LESSON PLAN/WEEK AT A GLANCE
Intro to Periodic Table Arrangement

SUBJECT:___Chemistry_____ **TEACHER:__Caldwell___**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
DATE:	Oct 19, 2026	Oct 20, 2026	Oct 21, 2026	Oct 22, 2026	Oct 23, 2026
OBJECTIVE:	Use patterns in the Elemental People activity to explain why elements are organized into periods and groups.	Create an accurate, labeled, color-coded reference table with a key.	Compare major element families and use location to infer properties.	Connect electron configurations, valence electrons, groups and periods.	Explain flame colors using excited electrons and photon emission.
STANDARDS:	LA HS-PS1-1 — Use periodic table patterns to predict properties based on outer electrons and nuclear composition.	LA HS-PS1-1 — Use periodic table as a model; classify and label repeating patterns.	LA HS-PS1-1 — Predict relative properties using group/family patterns and valence electrons.	LA HS-PS1-1 — Relate electron arrangements and outer energy levels to periodic position and properties.	LA HS-PS1-1 (supporting connection) — Relate electron energy levels to element identity; flame-test excitation/emission is an enrichment application.
BELLWORK **5-10min:** *(specific question you will ask on this day)*	Write the electron configuration for Mg (12). Identify the highest occupied principal energy level.	How do a group and a period differ? Where are metals, nonmetals, and metalloids generally located?	Draw the orbital notation for oxygen (8). How many unpaired electrons does it have?	An element is in group 17, period 3. Name it, classify it, and predict its valence electron count.	During a flame test, what happens when an electron absorbs energy and moves from ground state to excited state? What happens when it returns to a lower energy level?
DIRECT INSTRUCTION **10-15 min:** *(What you are doing for teacher guided instruction)*	Brief review of periodic law, groups vs. periods, and the idea that recurring properties create families; connect to students' prior	Model table labeling and explain how to design a consistent legend; show a sample without prescribing colors.	Introduce alkali metals, alkaline earth metals, transition metals, halogens, noble gases; reactivity patterns.	Model links: highest occupied energy level → period; outer electrons → main-group patterns.	Pre-lab: safety, flame-test procedure, excited electrons, emission of visible light.

	knowledge of element blocks.				
GUIDED PRACTICE 15-20 min: *(How you will lead the students in completing practice of modeled tasks)*	Introduce the “Elemental People” activity: students identify characteristics/clues on each person card and propose an organized arrangement. Discuss how repeated traits create families (columns) and ordered sequences create rows.	Begin color-coding regions and families; check legend and accuracy as students work.	Compare Li/Na, F/Cl, Ne/Ar; complete family identification examples.	Work through Na, Mg, Cl, Ar with configurations, valence electrons and locations.	Teacher demonstration, then supervised testing of prepared metal salt samples.
INDEPENDENT PRACTICE/ ASSIGNMENTS/ ACTIVITIES 15-20 mins: *(How the student will practice the skill independently)*	Elemental People sorting activity: in pairs/groups, arrange the provided people cards by repeating characteristics and logical progression. Students sketch their arrangement and write 2–3 sentences explaining their rules. Compare arrangements with the periodic table; if time permits, do a short element scavenger hunt.	Finish personal periodic table: labeled groups 1–18, periods 1–7, staircase, metals, nonmetals, metalloids, named families and legend. Collect for 25 points.	Graded “Periodic Table Detective” worksheet (25 points): family/group/period/classification and evidence-based predictions.	Element ID challenge: use 6 configurations to determine element, group, period and valence electrons.	Flame-test data sheet: record sample/color, connect observations to electron transitions, answer analysis questions (25 points).
CLOSURE/EXIT TICKET 5 mins: *(Specific question you will ask on this day)*	What characteristic did your group use to make columns, and what determined the order of rows? How is this similar to the periodic table?	Explain two colors and two labels in your key.	Name one shared property of elements in the same family.	How can a configuration help identify an element’s period?	Why do different elements produce different flame colors?
HOMEWORK: *(Anything that will be done at home from today’s lesson)*	.		Study		

UPCOMING ASSESSMENTS/DEADLINES:					