TFSD Curriculum Calendar 2009-2010

8th Grade Physical Science

Skill or Concept	ISAT	P.S. #	Topic, Task, Content	Projected Window
Students will effectively measure with metric scales, beakers, thermometers, and meter sticks	1.3.3	#1, 3		Aug. 24 (Ongoing throughout year)
Students will convert English measurements to SI units using calculators	1.3.3	#1, 3	*Selected labs, labs in TE p. 5D	
			LABOR DAY – NO SCHOOL	Sept 7
Students will observe, describe, and identify states of matter	1.2.1 1.3.1	#1, 3	Various hands on labs	Sep. 2 –Oct. 2
Students will effectively measure, calculate, and graph	1.3.3 5.2.2 1.8.1	#1, 3	Various hands on labs	
Students will compare and contrast chemical and physical properties of matter	1.2.1 1.3.1 1.6.1	#1, 3	Various hands on labs	
Students will compare and contrast exothermic and endothermic reactions	2.5.1	#1, 3	Various demonstrations and labs	
			STATE TEACHER IN-SERVICE	Oct. 1-2
Students will be able to report/research a selected element: energy levels, number of protons, electrons, neutrons, and isotopes, etc.	2.4.1 2.4.3 1.1.2	#1, 3	Element project: Rubric, brochures, PowerPoint, etc. Students present to peers in class	Oct. 5 -26
Students will earn 80% or better on post test over targeted Power Standards		#1, 3	1st Quarter post-test	Oct 23-29
			END OF 1ST QUARTER – TEACHER IN-SERVICE	Oct. 30
Students will compare and contrast atoms, molecules, and compounds	2.5.1	#1, 3		November 2
Students will compare and contrast physical and	2.4.1	#1, 3	Color the periodic table activity	

chemical properties of metals, nonmetals, and metalloids	**1.6.5** **1.6.6**			
			PARENT/TEACHER CONFERENCES – NO SCHOOL	Nov. 5-6
Students will predict atomic structure (family, period, valence electrons, energy levels) using the periodic table	**2.4.1**	#1, 3	Draw the periodic table activity	Nov. 9-25
Students will accurately build and peer present a designated 3D Bohr atom model	**1.1.2** **2.4.1** **1.6.7**	#1, 3	Student generated 3-D Bohr model project using a rubric Mystery Box: (observation vs. theory)	
			THANKSGIVING BREAK – 1:15 DISMISS	Nov. 25 - 28
Students will be able to explain and give examples of isotopes in regards to their exploration of element projects Students will recognize and give examples of chemical reactions Students will be able to balance simple chemical equations	**2.4.3** **2.5.1** **2.4.1**	#1, 3	Draw on student knowledge from projects Continue peer presentations of project Various teacher demonstrations and student labs Various worksheets (Show Lewis dot examples) Law of conservation of matter demos/labs	Nov. 30 – Jan. 14
Students will compare and contrast covalent and ionic bonding	**2.4.4**	#1, 3	Student demonstrations, teacher demonstrations, video clips (salt, water)	
Students will compare and contrast fission and fusion	**2.4.2** **1.3.2**	#1, 3	Introduce using video clips	
			END OF 2ND QUARTER –1:15 DISMISS	Jan. 14
Students will compare and contrast the laws of conservation of energy and matter	**2.5.1**	#1,2,3	Various labs and revisit balancing equations	Jan.18– Feb. 11
Students will be able to give examples of alternative energy and energy conversions	**2.3.1**	#1,2,3	Labs demonstrating friction (machines = heat) Fossil fuels/global warming research topic	
Students will be able to give examples of conduction, convection, and radiation and explain how it relates to their lives	**2.3.2** **2.4.4**	#1,2,3	Conduction/convection labs Radiation labs (incandescent bulbs, etc.)	

Students will be able to explain and give examples of the electromagnetic spectrum by wavelengths and frequency Students will be able to compare/contrast and give examples of potential and kinetic energy	**2.3.2**	#1,2,3	**T**extbook, overheads, video clips Draw examples of uses/ types of EM waves in order of the EM spectrum, Doppler Effect UV exploration/ cancer discussions, etc. Video clips, text, various labs	Jan. 18–Feb. 11
Students will be able to describe the properties of magnetism	**2.4.5**	#1,2,3,4	Various labs using magnets, overhead demonstrations	
			TEACHER IN-SERVICE	Feb. 12
			PRESIDENTS DAY – NO SCHOOL	Feb. 15
Students will be able to build a basic electrical circuit/electric motor Students will build a project using basic circuitry	**2.4.4** **1.1.1**	#1,2,3,4	Various electrical labs Student project: directions (Rubric), modeling, peer presentation	
Students will be able to effectively explain how electricity is generated	**2.4.5**	#1,2,3,4	Various labs using electromagnetism	
Students will achieve 80% of post test		#1,2,3,4	End of 3rd quarter post test	March 8-11
			END OF 3RD QUARTER 1:15 DISMISSAL	March 12
			SPRING BREAK	March 15-19
Students will compare/contrast potential and kinetic energy and motion	**2.3.2**	#1,2,3,4,5	Various labs demonstrating motion	March 22 - 29
Students will be able to identify and give examples of the three laws of motion	**2.2.1** **1.6.2** **1.6.3**	#1,2,3,4,5	Various labs demonstrating laws of motion	
Students will calculate speed and velocity and identify acceleration on a graph	**2.2.1** **1.6.2** **1.6.3**	#1,2,3,4,5	Various speed, velocity and acceleration labs	
			TEACHER CONFERENCES – NO SCHOOL	April 8 -9
			*Time built in for inability to stay within above timeline	April 11 – May 7

*If time, students will explain and give examples of gas laws		#1,2,3,4,5	Various gas labs: balloons, etc.	
*If time, students will explain and give examples of simple machines		#1,2,3,4,5	Various labs using pulleys, etc.	
Students will successfully/correctly complete a end of year study guide		#1,2,3,4,5	Teacher generated syllabus Class games for review	May 7
Students will achieve 80% or better on end of year post test		#1,2,3,4,5	**End of year post test: Chemistry and Physics**	May 17-21
			MEMORIAL DAY	May 31
Students will complete labs reinforcing physical science concepts		#1,2,3,4,5	Various labs that work well outside with student energy	
			LAST DAY OF SCHOOL 1:15 DISMISSAL	June 2
			END OF FOURTH QUARTER/GRADES	