



Combined ELA and Math Performance-Based Pathway Task Model

Background Information:

In order to complete the Performance-Based Pathway in ELA and Math simultaneously, students will need to complete a project that they have designed or chosen with guidance from an advisor. This project should connect in some way with the student's goals, interests, or creative pursuits aligned with their High School and Beyond Plan. The project must be designed so that the final products produced by the student will enable an educator to assess whether they have met the high school focus standards for both Math and ELA. (The advisor and the evaluator may or may not be the same person. The advisor could be a school staff person or community member, but there needs to be a teacher with an English endorsement and a teacher with a math endorsement involved in the evaluation of the student work.)

Schools may approach the creation of this project or learning experience in various ways. Schools could design a learning experience that students could modify to align with their High School and Beyond Plan, could have students design their projects or learning experiences individually, with guidance from an advisor, or do both. In some cases, students might work with advisors or mentors from the community as well as or in place of an advisor from the school. If the project will be evaluated by someone other than the students' project advisor, the evaluator should review the plan before the student begins their work. It will be important that everyone involved in designing the learning experience or project consult the [ELA Graduation Pathways rubric](#) and the [Math Graduation Pathways rubric](#) as they envision what the student will create.

Task Model: Any performance task that aims to assess the focus standards for both the math and the ELA Performance-Based Graduation Pathways must require students to engage in a learning experience that has an authentic, real-world challenge that they can break down, analyze mathematically, and translate into mathematical representations. They must also gather sources of information, read and respond to those sources, and create a product (text, audio, video, or live performance) in which they explain their solutions or recommended approach to the problem, integrating information from their sources and utilizing mathematical reasoning, along with graphs, diagrams, or other representations as necessary. The final product may take the form of any genre: narrative, exposition, argument, oral presentation, video, or another genre as defined by the student.



In order to design this project, students and teachers should first design a project that will allow the student to produce the items outlined in the [Mathematics Task Model](#) (below.) After ensuring that the proposed project will allow the students to produce these items, then work together to ensure that the student will also be able to produce the ELA components, which are listed beneath the math ones.

Note: Throughout this task model, the word “problem” is a general term for “a question that needs to be answered, or something that needs to be figured out, addressed, or solved.”

- The student will engage in a learning experience that has an authentic, real-world problem (aligned to their High School and Beyond Plan) that they can break down, analyze, and decontextualize, ultimately representing the problem symbolically as part of any final work product. *(Performance Indicators 1A, 2A and 2B)*
- The student will engage with and develop a written plan to address a problem that has enough complexity for multiple entry points and solution paths. *(Performance Indicators 1A and 1B)*
- Throughout the learning experience, the student will create a reflection (written, oral*, or video) or set of reflections that show they were able to:
 - (1) make strategic assumptions and approximations to simplify complex problems *(Performance Indicator 4A)*
 - (2) decompose complicated quantities into single objects or compositions of several objects *(Performance Indicators 7C)*
 - (3) use recognized patterns or structures to make predictions or decisions *(Performance Indicator 7B)*
 - (4) recognize calculations or results that repeat and use them mathematically through substitution or other processes *(Performance Indicator 8A)*
- The student’s final product must contain some elements (for example, a diagram, two-way table, graph, flowchart, and/or formulas) that demonstrate their ability to identify important quantities and map relationships. The student should be given the opportunity to describe the relationship between quantities, mathematically recognizing patterns, trends, and functions as applicable, and then use them to draw conclusions and make decisions. *(Performance Indicators 4B and 4C)*
- The student will create a written text, oral presentation, or video explanation that uses applicable vocabulary to communicate the following information (along with the student’s final solution) *(Performance Indicator 6B)*:
 - (1) stated assumptions, definitions, and previously established results that frame the problem; *(Performance Indicator 3A)*

- (2) arguments and tentative conclusions through a series of logical statements that offer a hypothesis on the solution to the problem, including addressing counter-arguments or examples; *(Performance Indicators 3B and 3C)*
- (3) description of problem-solving process that highlights the meaning of symbols chosen, units of measure, precise calculations, patterns and structures within resulting quantities and expressions, and an ability to both decontextualize and re-contextualize the project in order to determine if the result is plausible *(Performance Indicators 2A, 2B, 6A, 6C, 7A)*
- At the end of the learning experience, the student will produce a reflection (written, oral*, or video) in which they explain how they:
 - (1) correctly, efficiently, and strategically used a variety of tools and external mathematics resources to solve the problem. *(Performance Indicators 5A and 5B)*
 - (2) monitored and evaluated their progress, created procedural shortcuts, checked their work using different methods, adjusted their approach, and persevered through challenges. *(Performance Indicators 1C, 1D, and 8B)*
 - (3) clearly identified which high school mathematics standards they learned and/or created evidence for during the learning experience.
 - (4) connected their learning to their preparation for their post high school goals (from their High School and Beyond Plan) - including a self-evaluation of the skills and learning gained.

