



MILLER CREEK CHEMICAL CONVENTION

WELCOME TO THE ANNUAL INTERNATIONAL CHEMICAL CONVENTION, HELD THIS YEAR AT MILLER CREEK MIDDLE SCHOOL. YOUR PARTICIPATION IN THIS YEAR'S CONVENTION WILL LEAD TO THE CROWNING OF THIS YEAR'S "ELEMENT OF THE YEAR." YOU WILL FUNCTION AS A PARTICIPANT, AND AS A JUDGE. AS A PARTICIPANT, YOU WILL SELECT AND PROMOTE THE ELEMENT THAT YOU FEEL SHOULD BE SELECTED AS THE AWARD WINNING "ELEMENT OF THE YEAR." AS A JUDGE, YOU WILL LISTEN TO AND EVALUATE PRESENTATIONS, USING YOUR CHEMICAL EXPERTISE TO HELP US CROWN THIS YEAR'S AWARD WINNING "ELEMENT OF THE YEAR."

As part of the chemical convention, you will be asked to do the following:

1. Atom Model and and Scene 1-3 Storyboards DUE Wed. February 2

- a. Storyboard Scene 1 - Properties
- b. Storyboard Scene 2 –Your Element's Place In The Periodic Table
- c. Storyboard Scene 3 - Fascinating Facts, Amazing History, WOW!
- d. Build an Atom - (see rubric for details - 400 points)

2. Scene 4 – How your element bonds with other elements. DUE Tuesday, Feb. 8

3. Infomercial - Due Monday , February 14. (750 points) (Costa Rica Travelers must turn in project before leaving).

Present your infomercial to the convention. Final infomercials will be produced according to strict international chemical Society guidelines.

6. Presentation Scoring - Due the week of February 14 - 18. Evaluate all presentations and written materials using a numeric scoring sheet. Final scores will be tallied and used to select winning "Element of the year". (winners will receive 10 extra credit points for this assignment...)

Element Selection and Research

Fill in the information below for the three elements that you randomly selected to research and present to the International Chemical Society. You (and your partner) will be given one of these elements to research.

1. Name of element _____
2. Family on the periodic table _____
3. Number of protons it has _____
4. Atomic Mass _____
5. Period on the periodic table _____
6. Number of electron shells _____
7. Describe two distinct properties of this element:
 - a. Property 1: _____
 - b. Property 2: _____
8. Describe what makes this element interesting to you and your partner.

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Your Name _____ (Partner's Name _____)

CHEMICAL ELEMENT INFORMATION.

Name of Element _____

Part 1 – Element Properties

Chemical Symbol _____

Atomic Number _____

Number of Protons _____

Number of Electrons _____

Atomic Mass _____

Does this element have naturally occurring isotopes? (example: Carbon12 and Carbon14) If so, list MOST COMMON isotopes below:

How many total isotopes exist of this element? _____

Family (group) _____

Valence Electrons _____

Period (row) _____

Number of electron shells (energy levels) _____

Draw and label a diagram of this atom. Include the number of protons, electron shells, number of electrons, and number of neutrons. Label with appropriate isotope name.

Density (low density is Hydrogen to Argon, medium density is Sodium to Krypton, high density is Rubidium and above) _____

Color in solid form _____

State at room temperature _____

Melting/freezing temperature (in Celsius) _____

Boiling/condensing temperature (in Celsius) _____

Is it radioactive? _____

Does it conduct electricity? _____

Name three common compounds it is found in (if possible)

Scene 1 Element Properties		
The information below must be explained in your infomercial		
1. Metal, Non-metal or Semi Metal? _____		
2. Important Compounds (or NO compounds) _____		
3. State at room temperature _____		
4. Five ADDITIONAL properties important about your element		
a. _____		
b. _____		
c. _____		
d. _____		
e. _____		
5. Show and explain the atom model (or poster) of your element.		
A – information above explained with clarity, accuracy and interest.	B – information above explained with some clarity, accuracy and interest	C – information above partially explained and/or inaccurate or not interesting.

