

## Social Emotional Learning—5 Pillars



**Self-Awareness:** The ability to accurately recognize one’s emotions and thoughts and their influence on behavior. This includes accurately assessing one’s strengths and limitations and possessing a well-grounded sense of confidence and optimism.

**Self-Management:** The ability to regulate one’s emotions, thoughts, and behaviors

effectively in different situations. This includes managing stress, controlling impulses, motivating oneself, and setting and working toward achieving personal and academic goals.

**Social Awareness:** The ability to take the perspective of and empathize with others from diverse backgrounds and cultures, to understand social and ethical norms for behavior, and to recognize family, school, and community resources and supports.

**Relationship Skills:** The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. This includes communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively, and seeking and offering help when needed.

**Responsible Decision Making:** The ability to make constructive and respectful choices about personal behavior and social interactions based on consideration of ethical standards, safety concerns, social norms, the realistic evaluation of consequences of various actions, and the well-being of self and others.

**Learn more about Social Emotional Learning. —>**



## Clint ISD Chemistry

### Science Calendar 2021-2022

The following calendar does not contain the process standards but are included at the end of this booklet on page 14. The 5 pillars of Social Emotional Learning can be found on page 16 and a sample block schedule is on page 15 for your reference.

This calendar can be used along with the TEKS Resource System (IFD) to plan instruction. Quality instruction aligned with the curriculum at an appropriate level of rigor will ensure that students are successful.

The 4 week exam is a short checkpoints (10 items or less) covering only that 4 week window of instructional time. The 9 weeks checkpoint is longer, approximately 15-20 items; it covers content taught during the full preceding 9 weeks of instructional time. The 9-Week Checkpoints will include new test types to prepare for the STAAR 2.0 exam. The 4 weeks assessment can be taken for a daily grade at your discretion. The 9 weeks exam can be counted as a test grade at teacher discretion and data will be pulled at the campus and district level to support instruction.



Together...  
*We Build Tomorrow!*

July 2021 - Chemistry - Clint ISD						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4 	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19 Teacher PD	20 Teacher PD	21 Teacher PD	22 Teacher PD	23 Teacher PD	24
25	26 Safety Rituals Routines	27	28 Dimensional Analysis	29	30 C.4A Unit 1	31

August 2021 - Chemistry - Clint ISD						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 C.4A	3	4	5 C.4B	6	7
8	9 C.4C MAP Testing	10 MAP Testing	11 MAP Testing	12 MAP Testing	13 C.4D MAP Testing	14
15	16 C.4D	17	18	19 4-Weeks Exam	20 4-Weeks Exam	21
22	23 C.5A Unit 2	24	25 C.5B	26	27 C.5C	28
29	30 C.5C	31 C.6A	X	X	X	

## 45-50 MINUTE SCHEDULE

- Anticipatory Set—(5 min)** An engaging anticipatory set to pique students' interest, build relevance, bring concepts out of long-term memory or just set the stage for learning. (E.g. Bell Ringer, Review Games, Writing Prompt)
- Direct Instruction — (10-15 min)** Some kind of direct instruction, where the teacher delivers the day's lesson through a lecture, doing a demonstration, showing a video, having students read through some kind of text or do an interactive online lesson. During this time you can implement either Critical Writing or Frequent Small Group Purposeful Talk.
- Content Application — (10-15 min)** Student application of the content. This might take the form of individual practice, station teaching, or some other kind of group work. The 15 minute application time can be broken up however you see fit, 10 minutes for activity 1 and 5 minutes for activity 2 etc.. (E.g. Writing Prompt, creation of a product, review game or a combination of tasks)
- Assessment and/or Clarification — (10 min)** An assessment of the content or skill, followed perhaps by re-teaching to those who need it and an extension activity for students who met the standard. (E.g. STAAR Question(s), writing prompt, review game, creation of a product)
- Course Reflection — (5 min)** A reflection or other kind of wrap-up, where the value of the lesson is reinforced.
- You're Not Alone —** Not all lessons follow an exact road map. if you would like additional support on creating 90 minute lessons reach out to your curriculum coach, and/or content coordinator.

# Science Process Standards

(Blue—Tools to Know, Green—Ways to Show)

(1) Scientific processes. The student, for at least 40% of instructional time, conducts laboratory and field investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

(A) demonstrate safe practices during laboratory and field investigations, including the appropriate use of safety showers, eyewash fountains, safety goggles or chemical splash goggles, as appropriate, and fire extinguishers;

(B) know specific hazards of chemical substances such as flammability, corrosiveness, and radioactivity as summarized on the Safety Data Sheets (SDS); and

(C) demonstrate an understanding of the use and conservation of resources and the proper disposal or recycling of materials.

