Westbury High School
Science Department Lesson Plan
A merger of Madeline Hunter's Lesson Cycle and the 5-E Method of Instruction

Teacher: Zhang **Subject: Chemistry**
Date: 11/03/14– 11/07/14 **Lesson: Electron Configuration**

Defining Success

LESSON OBJECTIVE: What will your students be able to do by the end of the class?

Students will be able to identify the masses, charges, and locations of the major particles of the atom (protons, neutrons, and electrons);describe the electron configuration of the atom, draw the Lewis dot structure and bohr model

STANDARDS ADDRESSED: TEKS and ELPs	**MISCELLANEOUS INFORMATION** Marzano's Strategies, key concepts or questions
C.6.A understand the experimental design and conclusions used in the development of modern atomic theory, including Dalton's Postulates, Thomson's discovery of electron properties, Rutherford's nuclear atom, and Bohr's nuclear atom C.6.E express the arrangement of electrons in atoms through electron configurations and Lewis valence electron dot structures --- ELPS C.1.f Use accessible language and learn new and essential language in the process. ELPS C.3.f Ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments. ELPS C.4.g Demonstrate comprehension of increasingly complex English by participating in shared reading, retelling, or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs.	• Comparison and Contrast • Summarization • Graphic Organizers Keywords: Atom, Proton, Neutron, Electron, Electron confi gurations, Hund's rule, Pauli exclusion principle, Aufbau principle, Quantum numbers, Lewis dot structures

Lesson Cycle		MATERIALS
	ANTICIPATORY SET: ***(ENGAGE):*** A "hook" to get the students interest and attention. *(A question, picture, 2-3 minute long video clip, a demonstration).*	
	M: DO NOW- periodic table family review T: DO NOW : periodic table trend review W: DO Now-periodic table trend Review TH: DO Now: periodic table trend Review F/M : DO Now: periodic table trend Review	Periodic table review
	TEACHING/INSTRUCTIONAL PROCESS: ***(EXPLORE/EXPLAIN*****):** *Provide students with a common experience (Labs, hands on activities). Debrief activity, each concept.*	
	M: students will color the periodic table. T: Students will do the hog Hilton activity. W: students will observe the simulation of atomic structure. TH: students will color the periodic table. F/M : simulation-Atomic structure	Simulation-Atomic Structure. Blank PT Hog Hilton Activity
	GUIDED PRACTICE AND MONITORING: (EXPLAIN). Interactive discussions between teacher and students. Guide/help students as they solve problems and/or answer questions. Clarify misconceptions and check for understanding.	
	M: Teacher will explain how to write the electron configuration based on the hog Hilton activity. T: Teacher will explain 3 rules and how to write the electron configuration based on hog Hilton activity. W: Teacher will explain how to write the Electron configuration, Bohr model, lewis dot structure and valence e-. (sub- students will watch the video 1501&1502 to finish the notes and worksheets) TH : Teacher will explain how to write the electron configuration based on the hog Hilton activity. F/M : Students will watch the video to learn the history of atomic theory.(group work)	Ppt-electron configuration Worksheet-PT review Worksheet-Electron configuration 123 Video- Nuclear Worksheet-15.1&15.2 Video-Atomic Theory Worksheet-Atomic Theory Table-Atomic Thoery CBA4 Project-atomic structure
	INDEPENDENT PRACTICE: ***(ELABORATE)*** Students apply the information learned in the Explain to answer questions or solve problems.	
	M: Students will work by group to finish the electron configuration worksheet 2 T: Students will work by group to finish the electron configuration worksheet 1. W: Students will work by group to finish the electron configuration worksheet 3 TH: Students will work by group to finish the electron configuration worksheet 2 F/M: Students will do the worksheet-atomic theory	
	EVALUATE: Assess student mastery. (Quizzes, Lab Reports, Unit tests)	
	M: Periodic table chapter review worksheet T: Periodic table chapter review worksheet W: Students will take CB4 TH: Students will take CB4 F/M: project-Atomic Structure	

SpEd/ ELL Modifications: Pictures of equipment will be shown and the names of equipment will be provided on a worksheet. Safety tests will be modified for SpEd students.
Extended Time
Guided Practice
Shortened Assignments
Peer Tutoring
Short and Repeated Instructions

Visuals
Preferential seating