**Scene 1 – This scene describes the properties of your element
DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.**

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

**WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?
HOW WILL THE INFORMATION BE INTERESTING AND UNIQUE?**

Names _____ Per. _____ Element _____

Scene 2 – Periodic Table

Fill in the chart with properties or your element that will be used to explain the periodic table.

Property	Use your element to explain the periodic table properties listed below. You will be graded on how well you demonstrate your understanding of the periodic table.	
Period		
Valence electrons		
Family name		
Metal/non-metal/semi-metal		
State at room temp.		
Density		

A – information above explained with clarity, accuracy and interest.	B – information above explained with some clarity, accuracy and interest	C – information above partially explained and/or inaccurate or not interesting.
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Scene 2

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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On the back of this paper:

- 1. DESCRIBE WHAT IS HAPPENING IN THIS SCENE.**
- 2. WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?**
- 3. HOW WILL THE INFORMATION BE INTERESTING AND UNIQUE?**

Names _____ Per. _____ Element _____

Scene 3 – AMAZING facts and Information

Describe three amazing uses and information about your element. The information below must be in your infomercial!

- 1. _____

- 2. _____

- 3. _____

A – information above explained with clarity, accuracy and interest.	B – information above explained with some clarity, accuracy and interest	C – information above partially explained and/or inaccurate or not interesting.
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Scene 3

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

**WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?
HOW WILL THE INFORMATION BE INTERESTING AND UNIQUE?**

Names _____ Per. _____ Element _____

Scene 4 – Bonding

Information below is creative explained in your infomercial.

- 1. What family does your element belong to? _____**
- 2. What families of elements does your element bond with? _____**
- 3. What types of bonds does your element form? _____**
- 4. Draw a model below of your element forming a common bond with another element (or explain why it DOES NOT form bonds)**

A – information above explained with clarity, accuracy and interest.

B – information above explained with some clarity, accuracy and interest

C – information above partially explained and/or inaccurate or not interesting.

Scene 4

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

**WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?
HOW WILL THE INFORMATION BE INTERESTING AND UNIQUE?**

WHAT WILL YOU DO TO MAKE THIS INFORMATION INTERESTING AND UNIQUE?

Your Name _____ Partner's Name _____ Period _____
Element _____

Element Infomercial Part 2 – Your Element and the Periodic Table

Purpose of this scence – Use your element's position on the periodic table to TEACH VIEWERS HOW THE PERIODIC TABLE IS ORGANIZED.

Use your element's position on the periodic table to describe the following.

Property	Number or Name	How this can be found using a Periodic Table of Elements with and WITHOUT numbers.
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Protons		
Electrons		
Atomic Mass		
Electron Shells		
Metal, Non-metal, Semi-metal?		
Density		
Valence Electrons		
Name of Family		
Properties of elements in this family		

The Periodic Table and Your Element

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

HOW WILL VIEWERS LEARN ABOUT THE PERIODIC TABLE FROM THIS SCENE?

WHAT WILL YOU DO TO MAKE THIS INFORMATION INTERESTING AND UNIQUE?

Scene 3 Wow and much more lost due to computer error. Fuck. Retype here if needed.

PART 3 - BONDING

1. What type of chemical bonds is your element most likely to form, ionic, covalent, metallic, or no bonds? _____

2. Explain why your element forms this type of bonds with other elements.

3. How many Valence electrons does your element have? _____

4. Draw an electron dot diagram of your element bonding with another element below:

5. List three common compounds formed with your element:

6. Are the compounds above formed from ionic bonds, covalent bonds or metallic bonds?

7. What evidence supports this type of bonding for your element? (hint: are the elements metals plus non-metals, non-metals plus non-metals, or metals plus metals....)