(2) Scientific processes. The student uses scientific practices to solve investigative questions. The student is expected to:

(A) know the definition of science and understand that it has limitations, as specified in subsection (b)(2) of this section;

(B) know that scientific hypotheses are tentative and testable statements that must be capable of being supported or not supported by observational evidence. Hypotheses of durable explanatory power that have been tested over a wide variety of conditions are incorporated into theories;

(C) know that scientific theories are based on natural and physical phenomena and are capable of being tested by multiple independent researchers. Unlike hypotheses, scientific theories are well established and highly reliable explanations, but may be subject to change as new areas of science and new technologies are developed;

(D) distinguish between scientific hypotheses and scientific theories;

(E) plan and implement investigative procedures, including asking questions, formulating testable hypotheses, and selecting equipment and technology, including graphing calculators, computers and probes, electronic balances, an adequate supply of consumable chemicals, and sufficient scientific glassware such as beakers, Erlenmeyer flasks, pipettes, graduated cylinders, volumetric flasks, and burettes;

(F) collect data and make measurements with accuracy and precision;

(G) express and manipulate chemical quantities using scientific conventions and mathematical procedures, including dimensional analysis, scientific notation, and significant figures;

(H) organize, analyze, evaluate, make inferences, and predict trends from data; and

(I) communicate valid conclusions supported by the data through methods such as lab reports, labeled drawings, graphs, journals, summaries, oral reports, and technology-based reports.

(3) Scientific processes. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom. The student is expected to:

(A) analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, so as to encourage critical thinking by the student;

(B) communicate and apply scientific information extracted from various sources such as current events, published journal articles, and marketing materials;

(C) draw inferences based on data related to promotional materials for products and services;

(D) evaluate the impact of research on scientific thought, society, and the environment;

(E) describe the connection between chemistry and future careers; and

(F) describe the history of chemistry and contributions of scientists.

## July 2021

### Dimensional Analysis

## August 2021

### Unit 01: Matter

**C.4A** Differentiate between physical and chemical changes and properties.

**C.4B** Identify extensive properties such as mass and volume and intensive properties such as density and melting point.

**C.4C** Compare solids, liquids, and gases in terms of compressibility, structure, shape, and volume.

**C.4D** Classify matter as pure substances or mixtures through investigation of their properties.

### Unit 02: Atomic Structure and the Periodic Table

**C.5A** Explain the use of chemical and physical properties in the historical development of the Periodic Table.

**C.5B** Identify and explain the properties of chemical families, including alkali metals, alkaline earth metals, halogens, noble gases, and transition metals, using the Periodic Table.

**C.5C** Interpret periodic trends, including atomic radius, electronegativity, and ionization energy, using the Periodic Table.

**C.4A, C.4B, C.4C— 4 Wks Tested**

September 2021 - Chemistry - Clint ISD						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	X	X	1 C.6A	2	3	4
5	6 Labor Day	7 C.6B	8	9	10	11
12	13 C.6C Unit 3	14	15 C.6D Half Day	16	17	18
19	20 C.6D	21 9-Weeks Test	22 9-Weeks Test	23 9-Weeks Test	24 9-Weeks Test	25
26	27 Intersession	28 Intersession	29 Intersession	30 Intersession	X	

October 2021 - Chemistry - Clint ISD						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	^	X	X	X	1 Intersession	2
3	4 Intersession	5 Intersession	6 Intersession	7 Intersession	8 Intersession	9
10	11 C.7C	12	13 C.7D	14	15 C.7E	16
17	18 C.7E Chemistry Week	19	20	21 C.7A Unit 4	22	23
24	25 C.7A	26	27	28	29 Teacher PD	30
31	X	X	X	X	X	

## May 2022

### Unit 10: Acids and Bases

**C.10E** Distinguish among types of solutions such as ~~electrolytes and nonelectrolytes; unsaturated, saturated, and supersaturated solutions; and strong and weak acids and bases.~~

**C.10G** Define acids and bases and distinguish between Arrhenius and Bronsted-Lowry definitions and predict products in acid-base reactions that form water.

**C.10H** Define pH and calculate the pH of a solution using the hydrogen ion concentration.

### Unit 11: Thermochemistry

**C.11A** Describe energy and its forms, including kinetic, potential, chemical, and thermal energies.

**C.11B** Describe the law of conservation of energy and the processes of heat transfer in terms of calorimetry.

**C.11C** Classify reactions as exothermic or endothermic and represent energy changes that occur in chemical reactions using thermochemical equations or graphical analysis.

**C.11D** Perform calculations involving heat, mass, temperature change, and specific heat

### Unit 12: Nuclear Chemistry

**C.12A** Describe the characteristics of alpha, beta, and gamma radioactive decay processes in terms of balanced nuclear equations.

