

Name: _____ Block: _____



Periodic Table Project



One of the most important classification systems in science is the Periodic Table of Elements.

Project Goal

For this project, you will create a “Periodic Table” which demonstrates how objects we use every day, topics we discuss, foods we eat, and more, contain characteristics which allow us to group them using different patterns. Upon completion of your “Periodic Table” you will analyze trends in your system and compare your system of organization to the Periodic Table of Elements. You will be required to perform independent research on the periodic table to aid in your organization.

Time Allotment:

This project should be completed mainly **at home** and **sometime in class** will be given.

Due Date: 9-24-25-2018 *Depending upon your class block.*

Criteria:

Your table should:

- be constructed on poster/display board (or you can create a computer based/interactive periodic table)
- have a title “Periodic Table of _____”
- have name and class period on the back
- consist of 20 “elements” and at least 5 from your element study list.
- have 8 groups or families (columns)
- have 5 periods (rows)
- have a title for each family and period
- have a logical arrangement within groups & periods
- all four periodic trends should be used in your arrangement
- have a key showing the arrangement
- be neatly displayed (no stray pen or pencil marks) and be creative
- be free of spelling or grammatical errors
- have project questions answered in complete sentences on separate sheet attached to the back

Each “element” on your periodic table must include:

- Element Name
- Chemical Symbol (1 or 2 letters in the correct format)
- Atomic Number - a numerical characteristic which should represent something about your element & **must increase as you go down and across the table.**
- Atomic Mass - some numeric characteristic of the element that **must increase as you go down and across the table (size, style, cost, etc.)**
- An example of your “element,” Ex: picture/drawing

Name: _____ Block: _____

Periodic Table Project Questions

The following are questions that must be answered. The answers must be typed and you should attach one copy to the back of your periodic table.

1. Describe the basis of your arrangement. Give the details about your **specific topic** which allow it to be organized in the manner you chose.
Ex: Atomic # represents..., Atomic Mass represents...
2. Discuss the organization of the **TABLE**.
Ex: The elements are placed in Groups based on..., The period each element is in relates to...
3. How is your arrangement of objects similar to the Periodic Table of Elements? Explain.
Ex: How do your groups gradually change from left to right, top to bottom? Do the objects in your rows or columns have special or similar properties?
4. Mendeleev created a periodic table of elements and predicted characteristics of missing elements. **Make a prediction** about an object on your table that has not yet been discovered (the object will follow the last known one on your table or may fill in any gaps that are in your table). You should provide an “element box” of the object and you should provide **detailed reasoning** for why this particular object will fit onto your periodic table according to your arrangement. You should be able to explain how this predicted element will fit into an existing group/period or give an explanation for the new group/period required to house your new element.

Project Rubric

Basics, Poster is...

- Titled (4 pts)
- Neat (3 pts)
- Colorful (2 pts)
- Correct Size (1 pt)

+ _____ /10

Organization

- Groups - vertical (4 pts organization is numerical and in order) (1 pt title)
- Periods - horizontal (4 pts organization is numerical and in order) (1 pt title)
- The four periodic trends are represent and noticed. (12 pts)

+ _____ /20

20 Elements

- all 20 elements are present

+ _____ /20

Square Information

- Element Name (3 pts)
- Element Symbol (3 pts)
- Atomic Number – Represents a characteristic of your element (5 pts)
- Atomic Mass - Represents a characteristic of your element (5 pts)
- Example (2pts)

+ _____ /18

Key is Present with

- Atomic Number w/explanation (4pts)
- Atomic Mass w/explanation (4 pts)
- Example w/explanation (4 pts)

+ _____ /12

Questions Answered

- Questions 1-3 answered completely (12 points, 4 points per question)
- Question 4 answered completely with predicted “element” box (8 points)
- Answers are typed and one copy is attached to back of poster
-
-

+ _____ /20

Total + _____ / 100