Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Element Superhero Assignment

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**You have been hired by *Elements of the Universe*, a comic book** **publisher**, to create a new superhero whose appearance, characteristics and powers are based on an assigned element in the periodic table. Your supervisor wants you to present your new superhero through a two-page 8.5” x 11” sample trading card.

**On page one of your card you will include:**

1. A table listing the elements:

* + - * 1. full name (d) atomic mass (g) state at room temperature
        2. symbol (e) boiling point
        3. atomic number (f) melting point

2. A coloured drawing of your superhero based on the physical and chemical

characteristics listed in your research notes: colour, texture, physical appearance, etc. Make sure to include an appropriate background.

3. Your Superhero’s Slogan or catch phrase. What memorable saying will your superhero announce as he/she appears to save others? It should relate to its characteristics or uses of that element.

**NOTE:** you may use the following website to help create the graphic for your hero: <http://www.heromachine.com/>

**On page two of your trading card you must include a description of your elements:**

* *You may present this information in whatever way suits you (report, comic strip, newsletter, story, etc.)*

* + 1. **History:** how your hero came into being (the history of its discovery) who, when, how?
    2. **Atomic Model Drawing:** be sure to include the correct number of protons, neutrons and electrons.
    3. **Super Power(s):** his/her super power(s) including an explanation of at least 3 physical and 2 chemical properties. e.g. If an element has a high melting point, you might say that your superhero can move through fire to "save" others.
    4. **Superhero appearance**: Describe why you made him/her look the way you did. What colors are seen in its costume and what symbol is on that costume? Use the physical properties to help your design its appearance. The symbol should be an image associated with your superhero- for example a tungsten superhero might have a light bulb or a W for their symbol.)
    5. **Influence for Good or Evil:** your hero's influence for good or evil on plants, animals (humans) and the environment.
    6. **Additional Powers:** What additional element(s) could combine with your superhero to make him/her more powerful? (chemical compounds)
    7. **Fantastic Four:** what three elements align with (your element to make a 4-element superhero team? What would they be called? (chemical families)
    8. **Arch Nemesis:** Who is his/her arch nemesis and why? For example – oxygen turns iron to rust.
    9. **Resources:** Cite at least 2 resources**.**

**Research Requirements:**

You need to do some research before you create your superhero. To help you with your research you will have two classes for researching and completing your assignment. To be sure that you have good scientific information on which to base your hero you will need to do the following:

1. *Information:* consult a variety of sources (use the sources listed below).

1. *Works Cited* list: Make a TYPED list to hand in with your project.

**Recommended Sources:**

* Nelson Science Perspectives 9 science textbook

* A recommended website if you want help in designing your superhero drawing:

Hero Machine 2.5 - <http://www.ugo.com/channels/comics/heromachine2/heroMachine2.asp>

* Print book from the Weston library (Yes we still use hard copy books!). Books are reserved on a cart for **in library use only.**

* Websites - [www.webelements.com](http://www.webelements.com) [www.chemicalelements.com](http://www.chemicalelements.com)
* [WebElements: the periodic table on the WWW](http://www.webelements.com/index.html)
* [Chemical & Engineering News 80th Anniversary Issue](http://pubs.acs.org/cen/80th/elements.html)

For its anniversary, the magazine featured an essay about every element.

* C[hemGlobe's Periodic Table](http://www.chemglobe.org/ptoe/index.php)

This was created by some very ambitious chemistry students

* D[ynamic Periodic Table](http://www.ptable.com/)

Extremely interactive design uses only HTML; no Flash, Shockwave, Java or images.

* [Visual Periodic Table](http://periodictable.com/)

Numerous images of each element in natural state, pure form, 3D, etc.

* [Periodic Table from Spectrum Laboratories](http://www.speclab.com/elements/)

Each element symbol links to a text only page of extensive data and background information.

* [Periodic Table of the Elements](http://www.ktf-split.hr/periodni/en/index.html)

Excellent table displays both physical and chemical data as well as some historical background.

**Works Cited list:**

Type a list of all the sources you used in your project. You may use an online citation tool such as *easybib* or *citation machine* to help you.

***SNC1D1 Adapted from: R. Hall & M. Kopyto***