Stamped Work

Name(s) _____, _____

2008 International Chemical Convention

Element of the Year – INFORMERCIAL STORYBOARD

Directions – Use these guidelines to design your element of the year infomercial. The goals of your infomercial are:

1. To teach the class about your element **using each of the categories shown below and on the rubric.**
2. To show us why your element is the BEST element and should be element of the year.
3. To Keep us interested and make it fun to learn about your element.

The REAL infomercial can be live or filmed on video or made into a DVD.
MAXIMUM LENGTH IS FOUR MINUTES!!!

Partners – you must choose one of the two elements you have been researching as the element of the year.

Element 1 _____ Element 2 _____

Which element will you choose for your infomercial? _____

Why did you choose this element?

Scene 1 –

This scene describes the properties of your element based on element's position on the periodic table.

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?

Scene 2 –

Interesting and unique properties for this element are explained. IF WORKING WITH A PARTNER, ELEMENTS ARE COMPARED.

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?

Scene 3 –

What types of elements does it bond with? Give some examples of compounds it forms.

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?

Scene 4 –

What types of bonds does it form and why? (ionic, covalent, metallic)

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?

Scene 5 –

Why is this element worthy of being element of the year?

DRAW A PICTURE OF THE SCENE IN THE BOXES BELOW.

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DESCRIBE WHAT IS HAPPENING IN THIS SCENE.

WHAT WILL VIEWERS LEARN ABOUT YOUR ELEMENT FROM THIS SCENE?

Name _____

International Element Convention
Element of the Year – STUDENT GRADING AND SCORE SHEET

Presenter(s) _____ Element _____

*5 – thorough understanding and effort evident.**4- understanding and effort is evident.**3 – some understanding and effort is evident. Misconceptions are present.**2- Limited understanding and effort**1-Serious flaws exist. Effort is minimal or non apparent.**0- This part of the project is not included at all.*

Grade 1 - 5	Parts of infomercial
	Properties described based on element's position on the periodic table.
	Interesting and unique properties for this element are explained. IF WORKING WITH A PARTNER, ELEMENTS ARE COMPARED.
	Give some examples of important compounds it forms. (ie CO ₂ , or CaCO ₃)
	What types of bonds does it form and why? (ionic, covalent, metallic)
	Why is this element worthy of being element of the year?
	Infomercial is three to four minutes long.

Grade 1-10	Infomercial is engaging. Uses some of the following: humor, a plot, enthusiasm, graphics, music, technology, live drama, creativity
	Effort is evident: Well prepared and rehearsed; high quality of props, costumes, script and use of filming.
	Final Grade out of 50

**International Element Convention
Element of the Year – STUDENT GRADING AND SCORE SHEET**

Presenter(s) _____ Element _____

5 – thorough understanding and effort evident.

4- understanding and effort is evident.

3 – some understanding and effort is evident. Misconceptions are present.

2- Limited understanding and effort

1-Serious flaws exist. Effort is minimal or non apparent.

0- This part of the project is not included at all.

Grade 1 - 5	Parts of infomercial
	Properties described based on element's position on the periodic table.
	Interesting and unique properties for this element are explained. IF WORKING WITH A PARTNER, ELEMENTS ARE COMPARED.
	Give some examples of important compounds it forms. (ie CO ₂ , or CaCO ₃)
	What types of bonds does it form and why? (ionic, covalent, metallic)
	Why is this element worthy of being element of the year?
	Infomercial is three to four minutes long.
Grade 1-10	Infomercial is engaging. Uses some of the following: humor, a plot, enthusiasm, graphics, music, technology, live drama, creativity
	Effort is evident: Well prepared and rehearsed; high quality of props, costumes, script and use of filming.
	Final Grade out of 50

Periodic Table Card Directions:

Card must be 15 cm wide and 20 cm high.

----- 15 cm -----

Your Name and Period

Atomic Number

Element Name

Symbol

Atomic Mass

5 cool facts about your element!

Include illustrations, color, and visual appeal. The best cards will be hung on the class periodic table!