

STEM Chemistry Summer Assignment

Hello -

Here is the summer assignment for STEM Chemistry. You may choose 2 of the 3 options but everyone **must do assignment #1**. Do not email the assignment or turn in assignment, prior to the first day of school. Your teacher will create an assignment drop box in Schoology or you may also turn in a hard copy of your assignment. The assignment will be due the Second Friday of the School year (September 17).

1. Assignment #1 - Home Experiment Activity

You will choose one activity from the websites given below.

- 1) <http://www.scifun.org/HomeExpts/HOMEEXPTS.HTML>
- 2) <https://www.iflscience.com/chemistry/unfinished-20-fun-science-experiments-you-can-do-home/>

There are two experiments that cannot be done due to safety reasons (“making things glow in the dark” and “testing conductivity in solutions”). Have a parent/guardian **TAKE A PICTURE OF YOU DOING THE EXPERIMENT** and attach it to the report. Make sure to answer the following questions in complete sentences.

- A. Safety notes - what should you be careful of in this activity?**
- B. State the idea or principle demonstrated in the activity and explain how it works.**
- C. Describe how the activity worked.**
- D. Did the activity work the way it was supposed to? If not, what do you think happened?**
- E. Suggest one way to make the activity work better.**

****Pick either Assignment #2 or Assignment #3 to complete in addition to the first assignment****

2. Assignment #2 - Pharmaceutical Ad Project

Drug companies promote their product, with gorgeous people running around laughing, leading a great life and hardly mentioning what the drug is or what its purpose is. The announcer then instructs you to “tell your doctor you want some now.” The commercial ends with a speed speaker listing all the possible side effects: “XYZ will help your allergies, but may cause upper respiratory infections, spontaneous diarrhea, kidney stones, male-pattern

baldness, seizures, cancer, and death.... Do not touch if you are pregnant or may ever want to be pregnant.”

Prepare a report that includes:

- A. The name of the drug and where the ad was found (best if you could also attach a copy of the ad or bring it to class the first day)
- B. The drug’s intended use (explain the condition that is to be treated and how the drug works)
- C. Explain the cause of the condition and normal function/mechanism of the organ/body system
- D. Identify the side-effects/contraindications of the drug listed in the ad and explain why these effects occur
- E. Give your impression of the ad, explain the influence it may have on the public
- F. Identify alternative forms of treatment that the individual could consider for the condition being treated.

3. Assignment #3 – Adopt-an-Element

- A. Complete the adopt an element information sheet.
 - a. You may use a variety of references to complete the sheet that include encyclopedias, science encyclopedias, magazines, internet sites (see <http://sciencespot.net/> for a variety of possible sources). The information sheet must be typed and contain all information requested. You also need to provide a list of your sources (minimum of 3 sources).
- B. Create an advertisement for your element.
 - a. The advertisement must include the element’s name, symbol, atomic number, atomic mass, cost, and an advertising slogan that describes one or more of its important uses.
 - b. Advertisements must be neat, colorful, and contain all the information listed above. You may add pictures that relate to your advertisement theme.

Adopt an Element – Fact Sheet

Name: _____

Element: _____

Symbol	Atomic Number	Atomic Mass
# of Protons	# of Neutrons	# of Electrons
Melting Point	Boiling Point	Normal Phase
° C	° C	
Classification	Metal Nonmetal Metalloid	
Cost	_____ for _____	

My element belongs to the _____ family.

Discovered by: _____ in the year _____.

Interesting information: (may include use, interesting facts, common compounds, etc.)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

