASS Plus</p>	<p>RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. WHST.6-8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.</p>	
<p>OASS-Science & Engineering Practices- (Embedded throughout the year)</p>	<ol style="list-style-type: none"> 1. Asking questions (for science) and defining problems (for engineering) 2. Developing and using models 3. Planning and carrying out investigations 4. Analyzing and interpreting data 5. Using mathematics and computational thinking 6. Constructing explanations (for science) and designing solutions (for engineering) 7. Engaging in argument from evidence 8. Obtaining, evaluating, and communicating information 	
<p style="text-align: center;">Possible Learning Activities Possible Assessments Essential Questions</p>		
<p>Science Safety Contract Identify Laboratory Devices Metric Olympics Metric Mania Extended Design Labs from NY-SCI Drops on a Penny Lab Science Safety Posters Science in the News Article Review Interactive Science Notebook</p> <p>McDougall Littell Science-Oklahoma Lab Manual Grade 8- Measuring Labs-3-12 Making Observations-13-16 Inferring and Hypothesizing-17-20 Identifying Variables-21-22 Designing Experiments-23-28 Organizing and Analyzing Data-29-38 Writing a Lab Report- 39-40</p>	<p><u>Formative-</u></p> <p>Participation in investigation (following the procedures of the lab, and class discussion, Journals, Responses to reading materials, Appropriate use of terms, exit ticket, anticipation guides, pretests, quizzes</p> <p><u>Summative-</u></p> <p>Unit Test, Lab-report graded through a rubric</p>	<ul style="list-style-type: none"> ✓ Why do we have science safety rules and procedures? ✓ Why does science use the metric system? ✓ What role does science play in our world? ✓ What does it mean to be scientifically literate? ✓ How do we evaluate the validity of scientific claims? ✓ How is science related to Math and Reading/Writing?
<p style="text-align: center;">Academic Vocabulary/Concepts Proficiency Scales</p>		
<p>Mass, volume, distance, Independent, dependent variable, scientific method, experimental design, hypothesis, conclusion, observation, qualitative, quantitative, lab report, measurement, lab safety</p>	<p>Coming Soon.....</p>	