Dear Carbon, I Love You

ACTIVE LEARNING FOCUS

SINGLE LESSON – Project Development Guide with Templates and Examples

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TEMPLATES AND EXAMPLES

ABOUT THIS RESOURCE

This resource leads you through the process of designing a love letter project **tailored to the learning and skill goals of your unit.**

When students write creatively, they not only become stronger writers, but they also become more deeply engaged in the content. In this project, students are asked to write a love letter to something - an organelle, element, math concept, anything related to your subject - in a way that allows them to practice effective and persuasive composition, while also demonstrating their understanding of the content.

Learning Skill Focus

- Students **establish** knowledge and **understanding** of a central idea or key concept you choose, and
- demonstrate **creativity** as they **compose** a well-organized and effective piece of writing.

This project also provides several opportunities for differentiation through student choice. The template for the student-facing material is heavily scaffolded to support students who are still developing effective writing skills.

HOW TO USE THIS RESOURCE

Part 1: Project Brainstorm

Identify your learning goals and content parameters and establish requirements for the final product.

Part 2: Example Project

Review the example project for inspiration.

Part 3: Student Facing Materials

Edit and adapt the template to create student facing materials for your own project.

PROJECT DEVELOPMENT GUIDE

PART 1: PROJECT BRAINSTORM

Use the prompts below to develop your project and student facing materials.

1. **Identify your content and any content specific learning goals or skills.** Typically, the content will be a section or unit of your curriculum that your students will have already encountered and worked with.

2. **Determine the format for the final product.** The final product does not necessarily need to be a love letter for students to show understanding. You can differentiate the options and give students a choice about what they create. (eg. song lyrics, a poem, a social media post with a picture, etc.)

3. **Decide if you want students to collaborate, if at all.** (eg. work in pairs or groups to create their projects or individually provide a classmate with peer feedback.)

4. **Decide how you want students to share their final project** (eg. add to a class shared folder, handwritten or printed, video recording of reading, etc.)

PART 2: EXAMPLE PROJECT

Dear Carbon, I Love You

PROJECT OVERVIEW

Your final project for our unit on macromolecules is to write a love letter professing your love to Carbon. We have learned that the carbon atom has properties that make the diversity of compounds found in living organisms possible. Living things would not exist without carbohydrates, lipids, proteins and nucleic acids.

Tell *Carbon why it is the center of your universe: will you win Carbon's heart?
(You are correct, carbon is not typically capitalized, but we are making it into a proper noun, worthy of a love letter!)

LOVE LETTER REQUIREMENTS

The Basics

- Your love letter should be no more than 1 page or 600 words
- Share your project with 1 peer for feedback before submitting. Submit your feedback with your project.
- Submit via Canvas by February 14th.

Learning Skill Focus Areas

- **Be Creative:** Carbon may not be a real person, but it is important. Use your creativity to write about memories with Carbon, and reasons it is so lovable and memorable.
- **Establish Meaning:** Show Carbon (and me) what you know: its atomic structure and how it allows for macromolecules; the basic structure and functions of the four macromolecules; and the role of enzymes as catalysts in biochemical reactions.
- **Compose:** Make sure to edit for grammar and mechanics, and include proper formatting for a letter. For example, letters should be addressed to Carbon, started with a salutation and closed with your name. Structure is important in letters, just like in macromolecules, so make sure your letter is organized in a way that makes sense (see a suggested structure on the next page!).

How to Compose Your Letter (Suggested Structure)

Paragraph 1: Be Creative

- State the purpose of your letter (proving your love).
- Recall at least one fun, positive, and/or meaningful memory involving Carbon.
- Transition to the next paragraph, in which you will state what you love about Carbon.

Paragraph 2: Establish Meaning

- Establish that you truly understand Carbon, by explaining what you know and love about Carbon. Make sure to include…
    - Carbon's atomic structure and how it allows for macromolecules,
    - the basic structure and functions of the four macromolecules, and
    - the role of enzymes as catalysts in biochemical reactions

Paragraph 3: Be Creative

- Convince Carbon you love it more than anyone else, because only you truly understand what makes it special.
- Reaffirm your love and commitment.

