

1D Element Research Assignment

1. Select a specific element
2. Do research on that element to provide evidence to support each of the following.
 - Elements have specific physical and chemical properties that determine their practical uses
 - The use of chemical can have positive and or negative effects on society and or the environment based on their physical or chemical properties.

(In the examples you use clearly identify if you are discussing the elemental form or a compound that contains the element)

4. Product Options

A) Write 2 expository paragraphs proving the above ideas. See exemplars above.

B) Create a slide show to outline your proof. Have an introductory slide for each idea and create a series of 4 slides to support each of the above ideas. Summarize the key idea on each slide and provided visuals to illustrate the principle. See exemplar presented in class.

5. Share your document with melamcco@ed.amdsb.ca

Evaluation Paragraph Rubric

COMMUNICATION RUBRIC FOR PARAGRAPH WRITING	Level 1	Level 2	Level 3	Level 4
Opening and Closing.	Topic sentence is present Concluding statement is unclear	Topic sentence is present Concluding statement require some clarification.	Topic sentence is presented and is related to supporting evidence A valid concluding statement	Topic sentence is thorough and clearly connected supporting evidence is given An insightful concluding statement.
Evidence	Limited supporting evidence is provided Few evidence/ examples used One well developed point	Some supporting evidence is provided Some evidence/ examples used. Two well developed points	Considerable supporting evidence is provided and is connected to a valid concluding statement Supporting evidence/examples are used with considerable effectiveness Three well developed points	Ideas are fluid throughout the paragraph and connected to an insightful concluding statement. Supporting evidence/examples are used with a high degree of effectiveness Four well developed points
Use of Scientific Terminology	Limited	Some	Good	Extensive
Language Structure Uses language conventions IE. grammar, spelling & punctuation) Sentence and Paragraph structure	Uses language conventions with limited accuracy and effectiveness The components of sentence & paragraph structure are used with limited effectiveness and clarity.	Uses language conventions with some accuracy and effectiveness. The components of sentence & paragraph structure are used with some effectiveness and clarity.	Uses language conventions with considerable accuracy and effectiveness (a few errors) All components of sentence & paragraph structure are used with considerable effectiveness and clarity.	Uses language conventions accurately and effectively Sentence and paragraph structure is used with a high degree of success resulting in effective and clear communication.
Referencing	Bibliography has many errors in format	Uses APA format for bibliography with some errors	Uses APA format for bibliography with a few minor errors	Uses APA format for bibliography and citations with a high degree of effectiveness

Exemplar

Elemental Mercury has multiple uses because of its physical properties. Mercury is often used in thermometers because it is a liquid metal that expands when it is heated. It has many uses because it is a good conductor of electricity. Some devices contain mercury switches that work because when tilted the liquid element moves connecting the contacts and completing the circuit as electricity flows through the metal. This is common in vehicle lighting switches, aircraft attitude indicators and thermostats. It is also used in fluorescent lights in its gaseous form. It helps electricity be conducted through the tube and also converts some of the electricity to UV energy which will be converted into light. As it has been illustrated mercury has many uses because it is a liquid metal that is a very good conductor of heat and electricity.

Mercury has many health and environmental impacts because of its chemical properties and toxicity. Mercury exposure has long term toxic effect and causes damage to blood, liver, kidney, brain and the peripheral nervous system (ScienceLab.com, 2014). Mercury pollution from industry gained international attention as the cause of Minamata Disease in a community in Japan in the 50's (Allchin, N.D.). Numerous cases of severe mercury poisoning involving convulsions, insanity, paralysis and coma were the result of poisoning of the population's food source which was primarily shellfish (Allchin, ND). When mercury is released into aquatic ecosystems it is quickly converted into methyl mercury and then it bioaccumulates in the food chain. As the chemical magnifies organisms at the top of the food chain experiencing low level long term exposure results in cancer and birth defects, at high concentrations it can result in death. The environmental impacts of Mercury pollution is a world wide problem. It is a commonly used substance whose disposal has been poorly controlled and it is a byproduct of energy generation such as coal burning power plants. The toxic effects are even seen in the arctic in polar bear populations and people that live off the land (Basu, 2012). It is evident that because of its chemical properties Mercury has numerous health and environmental effects.

Literature Cited

Allchin, D. No Date. The poisoning of Minamata. Retrieved Nov 28, 2013, from;
<https://www1.umn.edu/ships/ethics/minamata.htm>

Basu, N. 2012 Mercury Rising in the Arctic. Retrieved Nov 28, 2013, from;
<https://www.youtube.com/watch?v=ilnU1OcWNG4>

ScienceLab.com. 2013. Mercury MSDS. Retrieved Nov 28, 2013, from;
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