

NAME:

HONORS CHEMISTRY

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SECTION:

History of the Periodic Table Webquest

Use the following site to answer questions:

<https://www.chem.tamu.edu/class/majors/tutorialnotefiles/periodic.htm>

<http://www.britannica.com/science/triad-chemistry>

### Law of Triads

1. What are the two sets of triads Dobereiner observed?

2. What is the Law of Triads?

<http://www.britannica.com/science/law-of-octaves>

<http://www.rsc.org/education/teachers/resources/periodictable/pre16/develop/newlands.htm>

<http://www.rsc.org/education/teachers/resources/periodictable/pre16/develop/chancourtois.htm>

### Law of Octaves

3. What did De Chancourtois first recognize with his chart?

4. John Newlands developed a chart (with rows and columns). How many elements were in each column before he started the next column?

### Two Fathers of the Periodic Table?

<https://www.aip.org/history/curie/periodic.htm>

<http://www.chemheritage.org/discover/online-resources/chemistry-in-history/themes/the-path-to-the-periodic-table/meyer-and-mendeleev.aspx>

5. Which two scientists could arguably be called the Father of the Periodic Table?

6. Meyer's work was based on valence charges and atomic weights. Refer to the following sites:

<http://web.lemoyne.edu/~giunta/meyer.html> and

[http://www.britannica.com/biography/Lothar-](http://www.britannica.com/biography/Lothar-Meyer)

[Meyer](http://www.britannica.com/biography/Lothar-Meyer) Sketch the graph in the box:

7. How does this violate Newlands' Law of Octaves?



**“The” Father of the Periodic Table:**

8. Mendeleev first organized the elements by...
9. Then with the metallic elements, he began to order them by ...
10. Going down a group (or family), how did Mendeleev order the elements?
11. Mendeleev boldly changed what accepted property of beryllium?
12. What was more important to Mendeleev: weight or correlating properties?
13. What did Mendeleev do with his gaps in his table?
14. What was the flaw in reasoning that caused Mendeleev to mix up the placement of Ar and K, Co and Ni, and Te and Ni?

**After Mendeleev:**

15. What group of elements was discovered after Mendeleev’s initial work? Why was this group of elements not discovered earlier?
16. Why was this group labeled “zero”? Do you think this label makes sense? Why or why not?
17. Summarize how the periodic table was reorganized based on the work of Henry Moseley. Here is a link to get you started: [http://www.chemistry.co.nz/henry\\_moseley.htm](http://www.chemistry.co.nz/henry_moseley.htm) (You can even read Moseley’s paper, if you wish!)
18. Seaborg is the last scientist to contribute to the organization of the modern periodic table. What did he do to change the layout of the table? <http://www.osti.gov/accomplishments/seaborg.html>