

# Periodic Table of Elements

## Overview Sheet

### Essential Question

How are elements/atoms organized?

### Vocabulary

|           |                |              |         |
|-----------|----------------|--------------|---------|
| periodic  | periodic table | Periodic Law | element |
| metals    | non-metals     | metalloids   | ductile |
| malleable | period         | group/family | valence |

### Objectives

1. Describe the meaning of periodicity and how it applies to the periodic table.
2. Describe the significance of elements.
3. Identify the scientists who have contributed to the creation and revision of the periodic table of elements (Mendeleev & Moseley).
4. Distinguish between the different classes of elements (metals, non-metals, metalloids).
5. Distinguish between periods and groups/families as they relate to the periodic table.
6. Describe how to use the periodic table to identify characteristics of elements/atoms.

### Helpful Websites

- <http://www.zephyrus.co.uk/dimitrimendeleev.html> (Mendeleev)
- <http://www.chem.msu.su/eng/misc/mendeleev/welcome.html> (Mendeleev)
- <http://www.aip.org/history/curie/periodic.htm> (Mendeleev)
- [http://www.chemistry.co.nz/henry\\_moseley.htm](http://www.chemistry.co.nz/henry_moseley.htm) (Moseley)
- [http://en.wikipedia.org/wiki/Henry\\_Moseley](http://en.wikipedia.org/wiki/Henry_Moseley) (Moseley)
- <http://www.periodic-table.org.uk/> (overview)
- <http://www.fordhamprep.org/qcurran/sho/sho/lessons/lesson34.htm> (overview)
- [http://www.colorado.edu/physics/2000/periodic\\_table/index.html](http://www.colorado.edu/physics/2000/periodic_table/index.html) (overview)

More on back



- [http://www.visionlearning.com/library/module\\_viewer.php?mid=52&l=&c3=](http://www.visionlearning.com/library/module_viewer.php?mid=52&l=&c3=) (overview)
- [http://www2.wwnorton.com/college/chemistry/gilbert/tutorials/interface.swf?chapter=chapter\\_06&folder=periodic\\_table](http://www2.wwnorton.com/college/chemistry/gilbert/tutorials/interface.swf?chapter=chapter_06&folder=periodic_table) (periodic table tutorial)
- [http://www.chem4kids.com/files/elem\\_pertable.html](http://www.chem4kids.com/files/elem_pertable.html) (structure of periodic table)
- <http://web.buddyproject.org/web017/web017/pertab.html> (structure of periodic table)
- <http://astrobiology.ciw.edu/students.php?id=1> (elements)
- [http://www.usgs.gov/faq/list\\_faq\\_by\\_category/get\\_answer.asp?id=248](http://www.usgs.gov/faq/list_faq_by_category/get_answer.asp?id=248) (elements)
- [http://exobio.ucsd.edu/Space\\_Sciences/elements.htm](http://exobio.ucsd.edu/Space_Sciences/elements.htm) (elements)
- <http://www.ausetute.com.au/elemlist.html> (origin/history of elements)
- <http://www.vanderkrogt.net/elements/> (origin/history of elements)
- <http://www.teachnet.ie/tburke/periodic/> (interactive periodic table)
- <http://periodic.lanl.gov/default.htm> (interactive periodic table)
- <http://www.chemicalelements.com/> (interactive periodic table)
- <http://www.webelements.com/> (interactive periodic table)
- <http://environmentalchemistry.com/yogi/periodic/> (interactive periodic table)
- <http://education.jlab.org/itselemental/> (interactive periodic table)
- <http://www.chemcool.com/> (interactive periodic table)
- [http://www.bayerus.com/msms/fun/pages/periodic/i\\_table.html](http://www.bayerus.com/msms/fun/pages/periodic/i_table.html) (interactive periodic table)
- <http://www.chemsoc.org/viselements/pages/pertable fla.htm> (interactive periodic table - visual elements)
- <http://www.colorado.edu/physics/2000/applets/a2.html> (interactive periodic table w/animations)
- [http://www.cite-sciences.fr/francais/ala\\_cite/expo/tempo/aluminium/science/mendeleiev/index\\_en.html](http://www.cite-sciences.fr/francais/ala_cite/expo/tempo/aluminium/science/mendeleiev/index_en.html) (interactive periodic table)
- <http://science.widener.edu/svb/tutorial/protonscsn7.html> (practice calculating P, N, e<sup>-</sup>)
- <http://science.widener.edu/svb/tutorial/protons.html> (practice calculating P, N, e<sup>-</sup>)
- <http://education.jlab.org/indexpages/elementgames.php> (list of games)
- <http://edu4kids.com/chem/> (game)
- <http://www.funbrain.com/periodic/index.html> (game)
- [http://www.chem4kids.com/extras/quiz\\_elempertable/index.html](http://www.chem4kids.com/extras/quiz_elempertable/index.html) (quiz)
- <http://www.triv.net/html/Users1/u4237.htm> (quiz)
- <http://www.brynmawr.edu/Acads/Chem/Chem101lc/pertab2.html> (quiz)
- [http://www.1001-periodic-table-quiz-questions.com/grade\\_9\\_science\\_quizzes.html](http://www.1001-periodic-table-quiz-questions.com/grade_9_science_quizzes.html) (multiple quiz links)
- <http://www.ilpi.com/genchem/periodicquiz.html> (hard quiz - fill in a periodic table)
- [http://www.chemistrycoach.com/periodic\\_tables.htm#Periodic%20Table%20Games](http://www.chemistrycoach.com/periodic_tables.htm#Periodic%20Table%20Games) (tons of links to topics regarding the periodic table)