

St. Croix Lutheran High School
Chemistry
Syllabus
2011-2012

Mr. Jeff Strehlow

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Text:

World of Chemistry. McDougal Littell, 2006.

Course Outcomes:

- ◆ The student will give glory to God for his infinite wisdom shown in the awesome design of his creation;
- ◆ The student will understand the nature of matter including its forms, properties and interactions.
- ◆ The student will describe chemical reactions and the factors that influence them.
- ◆ The student will understand the nature of scientific ways of thinking and that scientific knowledge changes and accumulates over time.
- ◆ The student will design and conduct scientific investigations.
- ◆ The student will understand the relationship between science and technology and how both are used.
- ◆ The student will recognize the historical and cultural context of scientific endeavors and how they influence each other.
- ◆ The student will practice and appreciate the collaborative nature of science.

Course Content (*Essential Questions*):

- ◆ CONCEPTS TAUGHT AND REVIEWED THROUGHOUT THE YEAR
 - Lab Safety / Lab Equipment Use
 - *“How could I get hurt in this class?”*
 - Measurements and Calculations
 - *“How do I use the quantitative tools of science?”*
- ◆ SEMESTER I
 - Nature of Science & Engineering
 - *“How does a scientist think?”*
 - Matter ó States
 - *“What’s the matter?”*
 - Matter - Mixtures
 - *“How does matter ‘mix it up’?”*
 - Chemical Foundations: Elements & Compounds
 - *“What are the elements of an atom?”*
 - *“What are compounds?”*
 - *“How does one communicate compound formulas and names?”*
 - Chemical Composition
 - *“What’s a ‘mole’ for?”*

- ◆ SEMESTER II
 - Nature of Science & Engineering
 - “Who does science?”
 - Chemical Reactions: An Introduction
 - “How can we make a chemical reaction react faster?”
 - “What’s so great about a balanced chemical equation?”
 - Reactions in Aqueous Solutions
 - “What important chemical reactions often take place ‘underwater?’”
 - Nature of Science & Engineering
 - “How is science limited?”
 - Modern Atomic Theory
 - “How did we arrive at our modern atomic theory?”
 - “Why do we care about where electrons are in an atom?”
 - Chemical Bonding
 - “Why do atoms develop relationships?”
 - “What does organic chemistry basically look like?”

Procedures & Policies:

- ◆ *Classroom Behavior Rule: “Respect.”*
- ◆ *Safety: Students will demonstrate a commitment to safety by learning proper laboratory procedures and by signing a chemistry student safety contract.*
- ◆ *Technical notebook/3-ring binder: Students will be asked to maintain a chemistry notebook/binder and to bring it to every class. These will be assessed from time to time for accuracy and completion.*
- ◆ *Passing period: The passing period will be extended 1 minute for Mr. Strehlow’s room. Students may use this extra time to use the restroom or to retrieve an item forgotten in a locker. Once class has begun, students are not allowed to leave the classroom unless it is an emergency.*
- ◆ *Online: Students are encouraged to utilize Mr. Strehlow’s webpage and their own online grade reports regularly.*
- ◆ *Grades*
 - *Letter grades are designed to strictly assess students’ levels of mastery.*
 - *Extra credit work will not be offered.*
 - *Daily work is to be viewed as “practice”; therefore, its weight for the overall grade is minimal.*
 - *Weighting for overall grade*
 - *Tests / Performance Assessments* 40%
 - *Quizzes* 25%
 - *Daily Work* 10%
 - *Technical Notebook / Lab Reports* 10%
 - *Semester Exam/Project* 15%
 - *Grading scale: St. Croix’s standard scale as listed in the Student Handbook*

Thank you for taking this class. I look forward to growing with you as we explore and appreciate the wonders of God’s creation. - Mr. Strehlow

Name: _____

Chemistry Syllabus Reflection Questions

1. Under the "Policies & Procedures" section, there is one classroom behavior rule. Please list 3 specific ways in which you could abide by this rule in this class.
 - a. .
 - b. .
 - c. .
2. You receive a 86% on a test. What letter grade would this represent?
3. What, in your opinion, are some characteristics of a good science teacher?
 - a. .
 - b. .
 - c. .
4. According to the syllabus, what will your letter grade represent?
5. When, exactly, would you be considered tardy in Mr. Strehlow's class?
6. When may you ask the teacher for an extra credit project?
7. Why does "Daily Work" count for only 10% of your overall grade?
8. Each topic under "Course Content" is followed by "essential questions." "Essential questions" are meant to help us focus on the few "big ideas" important to understanding chemistry.
 - a. Which essential question do you feel you already know the *most* about?
 - b. Which essential question do you feel you know the *least* about?
 - c. Which essential question are you most excited to explore?