

Chemistry CP

Name: _____

Project: My Life as a Radioisotope

Section: _____

All matter on this planet is made from a limited number of building blocks—the elements. The properties of the diverse elements are organized into the periodic table. Only 91 elements exist naturally on Earth. Several more elements exist, but they are made synthetically in laboratories. Only a few nuclides (i.e., individual kinds of atoms) are radioactive.

What if you woke up one morning as a radioisotope? For this project, you will write a *creative* and *engaging* short story, one-act play, diary, or comic book about your life as a radioisotope. You may work with a single partner, if you wish.

Include the following components in your project:

- Discuss the origin of the element's name.
- Include a description and important properties of the radioisotope.
- Include common or important uses of the radioisotope.
- Discuss the type of radioactive decay, with a balanced nuclear equation.
- Include the half-life of the radioisotope.
- Include a minimum of two references, reported in an appropriate format.

Absence is not an excuse for missing a deadline. Materials are due at the beginning of class. When in doubt, hand it in early.

Your radioisotope: _____

Project due date: Wednesday, 11/7

This project will be graded according to the following rubric:

Component	Scale					
Origin of element name	1	2	3	4	5	
	brief, incomplete description of name origin			detailed, inclusive description of name origin		
Properties of Radioisotope	1	2	3	4	5	
	brief, incomplete description and discussion of properties			detailed, inclusive description and discussion of properties		
Uses of Radioisotope	1	2	3	4	5	
	brief, incomplete discussion of uses			detailed, inclusive discussion of uses		
Type of Decay Balanced nuclear equation Half life	1	2	3	4	5	
	incorrect or missing equation half-life missing or incorrect			correct nuclear equation correct half-life reported		
Spelling and Grammar	1	2	3	4	5	
	many spelling mistakes and grammatical errors			correct use of grammar and spelling throughout		
Creative (see additional rubric)	1	2	3	4	5	6
Engaging (see additional rubric)	1	2	3	4	5	6
A minimum of two (2) references (Note: Wikipedia is NOT a suitable reference)	1	2	3	4	5	
	Not included		2 suitable references		3+ references correctly formatted	
	OR incorrectly formatted					

Creative

6: Student work is unusually creative. The ideas/materials/methods used are novel, striking, and highly effective. Important ideas/feelings are illuminated or highlighted in sophisticated ways. The creation shows great imagination, insight, style, and daring. The work has an elegant power that derives from clarity about aims and control over intended effects. The creator takes risks in form, style, and/or content.

*The problem has been imaginatively re-framed to enable a compelling and powerful solution.

*Methods/approaches/techniques are used to great effect, without overkill.

*"Less is more" here: there is an elegant simplicity of emphasis and coherence.

*Rules or conventions may have been broken to create a powerful new statement.

*Common materials/ideas have been combined in revealing and clever ways.

*The audience is highly responsive to (perhaps disturbed by) the work.

*The work is vivid through careful attention to telling details and deft engaging touches.

*There is an exquisite blend of the explicit and implicit.

5: Student work is highly creative. The ideas/materials/methods used are imaginative and effective. There is attention to detail. A clear and confident voice and style are present.

Novel approaches/moves/directions/ideas/perspectives were used to good effect. There is an effective blend of personal style and technical knowledge. Familiar materials and ideas have been combined in new and imaginative ways. The work provokes a lively audience response. The work takes risks in methods/style/content.

*Novel approaches/moves/directions/ideas/perspectives were used to good effect.

*There is an effective blend of personal style and technical knowledge.

*Familiar materials and ideas have been combined in new and imaginative ways.

*The work provokes a lively audience response.

*The work takes risks in methods/style/content.

4: Student work is creative. The ideas/materials/methods used are effective. A voice and style are present. Novel approaches/moves/directions/ideas/perspectives were used to good effect. There are imaginative and personal touches scattered throughout the work. The work keeps the audience mostly engaged. There is a discernible and interesting effect/focus/message/style, with lapses in execution. The work takes some risks in methods/style/content.

