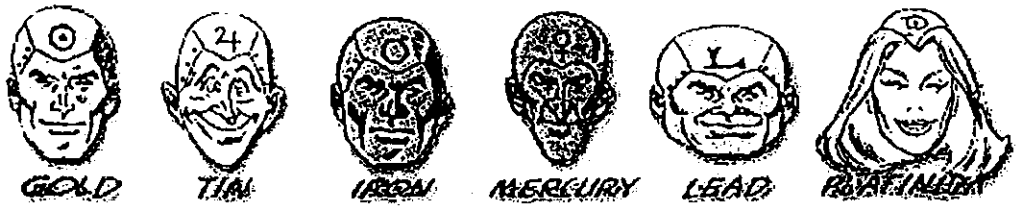
Nichole Hillier

TOC

Science 10 Chemistry.

Elemental Superheroes



1. Go to www.google.com.
2. Search using the words "Periodic Table"
3. Open the ***Chemicalelements.com*** prompt.
4. Click on the **Alkali Metals**
   - Identify the Group number and describe the location of Alkali Metals on the periodic table (PT).

   - List the group members and give their symbols.

   - How are alkali metals similar in appearance?

   - What will happen if an alkali metal is exposed to water?

   - Describe 3 properties of alkali metals.

   - Draw the atomic structure of Na.

5. Click on **Alkaline Earth Metals**
   - Identify the Group number and describe the location of Alkaline Earth Metals on the periodic table (PT).

   - List the group members and give their symbols.

   - Describe 2 properties of Alkaline Earth Metals.

   - Why are these elements not found in a free form in nature?

   - How do you think these elements are found in nature?

   - What are the uses of Magnesium?

   - Where is Magnesium found?

6. Click on **Metalloids**
   - Where are the Metalloids located on the PT?

   - What is the one element that is the exception to the location of metalloids?

- Name the group members and give their symbols.

- What does it mean to be a semiconductor and when is this property useful?

7. Click on **Nonmetals**
   - Identify the Group number and describe the location of the Nonmetals on the periodic table (PT).

   - List the group members and give their symbols.

   - Describe 3 properties of Nonmetals.

   - Hydrogen is a non-metal but it is located on the left side of the PT. Give 2 possible explanations for this (you will have to infer from the information given about Hydrogen).

8. Click on **Halogens**
   - Identify the Group number and describe the location of the Halogens on the periodic table (PT).

   - List the group members and give their symbols.

- What are the states that Halogens can exist in at room temperature.

- What is the name origin of Bromine and give its meaning.

9. Click on **Noble Gases**
   - Identify the Group number and describe the location of the Halogens on the periodic table (PT).

   - List the group members and give their symbols

   - What is another name for this group?

   - Who discovered Ne and when?

10. Go back to the **google search** page.
11. Search for **Chemcomics.**
12. Open the Comic Book Periodic Table of the Element.
13. Find the symbol of Oxygen and open it.
14. Click on the link for Ricky Nelson.
    - Using what you know about the structure of an atom, what is the flaw in what Ricky is saying to his girlfriend that would cause him to lose marks in Chem 11?

15. Click on Home.
16. Open the figure of Platinum.

17. Click on Showcase #37 pg 7.
    - What is a use for lead?

    - What element is used in a thermometer and why?

18. Click on Home.
19. Open the symbol for sodium.
20. Click on the Essential Showcase.
    - What did Flash drop?

    - What was the result and why did this occur?

21. If you were to invent an Elemental Superhero what would you call it and what special powers would your superhero have.

Science 10 Element Web Search

Name:_____
Date:_____

Your mission, should you choose to accept, is to research an element. Your mission specialist (Mrs. Hillier) will secretly give the secret agents (you and your partner) an element to search for on the Internet (do not tell anyone the name of your element - it is top secret!) After you have answered the questions to the Element Web Search work sheet, then you and your partner will report back to headquarters (the classroom). You will prepare an eye-catching, information rich overhead on **ALL** the information you have found. It is then your responsibility to report back to other secret agents (the rest of the class) and your mission specialist (Mrs. Hillier) in a two minute presentation using your prepared overheads. If you do **NOT** wish to present in front of the class, then you must make arrangements (before you go to the computer room) with Mrs. Hillier to stay after class today. **NO EXCEPTIONS!**

The Task

- Once we have entered the computer lab, you will need to log on to a computer (only the people who have Internet Passes may do so). The log in is: student2 guest2
- Once you have logged on, go to the icon, Internet Explorer - double click on it.
- When you have reached the starting page, type www.google.com in the address window. This will take you to the search engine's home page.
- Search for elements.
- When the list of results appear, click on Periodic Table (WebElements)
- Click on your secret element.
- Below are the following questions you must answer using the Periodic Table (WebElements) web site.

1. What is the name of your element?

2. What is the symbol of your element?

3. What is the atomic number of your element? What does the atomic number tell us? (From class notes)

4. What is the atomic mass (weight) of your element? How is the atomic mass calculated? (From class notes).

5. From the picture on the screen, draw the Bohr's Model of the electron configuration for your element.

6. What group number is your element in?

7. What is the group name your element is in?

8. What period number is your element in?

9. In what state is your element at 298 K (room temperature 25 °C)?

10. What colour is your element?

In the address box, type in www.google.com Search for chemicool. Click on the Chemicool Periodic Table link. Click on your element and answer the following questions:

11. What is the density of your element? Is it more dense than water (density of water is 1.00 g/mL) or less dense? Will it float or sink in water?

12. When was your element discovered?

13. What is the melting point of your element?

14. What is the boiling point of your element?

15. Is your element toxic? If so, what does it do?

16. What is the cost of your element (in the pure state) per 100 g?

In the address box, type in www.google.com Search for periodic table. Click on the A Periodic Table of the Elements at Los Alamos National ... link. Click on your element and answer the following questions:

17. Who discovered your element?

18. What are the sources of your element?

19. Identify 3 neat properties of your element.

20. Identify 3 uses for your element.

When you are finished this question sheet, return to the classroom and make an overhead(s) of you information. You will use the overhead(s) during your 2 minute presentation in front of the class.

Criteria for Evaluation:

	1	2	3	4
Concepts and Application	* the required information from the Internet worksheet is poorly identified and integrated into the poster/overhead	* the required information from the Internet worksheet is partially identified and integrated into the poster/overhead	* the required information from the Internet worksheet is identified and partially integrated into the poster/overhead	* the required information from the Internet worksheet is clearly identified and fully integrated into the poster/overhead
Presentation	* All members present participate and visual aid(s) are minimally used. *The information presented in a unorganized manner. *The poster/overhead is difficult to read. * Presenters are not within the appropriate time allotted and there is no logical flow.	* All members present participate and visual aid(s) are used satisfactorily. * The information is presented in a confused manner. * The poster/overhead is missing some information. * Presenters are within the appropriate time allotted and engages in disjointed flow of logic.	*All members present participate and use visual aid(s) sufficiently. * The information presented is presented in a clear manner. *The poster/overhead is easy to read. * Presenters are within appropriate time allotted and the flow of logic is satisfactory.	* All members present participate and use visual aid(s) efficiently. * The information is presented in a very clear, and concise manner. * The poster/overhead is aesthetically pleasing and is easy to read. * Presenters are within the appropriate time allotted and engages in logical flow.