



# TRINITY CLASSICAL SCHOOL

## Science 11: Chemistry

Taught by: Mr. Reimer

### Course Description

Before Jesus lived, Greeks like Democritus argued about whether any material could be infinitely divided into smaller parts of the same material or whether those parts are ultimately made of some kind of unique building blocks. In Genesis chapter one, God created a “good” world and gave it to his image bearers (us humans) for us to rule and organize. The study of Chemistry is one way we “organize” or “subdue” creation. By studying how molecules are made and changed, we become more thoughtful stewards of creation. Learning chemistry is a window into the precision of God’s design in the material world. Chemistry teaches us that the world operates in precise patterns that we can study. That nature is intelligible speaks to His gifts of reasoning to people. That we can understand part of God’s design and use it to glorify him and bless others is part of our mission as image bearers. Chemistry also teaches us that when we align our lives with God’s design and plan then we can benefit from his creation or we can work at cross purposes to God and his creation and suffer the consequences of our disobedience.

### Class Time

- Investigating essential properties of matter through measurement and experimentation.

### Nightly Homework

- Monday - Thursday work will consist of completing classwork, writing reports, reading and reviewing.

### Assessments

- Assessments will occur regularly worth little (quizzes) and worth a lot (tests.)
- A cumulative assessment will be given at the end of each semester

### Friday Home Study Day (~ 60 mins)

- Reading
- Practicals at home (building and measuring activities)
- Studying for quizzes & tests

### Grade Breakdown

- 50% Assessments (quizzes and tests)
- 40% Practice (engagement, detail, quality, correct response, completion, etc.)
- 10% Semester Exams (each semester has one comprehensive exam)



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## Approximate Timeline

Sequence	Weeks	Topic	Planning
September	2	1. <a href="#">Claim, Evidence Reasoning (CER 1: Siphon)</a>	<a href="#">Sept 22-23</a>
	2	2. <a href="#">Naming compounds and molecules (ch 4)</a>	<a href="#">Sept 24-26</a> ; <a href="#">Sept 29-Oct 3</a> ;
October	2	3. <a href="#">Molecules and Compounds (ch 2 &amp; 3)</a> <i>Next year put this <b>before</b> naming</i>	
	2	4. <a href="#">Moles &amp; Chemical Quantities</a> (ch 5 & 6)	
November	2	5. <a href="#">Chemical Reactions: Balancing</a> (ch 7)	
	2	Chemical Reactions in Aqueous Solution & Others (ch 8)	
December	2	Stoichiometry and Limiting Reagents (ch 9)	<a href="#">Year long study guide link</a>
	2	<b>CER 2: Potato Cannon Fuel</b>	
January	2	Energy and Hess' Law (no thermodynamics) (ch 10)	
	2	Modern Atomic Theory (ch 11.9-11.11)	
February	1	Chemical Bonding (ch 12)	
	3	Gases (ch 13)	
March	1	Solutions (ch 15)	
	3	Acids, Bases (ch 16)	
April	2	<b>CER 3: <a href="#">Making Smelling Salts</a></b>	
	2	Equilibrium (ch 17)	
May	3	Redox Chemistry (ch 18)	
	1	<b>CER 4: <a href="#">Making a battery (Electrochemical cell)</a></b>	

**Antoine Lavoisier** said, "It is in these things which we neither see nor feel, that it is especially necessary to guard against our extravagant imagination which forever inclines to step beyond the bounds of truth, and is very difficultly restrained within the narrow line of facts."

*Elements of Chemistry (1740)*