**C.12B** Compare fission and fusion reactions.

**C.8G, C.9B, C.9A, C.10A, C.10B, C.10C, C.10D, C.10E, C.10G— 9Wks Tested**

## June 2022

### Unit 12: Nuclear Chemistry

**C.12A** Describe the characteristics of alpha, beta, and gamma radioactive decay processes in terms of balanced nuclear equations.

**C.12B** Compare fission and fusion reactions.

MAY 2022 - Chemistry - Clint ISD						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 C.10E	3 State Testing	4 State Testing	5 State Testing	6	7
8 Mother's Day	9 C.10G	10	11	12	13 C.10H	14
15	16 C.10H	17	18 Half Day	19 C.11A, C.11B Unit 11	20	21
22	23 9-Weeks Exam MAP Testing	24 9-Weeks Exam MAP Testing	25 9-Weeks Exam MAP Testing	26 9-Weeks Exam MAP Testing	27 C.11C, C.11D	28
29	30 Memorial Day	31 C.11C, C.11D	X	X	X	

JUNE 2022 - Chemistry - Clint ISD						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 C.12A, C.12B Unit 12	2 Last Day	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19 Father's Day	20	21 State Testing	22 State Testing	23 State Testing	24 State Testing	25
26	27	28	29	30		

## September 2021

### Unit 02: Atomic Structure and the Periodic Table

C.6A Describe 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.6B Describe the mathematical relationships between energy, frequency, and wavelength of light using the electromagnetic spectrum.

C.6C Calculate average atomic mass of an element using isotopic composition.

### Unit 03: Chemical Bonding

C.6D Express the arrangement of electrons in atoms of representative elements using electron configurations and Lewis valence electron dot structures.

C.7C Construct electron dot formulas to illustrate ionic and covalent bonds.

C.7D Describe metallic bonding and explain metallic properties such as thermal and electrical conductivity, malleability, and ductility.

C.4A, C.4B, C.4C, C.4D, C.5A, C.5B, C.5C, C.6A, C.6B, C.6C, C.6D— 9Wks Tested

## October 2021

### Unit 03: Chemical Bonding

C.7E Classify molecular structure for molecules with linear, trigonal planar, and tetrahedral electron pair geometries as explained by Valence Shell Electron Pair Repulsion (VSEPR) theory.

C.7C Construct electron dot formulas to illustrate ionic and covalent bonds.

C.7D Describe metallic bonding and explain metallic properties such as thermal and electrical conductivity, malleability, and ductility.

### Unit 04: Chemical Formulas

C.7A Name ionic compounds containing main group or transition metals, covalent compounds, acids, and bases using International Union of Pure and Applied Chemistry (IUPAC) nomenclature rules.

### November 2021 - Chemistry - Clint ISD

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 C.7A	2	3 4-Weeks Exam	4 4-Weeks Exam	5 C.7B	6
7	8 C.7B	9 C.8F Unit 5	10 Half Day	11 Veterans Day	12 C.8F	13
14	15 C.8F	16	17	18	19	20
21	22 T-Giving	23 T-Giving	24 T-Giving	25 T-Giving	26 T-Giving	27
28	29 C.8E	30	X	X	X	

### December 2021 - Chemistry - Clint ISD

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	X		1 C.8E	2	3 C.8A Unit 6	4
5	6 C.8A	7 State Testing	8 State Testing	9 State Testing	10 State Testing	11
12	13 9-Weeks Exam/Fall Benchmarks	14 9-Weeks Exam/Fall Benchmarks	15 9-Weeks Exam/Fall Benchmarks	16 9-Weeks Exam/Fall Benchmarks	17 Last Day 9-Weeks Exam/Fall Benchmarks	18
19	20 Break	21 Break	22 Break	23 Break	24 Break	25
26	27 Break	28 Break	29 Break	30 Break	31 Break	

### March 2022

#### Unit 08: Gases

**C.8G** Perform stoichiometric calculations, including determination of mass and gas volume relationships between reactants and products and percent yield.

**C.9A** Describe and calculate the relations between volume, pressure, number of moles, and temperature for an ideal gas as described by Boyle's law, Charles' law, Avogadro's law, Dalton's law of partial pressure, and the ideal gas law.