Extension

Volunteers will read their letters aloud to the class. The class will vote on who would win Carbon's heart.

EXAMPLE

Dear Carbon, I Love You Feedback Guide

Criteria	Not Yet	On Your Way	Mission Accomplished	Above and Beyond!
Compose	Letter is not formatted correctly and/or several errors in grammar and mechanics get in the way of communication. Submitted without peer feedback.	Letter is formatted correctly and grammar and mechanics rules are generally followed, possibly with a few small errors. Submitted without peer feedback.	Letter is formatted correctly and grammar and mechanics rules are followed, with minimal small errors. Submitted with 1 instance of peer feedback.	Letter is formatted correctly and grammar and mechanics rules are well-followed. Submitted with multiple instances of peer feedback.
Be Creative	Letter does not demonstrate creativity or original thought. It is missing both a memory and sufficient reasons that carbon is lovable.	Letter demonstrates some creativity, but is not effective or convincing. It may be missing either a memory or sufficient reasons that carbon is lovable.	Letter demonstrates creativity and original thought. It includes both a memory and sufficient reasons that carbon is lovable.	Letter is highly convincing, demonstrating creativity and original thought. It includes a well-crafted memory and persuasive reasons that carbon is lovable.
Establish Meaning	Letter shows a lack of understanding of what makes carbon unique and important to living things. Includes at least 1 example.	Letter shows some understanding of what makes carbon unique and important to living things. Includes at least 2 examples.	Letter shows a sufficient understanding of what makes carbon unique and important to living things. Includes at least 3 examples.	Letter shows a deep understanding of what makes carbon unique and important to living things. Includes at least 4 examples.

PART 3: STUDENT FACING MATERIALS

Use the templates on the following pages to develop materials for your students.

- Review the project overview pages of the template, using your answers from the project brainstorm and referring to the example project as needed. Any text in [brackets] will need to be edited by you, according to your project parameters.
- Decide if you will create target dates for completion or create milestones in collaboration with your students.
- Review the feedback template and edit according to your learning and skill goals and differentiated project choices.

<< TEMPLATE >>

Dear [Concept], I Love You

PROJECT OVERVIEW

Your final project for our unit on [insert concept] is to write a [love letter or differentiated options] professing your love to [insert concept(s)] . We have learned that [insert description].

Tell [insert concept] why it is the center of your universe: will you win [insert concept] 's heart?

PROJECT REQUIREMENTS

The Basics

- [insert format or style requirements]
- [insert format or style requirements]
- [insert submission requirements]

Learning Skill Focus Areas:

- Be Creative: [insert evidence of skill practice or performance indicators]
- Establish Meaning: [insert evidence of skill practice or performance indicators]
- Compose: [insert evidence of skill practice or performance indicators]

How to Compose Your [Product] (Suggested Structure)

[optional: insert suggested structure for product]

Extension

[optional: insert extension opportunities]

<< TEMPLATE >>

DEAR [INSERT CONCEPT], I LOVE YOU - FEEDBACK GUIDE

Criteria	Not Yet	On Your Way	Mission Accomplished	Above and Beyond!
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Be Creative	Letter does not demonstrate creativity or original thought. It is missing both a memory and sufficient reasons that carbon is lovable.	Letter demonstrates some creativity, but is not effective or convincing. It may be missing either a memory or sufficient reasons that carbon is lovable.	Letter demonstrates creativity and original thought. It includes both a memory and sufficient reasons that carbon is lovable.	Letter is highly convincing, demonstrating creativity and original thought. It includes a well-crafted memory and persuasive reasons that carbon is lovable.
Establish Meaning	Letter shows a lack of understanding of [insert concept]. Includes at least 1 example.	Letter shows some understanding of [insert concept]. Includes at least 2 examples.	Letter shows a sufficient understanding [insert concept]. Includes at least 3 examples.	Letter shows a deep understanding of [insert concept]. Includes at least 4 examples.

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