

## ICS1 – ACTIVE CHEMISTRY STORYBOARD

	<b>PT 1</b>	<b>PT 2</b>	<b>PT 4</b>	<b>PT 5</b>	<b>PT 6</b>	<b>PT 7</b>	<b>PT 8</b>
<b>Student Experience/ Experimental Evidence</b>	Students organize a store based on the properties of the items for sale.	Students test elements for conductivity & reaction with acid	Students simulate Rutherford's gold foil experiment using the Battleship game.	Students observe the spectrum of light given off by hydrogen gas.	Students graph the 1 <sup>st</sup> ionization energies (1 <sup>st</sup> IE).	Students read how Argon was discovered.	Students make the connection - the position of an element in the PT determines its valence electrons.
<b>Big Idea/ Chapter Challenge</b>	Analyze trends in the arrangement of the store. Relate the arrangement of the items in the store to the arrangement of elements in the periodic table.	Elements have characteristic chemical and physical properties that can be used to identify the element The position of the element on the PT determines the physical and chemical properties.	The atom is mostly empty space and the mass is concentrated in a dense nucleus. The number of p <sup>+</sup> is equal to the atomic number.	Each element has a unique line spectrum based on e- configuration. The row on the PT corresponds to energy levels.	IE helped determine the structure of the periodic. Blocks on PT correspond to sublevels in e <sup>-</sup> clouds	Once 1 element in a group was identified it predicted the existence of others. The PT position of new elements (manmade) can be predicted	Atoms react based on valence shell e <sup>-</sup> configuration Use of octet rule and PT to predict ionic and covalent formulas
<b>Steps</b>	ALL	ALL	3ab.,4a, 5a, 6a	1a,b	1a-d, 2a, c, 3a-c, 4a, 5a,-d, 6a-g	No activity; Read Chemtalk	ALL
<b>CA Chem. Content Standards</b>	1.a	1b. c.	1.e.	1.d	1.d	1.f*	2.a.b.c.
<b>Time</b>	60-90 min	120 min	60 min	60 min	60 min	20 min read only	180 min
<b>Pages</b>	358-359	360-363	377-384	385-394	395-403	404-411	412-418

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	<b>CC 2</b>	<b>CC 3</b>	<b>CC 5</b>	<b>CC 7</b>
<b>Student Experience/ Experimental Evidence</b>	Students observe micro scale reactions in solutions.	Students combine various materials to determine whether or not a chemical reaction occurs.	Students create hot and cold packs.	Students test common materials for pH.
<b>Big Idea/ Chapter Challenge</b>	New substances are formed when chemicals react. Compound properties have patterns like elements do.	Chemical reactions do not occur under all conditions. Use of octet rule and PT to predict ionic formulas	Some reactions absorb energy and other reactions release energy.	pH indicators show the presences of an acid or base.
<b>Steps</b>	ALL	Steps 1-10	Step 1-4;	Steps 1-6; Demo step 7
<b>CA Chem. Content Standards</b>	2.a	2.a	7.b.c.	5.a.c.
<b>Time</b>	220 min	180 min	90 min	120 min
<b>Pages</b>	443-448	449-455	466-471	480-488