

**Contribution from...
Piscataway Township Schools
Instructional Plan**

Week of:		Teacher/ Grade		Subject/ Period	SCIENCE
Theme:	Introduction to Science				
Enduring Understandings					
Standardizing measures allows people to accurately describe the world. The metric system is not difficult to apply. The metric system is based on the number 10. All measures in the scientific world are based on the SI system, or the metric system. Organizing thoughts builds reasoning.					
Essential Questions					
What is the best way to represent data? How are scientific questions answered?					
Objectives					
<p>Students will know...</p> The metric system is used to measure scientific data. Metric units can be converted into smaller and larger units based on a decimal system. The balance is used to measure mass. The graduated cylinder is used to measure liquid volume. That to measure an irregularly shaped item, one must use the water displacement method. Using the scientific method will help organize their thoughts and develop their process skills. Parts of the scientific method. The basic structure, components, and pedagogical benefits of taking and using Cornell notes.					
<p>Students will be able to...</p> Use both a triple-beam balance and a double-pan balance to accurately measure mass. Use a graduated cylinder to accurately measure liquid volume. Use a thermometer to measure degrees Celsius. Use a graduated cylinder to measure the volume of an irregular shaped object. Use analysis skills to answer an open-ended question. Form Cornell Notes based on scientific lecture.					
Content Vocabulary					
Kilo-, hecto-, deka-, deci-, centi-, mili-, metric system, triple beam balance, double pan balance, water displacement, meniscus, SI units, mass, weight, volume, density,					
Resources/Materials					
"Preparing for the NJ GEPA," Life Science text book, www.metricmania.com , teacher-made reproducibles, http://schools.brunnet.net/jmaahs/cornell.html (The Cornell Note taking system)					

Name: _____ Week of: _____

Instructional Strategies/Lesson Sequence		
	MONDAY	TUESDAY
Access Prior Knowledge (Assessing what students know)	Convert the following metric measurements.	Students will be given a comprehensive metric test on the material reviewed thus far.
Motivation (the hook)	Students will have an opportunity to review and ask any questions before taking their unit test tomorrow.	This is their first major test of the marking period. 50 points
Learning Activities	<ol style="list-style-type: none"> 1. DO NOW – see prior knowledge 2. Teacher will ask for responses on their metric circuit. The class will compare answers and check for accuracy. 3. Students will review reading triple beam balances and thermometers by completing worksheets independently. 	<ol style="list-style-type: none"> 1. DO NOW – Name three things you did to prepare for this test. 2. Students will complete “Metric Test” 3. Students who complete test early will begin reading in text pages 4-9, 12, 13.
Closure		By the end of the week, we will be beginning the review of the scientific method. Please become familiar with these concepts.
Homework	Study for Metric Test	In text, read pages 4-9, 12, 13 by Thursday.
Assessment	Students will be called on to respond to their work.	Test will be collected and graded – worth 50 points. Lab practical to follow.

Name: _____ Week of: _____

Instructional Strategies/Lesson Sequence		
	WEDNESDAY	THURSDAY
Access Prior Knowledge (Assessing what students know)	Students will recall measurement skills to complete a liquid volume laboratory practical.	Students will be asked to recall on their knowledge of the scientific method as was learned in the sixth grade.
Motivation (the hook)	Students enjoy lab work and will be graded not only on their lab skills, but also how well they can work cooperatively and safely.	Students will be learning a new note-taking procedure and study tool called Cornell Notes. A distinct understanding in completing these notes will help any student to study more efficiently.
Learning Activities	<ol style="list-style-type: none"> 1. DO NOW – Convert the following metric measurements. 2. Teacher will instruct students on the basic concepts in the lab. Safety rules will be reviewed. 3. In pairs, students will complete lab practical, “Measurement of Fluids Lab Practical Quiz” 4. Students will clean up lab stations and set up for the next class before the bell rings. 	<ol style="list-style-type: none"> 1. DO NOW – Brain teaser 2. Students will be given a piece of Cornell Notes paper. Teacher will go over the basic premise behind Cornell Notes: the structure, function, and benefits to using it. 3. Teacher will set up CN’s with students. 4. Teacher will review the main parts of the scientific method through a powerpoint. Students will complete notes.
Closure	It is your responsibility to clean up your lab station after completing the lab. Clean up points will be deducted for messy stations.	Tonight you must complete the questions and summaries on your Cornell notes. They will be checked tomorrow for 5 points.
Homework	Re-read pages 4-13 in text answer the questions on worksheet.	Complete Cornell Notes
Assessment	Lab practical will be collected and graded – worth 50 points. Students will be monitored as they perform the lab as well as their lab station will be assessed for cleanliness.	Cornell notes will be checked – a pop quiz on the information given during today’s lecture will follow.

Instructional Strategies/Lesson Sequence		
	FRIDAY	NOTES
Access Prior Knowledge (Assessing what students know)	A pop quiz on the previous day's lecture will be given. It will serve as an assessment of the quality of their notes as well as a demonstration of material learned in the sixth grade.	Anticipated Results/Actual Results <ul style="list-style-type: none"> ▪ Cornell Note-taking will be a year-long process that will take a lot of monitoring and feedback. ▪ Many students should recall the steps to the scientific method from their 6th grade process skills unit. ▪ Cleaning and setting up your station for the next class HAS to be enforced as it is impossible to have labs without some kind order and continuity. ▪ Powerpoint already made on the Scientific Method. ▪ Need to reserve an LCD projector for both Thursday and Friday. ▪ Block scheduling will be used on Tuesday and Wednesday so that students can take their metric test AND complete their metric lab.
Motivation (the hook)	Those that completed their notes should do exceptionally well on the pop quiz.	
Learning Activities	<ol style="list-style-type: none"> 1. DO NOW – DLQ 2. Pop Quiz – scientific method. 3. Teacher will review the concepts behind taking Cornell Notes (ex. the STAR method to taking notes) 4. Lecture and powerpoint on the Scientific method will continue. Teacher will pause periodically to ask students what questions they could write in their notes, what abbreviations they should use, how they can shorten sentences, etc... 	
Closure	Cornell Notes will be used throughout the year and throughout all of your academic classes. Scientific method will continue next week, ending with your first MAJOR lab report.	
Homework	NONE	
Assessment	Teacher will circulate and ask various questions regarding the technique of writing notes, as well as the steps to the scientific method. Notes will periodically be collected and assessed throughout the year.	

Administrator's Feedback: Name _____ **Date:** _____

Alignment: Curriculum and Instructional Plan is aligned with curriculum or NJCCCS if curriculum not designed using Understanding By Design as framework.

Rigor: Instruction focuses on discovering the concepts that lies at the heart of the curriculum.

Transfer: Students demonstrate the use of knowledge and skills in new situations

Assessments: Uses the Six Facets of Understanding to measures level of understanding as evidenced through open-ended prompts and challenges that promote the use of knowledge and skills in new, engaging and authentic ways.



All information provided in this and other documents is strictly for educational use and distribution. CESE and KU claim no liability or ownership of these products and offer no guarantee as to their effectiveness or their application.