

Periodic Table of Elements Research Project

8th Grade Science
Nettelhorst

Researching the Periodic Table!

Choose one element from the periodic table #1-86 (see p.B-27)

Design an **informative poster** to showcase your element!

What element did you choose?

STEP ONE: RESEARCH

- Find more information about your chosen element through reading books or searching online
- Record this information in the graphic organizer provided on p. 2-3

STEP TWO: DESIGN

- Present this information as a **MINI-POSTER!**
- Option 1: Old School
 - Create poster using paper & colored pencils/ markers
- Option 2: High-Tech
 - Create poster using Google Docs/ Slides & print it out

STEP THREE: SHOWCASE

- Be prepared to talk about your element in front of the class for about 2 minutes

Learning Goal:

I will be able to describe the physical and chemical properties of an element from the Periodic Table, in detail.

POSTER REQUIREMENTS

- all information from graphic organizer
- an image, picture, or drawing of the element
- cite at least 3 sources

DUE DATE:

Tuesday, Nov. 15, 2016



STEP ONE: RESEARCH (DAY 1-2)

- Use a Chromebook to look for more information about your chosen element. Here are some helpful websites:

Chem4Kids

http://www.chem4kids.com/files/elem_intro.html

Ducksters

http://www.ducksters.com/science/periodic_table.php

About.com

<http://chemistry.about.com/library/blperiodictablekids.htm>

Israel Science and Technology

<http://www.science.co.il/PTelements.asp>

WebElements

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

Chemical Elements

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

- Or, borrow one of Ms. Chu's books about the periodic table
- Fill out the graphic organizer below with information about your element. ALL this information will need to appear on your research poster.

Element Graphic Organizer

Basic Facts	Element Name & Symbol	
	Element Family	
	Atomic Number	
	Atomic Mass	
Interesting Facts	When it was discovered?	
	How was it discovered? (Or, who discovered it?)	
	Where is the element's name from? Why is it named that?	
	Where in the world it is typically found?	

Physical Properties	Color	
	Texture	
	Light Transmission	
	Luster	
	Hardness	
	Density	
	Phase in room temperature	
	Melting point	
	Boiling point	
Chemical Properties & Uses	Common compounds in which it is found (include common names and their chemical formulas)	
	3 uses for this element	
Books & Websites Used		

STEP TWO: DESIGN (DAY 3-5)

- Get your creative juices flowing! Be artistic!
- Your poster will be the size of a regular sheet of paper (8.5 x 11) but feel free to use both sides, if necessary.
- This poster must include a picture of the element at room temperature (either from online or hand-drawn). Think about where you want to place it: center? top corner? bottom corner?
- This poster must include all the information outlined in the graphic organizer.
- This poster must include at least 3 sources cited — from books or websites
- You have two options to create this poster:
 - Option 1: Old School
 - Use paper, markers, colored pencils and design it by hand
 - Option 2: High-Tech
 - Use a Google Docs or Google Slides to type and add graphics

STEP THREE: SHOWCASE! (DAY 6)

- Posters should be complete and ready for viewing. Any posters created using Google Docs/ Slides should be printed in full color.
- Our class will be split into 2 groups. The first group will present their elements while the second group does a gallery walk, listening to presentations. Then each group will switch.
- Be ready to speak about your element for about 2 minutes
 - Remember to to make eye-contact & stand with good posture
 - Make sure your speaking volume is loud enough for your audience
 - The tone of your voice should sound animated and interested

Periodic Table of the Elements

Legend:

- Alkali Metals
- Alkaline Earth Metals
- Transition Metals
- Non-metals
- Other Metals
- Lanthanide Series
- Actinide Series
- Halogens
- Inert Gases

Callout for Hydrogen (H):

- Atomic Number: 1
- Atomic Weight: 1.008
- Name: Hydrogen
- Symbol: H
- Electron Configuration: 1s¹

States of Matter Legend:

- Aa - Solid
- Aa - Gas
- Aa - Liquid
- Aa - Synthetically Prepared

Innovating Science™ by Aldon Corporation
 "cutting edge science for the classroom"

Periodic Table of Elements Research Project Poster Rubric

	Exceeds Standards (4)	Meets Standards (3)	Partially Meets Standards (2)	Minimally Meets Standards (1)
Basic Facts & Interesting Facts	Poster includes all required basic facts & interesting facts as well as additional information	Poster includes all required basic facts & interesting facts	Poster includes some required basic facts & interesting facts	Poster includes little to none of the required basic facts & interesting facts
Physical Properties	Poster includes all required physical properties as well as additional information	Poster includes all required physical properties	Poster includes some required physical properties	Poster includes little to none of the required physical properties
Chemical Properties & Uses	Poster includes all required chemical properties and three of the element's uses as well as additional information	Poster includes all required chemical properties and three of the element's uses	Poster includes most chemical properties and less than 3 of the element's uses	Poster includes little to none of the required chemical properties and less than 2 of the element's uses
Picture	Poster includes a detailed visual of the element	Poster includes a visual of the element	Poster includes a visual of the element but details are lacking	Poster does not include a visual of the element
Visual Presentation	Poster is exceptionally attractive in terms of design, layout, and neatness	Poster is attractive in terms of design, layout, and neatness	Poster is fine in terms of design and layout, although it may be a bit messy	Poster is poorly designed or messy
Spoken Presentation	Speaker maintained eye contact and spoke with a loud, clear, and enthusiastic voice	Speaker maintained eye contact and spoke with a loud, clear voice	Speaker mostly maintained eye contact and spoke with a clear voice	Speaker barely maintained eye contact and spoke with a low, mumbled voice
Cite Sources Used	3 or more sources were cited	3 sources were cited	2 sources were cited	1 or fewer sources were cited

TOTAL: _____ of 28 A: 28-25 B: 24-22 C: 21-19 D: 18-17 F: 16 and below

COMMENTS: