



Thomas Haney Secondary School

Science 9

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LG 4: The Atom and The Periodic Table

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Questioning and Prediction:

- What do you find most interesting about the periodic table? Can you apply the knowledge you have gained about the periodic table to a personal problem or situation you have faced?
- Did you notice any trends or characteristics about the elements found in the periodic table that you could apply to solve everyday situations in your life?
- Can you predict or hypothesize how different elements may react with one another when put together in daily life situations?

Planning and Conducting:

- The elements in the periodic table have been organized due to quantitative and qualitative data that has been collected. Can you provide an example of such data and or predict where this data came from? What is qualitative and quantitative data?
- Can you explain the methods that past scientists have used to study the elements of the periodic table and think of any ethical, cultural and/or environmental issues that may be related to these methods?
- What kind of lab equipment would the researchers have used to collect such data?
- While investigating the periodic table what safety and ethical guidelines should be followed?

Processing and Analyzing Data and Information:

- What experiences have you had in your past with periodic elements reacting?
- What experiences and knowledge did first nations people have with elements in the periodic table?
- While studying the elements in the periodic table did you notice any patterns or trends?
- What conclusions did you determine while studying the elements in the periodic table...what was the data (logical reasons) you use to defend these conclusions?
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Evaluating:

- When past scientists have done experiments on the elements of the periodic table did you notice any sources of error that were present?
- When you conducted experiments in the lab, what could you have done differently to get better (more accurate) data?
- Do the rules that have been learned about the organization of the elements of the periodic table apply to all elements? Are there any exceptions?
- Were there any assumptions made during investigations of the periodic table?
- Have new technologies allowed us to view old scientific concepts in a new way?
- Are there any possible careers in Chemistry you would be interested in or you can think of?

Applying and Innovating:

- Can you apply your knowledge about “charges” elements are the periodic table posses and to create ionic and molecular compounds?
- Can you apply the concepts you learned in this learning guide to possibly solve local or global problems that exists?

Communicating:

- Using the knowledge about elements on the periodic table can you more descriptively describe phenomenon around you? Explain.
- Reflect on a variety of experiences that are related to elements on the periodic table.