*Novel approaches/moves/directions/ideas/perspectives were used to good effect.

*There are imaginative and personal touches scattered throughout the work.

*The work keeps the audience mostly engaged.

*There is a discernible and interesting effect/focus/message/style, with lapses in execution.

*The work takes some risks in methods/style/content.

3: Student work is somewhat creative. The ideas/materials/methods used show signs of imagination and personal style. Familiar approaches/routines/moves were used, but with a few new twists. There are places where ideas and techniques are borrowed whole. Novel ideas or approaches may be present but they seem added on, excessive, out of place and/or not integrated effectively in the work. Time-tested recipes and cliches are used even where there is a personal voice - the work is pretty "safe". The work is an uneven blend of interesting and familiar approaches and effects, but with no coherence, OR the work is technically very competent and coherent, but without much spark or insight.

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*There are places where ideas and techniques are borrowed whole.

*Novel ideas or approaches may be present but they seem added on, excessive, out of place and/or not integrated effectively in the work.

*Time-tested recipes and cliches are used even where there is a personal voice - the work is pretty "safe".

*The work is an uneven blend of interesting and familiar approaches and effects, but with no coherence, OR the work is technically very competent and coherent, but without much spark or insight.

2: Student work is not very creative. The approach is trite and the ideas cliched, leading to a flat and predictable performance. There is little sense of the creator's touch, voice, or style here. The work offers little in the way of new approaches/methods/ideas. There is little sign of personal voice, touch, or style. The work suggests that the creator confuses "creative" and "risk-taking" with "shocking in a juvenile way". There is excessive and incoherent use of different materials, techniques, ideas. The creator may have confused great care and precision with creativity - the work is more polished than imaginative or revealing.

*The work offers little in the way of new approaches/methods/ideas.

*There is little sign of personal voice, touch, or style.

*The work suggests that the creator confuses "creative" and "risk-taking" with "shocking in a juvenile way".

*There is excessive and incoherent use of different materials, techniques, ideas.

*The creator may have confused great care and precision with creativity - the work is more polished than imaginative or revealing.

1: Student work is uncreative. The performance re-creates someone else's performance or relies exclusively on

the models/algorithms/moves/recipes/templates/directions/materials provided. The work is predictable throughout, relying almost exclusively on hackneyed approaches; there is no apparent personal touch. The work is timid and lacking in vivid feelings and ideas - so abstract that it has little to say to an audience. The work is done with care but lack or is off-topic direction or insight.

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*The work is predictable throughout, relying almost exclusively on hackneyed approaches; there is no apparent personal touch.

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Engaging

6: Student work engages the audience from the very beginning and throughout. This is sophisticated work. The ideas and the way they are communicated maintain the audience's interest. There is unusual flair: The author's voice consistently shines through, as does the author's control over purpose and sensitivity to the audience.

5: Student work engages the audience throughout. The ideas and the way they are communicated consistently maintain the audience's interest. The author's voice is clearly present. The work reveals good control over purpose; the language is consistently clear, complete and logical, and shows sensitivity to the audience.

4: Student work generally engages the audience. Ideas and the way they are communicated generally maintain the audience's interest. The author's voice is present, with occasional lapses into a context-less or bland style. The work generally reveals control over purpose and sensitivity to the audience, with minor lapses.

3: Student work is straightforward, communicated in a competent matter-of-fact style, but only occasionally holds the audience's interest. The work may lack a strong and consistent author voice. There is inconsistent control of the purpose AND/OR the work is insufficiently mindful of the audience.

2: EITHER student work is communicated in a perfunctory matter-of-fact style that does not engage the audience much OR the writing reveals flashes of brilliance side by side with confusing, incomplete, or incoherent language. There is either no discernible author voice or point of view OR there is great inconsistency in the author's voice and style. There is no general control over purpose and audience exhibited in the work.

1: Student work is ineffective and/or incomplete. The language used reflects little control over the genre and the mechanics of communicating for a purpose and audience.