**C.9B** Describe the postulates of kinetic molecular theory.

**C.8C, C.8D, C.8B, C.8A, C.8G, C.8H — 9Wks Tested**

### April 2022

#### Unit 09: Solutions

**C.10A** Describe the unique role of water in solutions in terms of polarity.

**C.10B** Apply the general rules regarding solubility through investigations with aqueous solutions.

**C.10C** Calculate the concentration of solutions in units of molarity.

**C.10D** Calculate the dilutions of solutions using molarity.

**C.10E** Distinguish among types of solutions such as electrolytes and nonelectrolytes; unsaturated, saturated, and supersaturated solutions; ~~and strong and weak acids and bases.~~

**C.10F** Investigate factors that influence solid and gas solubilities and rates of dissolution such as temperature, agitation, and surface area.

**C.8G, C.9B, C.9A, C.10A, C.10C — 4 Wks Tested**

### MARCH 2022 - Chemistry - Clint ISD

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		9-Weeks	9-Weeks	9-Weeks	9-Weeks	
6	Interession	7	Interession	8	Interession	9
		10	Interession	11		12
13	Break	14	Break	15	Break	16
		17	Break	18		19
20	21	22	23	24	25	26
	C.8G	→	C.9B	→	C.9A	
27	28	29	30	31		
	C.9A	→		C.10A Unit 9	X	

### APRIL 2022 - Chemistry - Clint ISD

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
	X	X	X	X	C.10A	
3	4	5	6	7	8	9
	C.10A	→	C.10C	→	C.10B	
10	11	12	13	14	15	16
	C.10B	4-Weeks Exam	4-Weeks Exam	C.10D	Good Friday	
17	18	19	20	21	22	23
Easter Sunday	C.10D	C.10E	→	→	→	
			Half Day			
24	25	26	27	28	29	30
	C.10F	→	→	→	C.10E Unit 10	

## November 2021

### Unit 04: Chemical Formulas

**C.7A** Name ionic compounds containing main group or transition metals, covalent compounds, acids, and bases using International Union of Pure and Applied Chemistry (IUPAC) nomenclature rules.

**C.7B** Write the chemical formulas of ionic compounds containing representative elements, transition metals and common polyatomic ions, covalent compounds, and acids and bases.

### Unit 05: Chemical Equations and Reactions

**C.8F** Differentiate among double replacement reactions, including acid-base reactions and precipitation reactions, and oxidation-reduction reactions such as synthesis, decomposition, single replacement, and combustion reactions.

**C.8E** Write and balance chemical equations using the law of conservation of mass.

**C.7A, C.7C, C.7D, C.7E— 4 Wks Tested**

## December 2021

### Unit 05: Chemical Equations and Reactions

**C.8E** Write and balance chemical equations using the law of conservation of mass.

### Unit 06: Mole Concept

**C.8A** Define and use the concept of a mole.

**C.7C, C.7D, C.7E, C.7A, C.7B, C.8F, C.8E, C.8A— 9Wks Tested**

JANUARY 2022 - Chemistry - Clint ISD						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	X	X	X	X	X	1 New Year's Day
2	3 Break	4 C.8C	5	6	7	8
9	10 C.8D	11	12 Dimensional Analysis Half Day	13	14 C.8.B	15
16	17 M L King Day	18 C.8.B MAP Testing	19 MAP Testing	20 MAP Testing	21 C.8.A Unit 7 MAP Testing	22
23	24 C.8.A	25	26	27 4-Weeks Exam	28 4-Weeks Exam	29
30	31 C.8G	X	X	X	X	

FEBRUARY 2022 - Chemistry - Clint ISD						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 C.8G	2	3	4	5
6	7 C.8G	8 Dimensional Analysis	9	10	11	12
13	14 C.8H Valentine's Day	15	16	17	18 PD Day	19
20	21 Presidents' Day	22 C.8A Unit 8	23	24	25	26
27	28 9-Weeks	X	X	X	X	

## January 2022

### Unit 06: Mole Concept

**C.8B** Calculate the number of atoms or molecules in a sample of material using Avogadro's number.

**C.8C** Calculate percent composition of compounds.

**C.8D** Differentiate between empirical and molecular formulas.

### Unit 07: Stoichiometry

**C.8A** Define and use the concept of a mole.

**C.8B, C.8C, C.8D— 4 Wks Tested**

## February 2022

### Unit 07: Stoichiometry

**C.8G** Perform stoichiometric calculations, including determination of mass and gas volume relationships between reactants and products and percent yield.

**C.8H** Describe the concept of limiting reactants in a balanced chemical equation.

### Unit 08: Gases

**C.8A** Define and use the concept of a mole.

**C.8G** Perform stoichiometric calculations, including determination of mass and gas volume relationships between reactants and products and percent yield.

**C.9A** Describe and calculate the relations between volume, pressure, number of moles, and temperature for an ideal gas as described by Boyle's law, Charles' law, Avogadro's law, Dalton's law of partial pressure, and the ideal gas law.

**C.9B** Describe the postulates of kinetic molecular theory.