

Name: _____

Element Culminating Project— Due Date:

In this project you will first research an element and create a presentation about that element, combining text and images. All research must be done before you work on the creative aspect of this project. Google Slides or Prezi are recommended presentation tools.

Section: Introduction Slide

Element Name
Element Symbol

Your Name
Your Teachers Name

Section: THE NUMBERS and Classification

Under normal conditions (room temperature) my element is solid / liquid / gas (circle one).

My element is a metal / non-metal (circle one).

Family: _____

The atomic number is _____. The mass number (a.k.a atomic weight) is _____.

A neutral atom of my element has (#) _____ protons, _____ neutrons, _____ electrons

Include a Bohr Diagram of your Element with proper referencing

Section: Physical Properties (appearance)

If you had a pure sample of the element (no other elements mixed in), describe 3 of its physical properties (i.e. appearance):

1.

2.

3.

4.

5. Melting point temperature: _____ °C.

6. Boiling point temperature: _____ °C.

7. Density: _____ g/cm³

Include 2 –3 images of your element depicting it's properties (Use proper referencing)

Section: Chemical Properties (reactions)

Find 2 other elements or compounds that your element reacts with. Describe what happens during the reaction and the products made. If possible, write out the chemical equation. Include any photos or flash video or any reactions.

1.

2.

Section: HISTORY

Who discovered your element:

Where was it Discovered:

When was it discovered:

Meaning / Origin of name:

Include photo of person who discovered your element. (use proper referencing)

Section: USES

Find and describe three things that the element is used for. These might be specific objects (e.g. x-ray tubes), as well as more general things (e.g. computer technology.) Write down enough descriptive information that you will be able to expand on. Include photos depicting that particular use (include proper referencing)

Uses	What physical or chemical properties of the element make it useful for this purpose? (2-3 per use)
1.	1
2.	2.
3.	3.

Section: Compounds

Compounds contain more than one element. List 3 compounds formed by your element. Give the formula (ex. LiCl) and the name (Lithium chloride). Include a picture of each molecular structure.

1. Formula _____ Name: _____

2. Formula _____ Name: _____

3. Formula _____ Name: _____

Section: Mining

Where : List the places where your element can be found on Earth. Include a Map illustrating some of these places.

% Abundance

Explain **how** element is extracted from the earth (i.e. mined and refined (processed)). You can use flow charts and diagrams to assist you in your written explanation.

Section: References

Be sure to use 3 –5 sources of information.

For books: Author. (year of publishing). *Title*. Location of publisher: Publisher.

Example: Ritter, B. (2001). *Unit 1: Sustaining Ecosystems, Science 10*. Scarborough, Ontario: Nelson Thomson Learning.

For websites: Url. *Title of article*. Author if available. (Year of publishing if available).

Example: www.naturalencounters.com *The Anatomy of Parrot Behavior*. Martin, S. (2002)

Element PowerPoint – Inquiry and Research

	Excellent 3	Good 2	Satisfactory 1	Inco 0
The “numbers” on the element are correct: atomic number, Mass number, p^+ , n^0 , e^- and Bohr diagram included.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 physical properties (m.p., b.p., density etc...) are listed including proper units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classification. Main group and specific family from periodic table. Pictures of other elements in that family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Two chemical properties (reactions) are described including the products made from the reaction. Chemical equations included.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historical facts Who, Where, When, Origin of Name / Meaning of name Picture of Discover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Three uses of the element have been listed including photos depicting each use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The properties of the element that makes it suitable for each use have been clearly stated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Three compounds containing the element are listed with proper formulas and names. Pictures of compounds included	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abundance % or ppb [universe, ocean, body/atmosphere] Mining: Where it is mined? Map is also included.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reference web site addresses included on last page	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Mark breakdown: Research/Inquiry:

Total: / 30 _____%