

HONORS CHEMISTRY 2009 SUMMER PROJECT

(STORCH)

PART I

You will be given a test during the first week of the 2009 - 2010 school year. The test will be based on :

1. major contributions to the evolution of the science of chemistry made by the twenty five individuals listed below.
2. Chapters 1 and 2 of your text (Modern Chemistry). Questions will come from chapter vocabulary and reviewing concepts questions at the end of these chapters.
3. Names/symbols of elements in the Periodic Table (given the chemical symbol provide the properly spelled name or given the name provide the proper chemical symbol).

This test will be worth 100 points and will be one of the first two (**see Part II on the back of this sheet**) major grades for the first quarter of your honors chemistry course. You will need to prepare for this test during the summer by doing some research about the individuals listed below, learning the names and chemical symbols for the elements of the Periodic Table and reading Chapters 1/2 of your text, learning the vocabulary and being able to answer the reviewing concepts questions for these chapters.

The course texts for the coming year are: Modern Chemistry (Holt, Rinehart, Winston -ISBN 0030735467) and the Modern Chemistry Section Reviews (ISBN 0030367778). You should purchase a copy of each as soon as possible.

- * Democritus (c 460-370 BC)
- * Robert Boyle (1627-1691)
- * Joseph Priestley (1733-1804)
- * Antoine Lavoisier (1743-1794)
- * Jacques Alexander Cesar Charles (1746-1823)
- * John Dalton (1766-1844)
- * Amedeo Avogadro (1776-1856)
- * Joseph Gay-Lussac (1778-1850)
- * Johann Dobereiner (1780-1849)
- * Thomas Graham (early 1800s)
- * James Prescott Joule (1818-1889)
- * John Tyndall (1820-1893)
- * William Thomson(1824-1907)**Lord Kelvin**
- * Dmitri Mendeleev (1843-1907)
- * John Newlands (1837-1898)
- * Antoine Henri Becquerel (1852-1908)
- * Joseph John Thomson (1856-1940)
- * Svante Arrhenius (1859-1927)
- * Robert Millikan (1868-1953)
- * Lord Ernest Rutherford (1871-1937)
- * Gilbert Newton Lewis (1875-1946)
- * Niels Bohr (1885-1962)
- * Henry Gwyn-Jeffrys Moseley (1887-1915)
- * James Chadwick (1891-1974)
- * Werner Heisenberg (1901-1976)

HONORS CHEMISTRY 2009 SUMMER PROJECT PART II (STORCH)

Five short essays with documentation are due on the first full class day (Tuesday) of the 2009 - 2010 school year. One essay is due from each of the **five** topic categories listed below. Each essay should be a minimum of two full, typed, doubled spaced pages and a maximum of three pages. Each essay must include: a cover page, at least two parenthetical references from separate sources and a works cited page. You may **NOT** use your textbook as one of the required sources. Essays must follow the MLA documentation style discussed on pages 374 to 400 of your Prentic Hall Reference Guide. A sample MLA-style research paper is discussed on pages 401 to 417 of your Reference Guide. Each essay is worth 20 points and will be graded using the following criteria:

	1	2	3	4	5
THEME (4 PTS) – appropriate to topic selected					
LENGTH (4 pts) – 2 to 3 typed, double spaced pages					
REFERENCES (4 pts) – 2 parenthetical references required					
WORKS CITED (4 pts) – format, two separate sources					
FORMAT (4 pts) – manuscript form, English usage					
SUBTOTAL					

GRADE _____

SELECT ONE TOPIC FROM EACH CATEGORY (I THRU V) BELOW

- I- Alkali and Alkaline Earth Metal:
- Sodium Vapor Lighting
 - Electrolyte Balance in the Body
 - Fireworks
 - Calcium: An Essential Mineral in the Diet
 - Magnesium: An Essential Mineral in the Diet.
- II- Transition Metals:
- Gemstones and Color
 - Alloys
 - Mercury Poisoning
 - Elements in the Body
 - The Role of Iron
- III- Carbon Family:
- Carbon and the Reduction of Iron Ore
 - Carbon Dioxide and Respiration
 - Carbon Monoxide Poisoning
 - Silicon and Silicates
 - Semiconductors
- IV- Nitrogen and Oxygen Families:
- Plants and Nitrogen
 - Fertilizers
 - Oxides
 - Ozone
 - Sulfuric Acid
- V- Boron and Halogen Families:
- Aluminum
 - Aluminum Alloys
 - Chlorine in Water Treatment
 - Flouride and Tooth Decay