

# ELEMENT SUPERHERO/VILLIAN PROJECT Final Product due November 28<sup>th</sup>.

You have been hired by *Elements of the Universe*, a comic book publisher, to create a new superhero. Your superhero (or villain) will have the appearance, characteristics and powers based on an assigned element in the periodic table.

## **Directions:**

Students will conduct research to find information regarding their assigned element.

**\*\*You will complete your research and planning using the *My Element Worksheet*. This will get turned in with your completed project.**

**\*\*Create a product/project** for your Element Superhero that illustrates this information with a creative name and facts about your element intertwined in your story

**\*\*Write a story** about the superhero that explains how your superhero got his/her powers and how they related to the element you researched. Be creative! **YOUR ELEMENT SUPERHERO PROJECT**

## **MUST INCLUDE THE FOLLOWING SECTIONS:**

**TITLE:** Creative **name** of superhero. Name of your element and your elements' symbol and your name.

**DRAWING/ MODEL/ COSTUME/ 3D MODEL OR OTHER DEPICTION OF YOUR ELEMENT SUPERHERO. IF YOU DO SOMETHING WE HAVE NOT DISCUSSED, CLEAR IT WITH THE TEACHER!**

***-Your depiction of your superhero/villain must correspond to the qualities of your superhero. For example, if sulfur is your chosen element, the superhero's uniform or hair or skin, etc. must be yellow since sulfur has a characteristic yellow color.***

**\*\*You may also use [Hero Machine 3](http://www.heromachine.com/heromachine-3-lab/) This website will allow you to customize your character with unique characteristics and powers derived from your element. <http://www.heromachine.com/heromachine-3-lab/>**

**5 FACTS** This section should include at least 5 fun facts about your element.

You can choose to describe facts that illustrate where your element is found in nature. You may also wish to describe what is your element used for. You may address what are characteristics of your element or what are important uses of your element. For example, can your element be made into something useful or can your element combine with other elements to make something totally different.)

**ATOMIC DRAWING INCLUDED IN THE STORY OR ILLUSTRATION** Include the atomic structure of your element with correct labeling of its protons neutrons, electrons. Make sure your drawing has the correct number of protons, neutrons, electrons.

The story should include: PLOT (A PROBLEM/ HOW WAS THE PROBLEM SOLVED?) SETTING AND CHARACTERS

**DESCRIPTION OF ELEMENT SUPERHERO:** *This section should include a brief **description** of what your superhero looks like and how he/she uses, or lives with their element power.*

**Physical description:** What does your element/hero look like? What does it feel like? Color? Solid, liquid or gas

You may want to describe:

- o Where does your superhero element live (where in nature can it be found)?
- o What are his/her superpowers?
- o Does your superhero element have a hideout?
- o What are his/her strengths? What is his/her weakness?
- o Who is his/her arch nemesis (evil supervillain)?
- o What additional element(s) could combine with your superhero to make him/her more powerful?

Use the following questions about your element to help guide you:

*What is your element's Boiling point, Freezing/Melting Point?*

*What is his/her atomic mass*

*Atomic number?*

*What family is he/she in? Alkali metals? Alkali Earth? Transition Metals?*

*Lanthanides and Actinides? Non-metal? Metalloid? Noble Gas?*

*What is the density of your superhero?*

*Is he/she malleable, ductile or brittle?*

*Is he/she a conductor of heat and electricity?*

*What's your superhero's state of matter at room temperature (20 degrees Celsius)?*

*What does he/she commonly combine with and/or what does he/she react with?*

*Is it highly reactive or non-reactive?*

**Story must include 5 characteristics/properties of the element (at least 2 must be chemical properties)**

o Underline each property in your story **Examples of Properties:**

1. If your element has a high melting point, you might say that your super hero can move through fire to save others.
2. If your element is a gas, you might say that your superhero can sneak through a crack into a room.
3. If your element explosively reacts with water, you might say that your super hero uses water to create explosions to stop his/her enemies.

□□**PROPER FORMAT - NEATLY** typed, 12 font. Double spaced. Times New Roman. First and last name, Class period included.

***Be Creative with your character and use your imagination!!!***

***What do I turn in and when?***

**November 10** Paragraph informing the teacher of what your product will be. Include materials, programs you will use, etc.

**November 16**

1. Element Worksheet
2. Element Superhero Sketch
3. Element Superhero Story

## RESOURCES

<http://periodictable.com>

<http://www.chemicalelements.com/>

<http://periodic.lanl.gov/default.htm>

<http://www.ptable.com/>

<http://www.webelements.com/>

<http://www.uky.edu/Projects/Chemcomics/>

*\*\* has pictures if you need inspiration\*\**

<http://www.chemicool.com/elements>

<http://elements.wlonk.com/ElementsTable.htm>

# Element Super Hero/Villain Worksheet

Name \_\_\_\_\_

|   |  |    |    |    |    |    |    |    |    |
|---|--|----|----|----|----|----|----|----|----|
| Is it a superhero or a villain?             |  |    |    |    |    |    |    |    |    |
| What is your character's name?              |  |    |    |    |    |    |    |    |    |
| What element gives the character its power? |  |    |    |    |    |    |    |    |    |
| Periodic Table Information                  | <p>Element name: _____ Symbol: _____<br/>Atomic Number: _____ Atomic Mass: _____<br/>Boiling Point: _____ Melting Point: _____<br/>Family: _____ State at Room Temp: _____ Other _____</p> <p>Characteristics/Properties (at least 2 chemical properties)</p> <table border="0"><tr><td>1.</td><td>5.</td></tr><tr><td>2.</td><td>6.</td></tr><tr><td>3.</td><td>7.</td></tr><tr><td>4.</td><td>8.</td></tr></table> | 1. | 5. | 2. | 6. | 3. | 7. | 4. | 8. |
| 1.  | 5.   |    |    |    |    |    |    |    |    |
| 2.  | 6.   |    |    |    |    |    |    |    |    |
| 3.  | 7.   |    |    |    |    |    |    |    |    |
| 4.  | 8.   |    |    |    |    |    |    |    |    |
| How is the element used?                    | <p>Uses (You must have at least 2):</p> <table border="0"><tr><td>1.</td></tr><tr><td>2.</td></tr></table>   | 1. | 2. |    |    |    |    |    |    |
| 1.  |  |    |    |    |    |    |    |    |    |
| 2.  |  |    |    |    |    |    |    |    |    |

|  |  |
|--|--|
| What powers does your character have? How did he/she get those powers?                             |  |
| What are the strengths and/or weaknesses of his/her powers based on the properties of the element? |  |
| What does the character look like (think about the color and state of the element)?                |  |
| How old is he/she?   |  |
| Where does your hero live (where in nature)? Do they have a hideout?                               |  |
| Do they have an arch nemesis?  |  |
| What additional elements could combine with your hero to make them more powerful?                  |  |

Name \_\_\_\_\_ Period \_\_\_\_\_ Number \_\_\_\_\_

## Element Superhero/Villain Project Rubric

Project due: \_\_\_\_\_

|  |                                       | 4   | 3   | 2   | 1   | 0                                  |
|--|---------------------------------------|---|---|---|---|------------------------------------|
| <b>Poster Rubric<br/>15 pts</b>          | <b>Title</b>                          | <del>4</del>  | Creative name of the superhero element  | Name of the superhero element   | Element is listed as title  | No title                           |
|  | <b>5 facts</b>                        | 5 interesting and relevant facts are stated in complete sentences   | 5 interesting and relevant facts are stated but not in complete sentences                         | 4 relevant facts are stated in complete sentences   | 3 facts are stated and/or in semi-complete sentences                                    | No facts are presented             |
|  | <b>Drawing of Hero/Villain</b>        | Clearly shows character and powers.   | Shows character and powers.   | Adequate display of character and powers.   | Poor display of character and powers.   | No character drawn                 |
|  | <b>Atomic Drawing</b>                 | Drawing is complete with no errors  | Drawing is complete with minor errors   | Drawing has several errors  | Drawing is incomplete   | No drawing given                   |
| <b>Story Rubric<br/>15 pts</b>           | <b>Superhero's Background</b>         | Story clearly explains how superhero got powers and powers match element' chemical or physical properties | Story explains how superhero got powers and powers match element' chemical or physical properties | Story explains how superhero got powers but powers do not match element's physical or chemical properties | Little explanation about superhero's powers is given                                    | No explanation given               |
|  | <b>Characteristics</b>                | 5 properties explained, underlined and 2 are chemical   | 3-4 properties explained, underlined and 2 are chemical   | Less than 3 properties explained, underlined  | Less than 2 chemical properties   |                                    |
|  | <b>Spelling and Grammar</b>           | <del>4</del>  | Correct spelling and grammar is used throughout story   | Correct spelling and grammar is used throughout most of story   | Story included many spelling and grammatical errors                                     |                                    |
|  | <b>Character</b>                      | Clear identity. Powers are very appropriate for element   | Clear identity. Powers are appropriate for element.   | Identified, but powers are too general.   | Hard to tell who the characters are or what powers are present.                         | No character is presented          |
| <b>Overall Project Rubric<br/>20 pts</b> | <b>Creativity and effort (x2)</b>     | Project is excellent. Obvious, high quality effort is shown.  | Project shows good effort and quality.  | Project shows average effort and quality.   | Poorly created, showing obvious signs of rushing or lack of effort.                     | No character or written assignment |
|  | <b>Format</b>                         | Proper format is used: 12 font, double spaced, 1 page   | Between ¾ to 1 page and/or format errors  | Between ½ to ¾ page and/or format errors  | Less than ½ page  |                                    |
|  | <b>Organization and Neatness (x2)</b> | Presentation is organized, neat and easy to read. Characters are colorful.                                | Presentation is moderately neat and organized, and has some color                                 | Project is moderately neat, lacks some organization, hard to read, and has very little color              | Presentation lacks neatness and organization, is difficult to read, and/or has no color | No character or written assignment |
| <b>Total out of 50 points</b>            |                                       |   |   |   |   |                                    |

Comments: \_\_\_\_\_

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