***NOTE:** The student may choose to reflect verbally when conferencing with the educator throughout their learning experience. The educator should take notes so that there is an artifact to refer to when completing the final assessment of the student's evidence for the pathway.

Additionally, the Performance Assessment must be designed to elicit student work that will allow the student to demonstrate they have met at least two high-school level mathematics standards from each of at least two conceptual categories (limited to: Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability). These standards should be:

- Clearly applicable and relevant to the learning experience
- Easily identifiable within the student's submission of evidence

As the students work to analyze and solve the mathematical problems that they have identified, they will also need to add these components in order to demonstrate mastery of the ELA standards:

Research:

- The student must engage in research that informs their final product, consulting with at least **five** authoritative sources {including information presented in text as well as other media or formats}, using advanced searches effectively. Interviews with experts or community members are encouraged as possible sources. The two texts mentioned in the reading section are included in this set of sources.
- The student must produce an annotated bibliography which will include an alphabetical list of sources, with citations formatted in an accepted style (for example MLA or APA). Each citation should be followed by a paragraph explaining how the source was found, and why the student found it to be relevant and reliable. The student's analysis addresses these four resource elements, as defined by the [National Association of Media Literacy Education](#): authorship, purpose, economics, and content. This paragraph may also contain notes on elements that the student found interesting or noteworthy about that source.
- The student must integrate information or quotes from these sources into one of their final products. If the student is creating a narrative, poetry, or other product in which it would be inappropriate to integrate information, then they should integrate information from the sources into their text analysis. If the student is creating a final piece that is expository, persuasive, or informative, then they should integrate information from the sources into their final product.

Text Analysis:

- The student must analyze at least two written texts that are at a text complexity level that matches the type of text that students will need to be able to read in their chosen field after high school.
- The student must annotate a printed copy of one text, using underlining or highlighting and margin notes to indicate these features of the text:
 - A sentence or group of sentences/phrases that best communicate the central idea or core message of the text
 - A place where the text is ambiguous or where the reader may have questions that are not answered by the text
 - A section of the text that could be used to support the student's interpretation of what the text says.
- The student must produce a written analysis of the texts in which they explain their interpretation of the texts using quotes or paraphrases from the texts to support their

argument. (If the student has decided that an essay or written argument of some kind will be their final product, then this analysis may be contained in their final product. If the student is producing a narrative, poetry, or any kind of oral or recorded creative work, then this analysis must be turned in along with the final product.)

- The student must annotate a printed copy of one text, using underlining or highlighting and margin notes to indicate these features of the text:
 - 3 key words or phrases in the text
 - interpretation of what the word means in the context of the text
 - analysis of why the author may have chosen this word, why the word is important, **or** ways in which the author uses the word creatively

Final Product:

- The student must produce a final product, either oral or written, in any genre, that conveys their problem-solving journey and the results of their calculations (as defined in the [Mathematics Task Model](#).) This final product must use tone and transitions effectively to communicate to the reader or audience
- This presentation or text must also integrate information, perspectives or quotes from the five sources

Proofreading and Attention to Detail:

- In all of the written items for the Pathway, the student must review their work and fix grammatical errors, instances of lack of agreement, or punctuation errors

Here are three hypothetical examples of projects that could be designed using this task model to demonstrate mastery of both ELA and Math focus standards:

Business Plan or Career Exploration	Creative Endeavor	Argument, Civic Action or Research
The student has a vision of a business that they would like to create or design after leaving high school - for example, a beauty salon. They articulate some mathematical problems that they will need to solve as a business owner (such as setting prices for services, rates of pay for staff, costs for products sold, etc. in	The student is passionate about a form of creative expression. They articulate some mathematical problems that they would need to solve in order to create a particular piece of art (for example, the geometry behind a sculpture, mural, or other piece of visual art, or the mathematics behind chord progressions in music.)	The student is passionate about a school, local, tribal, state, national, or international issue. They seek out resources to deepen their understanding of this issue. They also identify mathematical questions or problems that need to be solved in order to understand the issue or propose solutions. After their research and

<p>such a way that the business can yield a profit). They also research the federal and state regulations pertaining to salons, utilizing at least two written texts along with videos, charts, infographics or any other type of sources. Once their research is complete, they produce these items:</p> <ol style="list-style-type: none"> 1. A text analysis of the written sources, including an annotated copy of at least one text 2. An annotated bibliography explaining how they searched for and selected sources 3. A brochure, website, presentation, or other type of communication explaining the conclusions they have drawn from their mathematical problem-solving, along with the most important regulations pertaining to beauty salons in Washington and the most important things for new business owners to know. 	<p>They also seek out sources that discuss some aspect of this creative endeavor. After their research is complete, they produce these items:</p> <ol style="list-style-type: none"> 1. A text analysis of the texts they read, including an annotated copy of at least one text 2. An annotated bibliography explaining how they searched for and selected sources 3. A piece of writing, presentation or other communication that explains their mathematical problem-solving process and conclusions, and the implications for the creative work. 	<p>calculations are complete, they produce these items:</p> <ol style="list-style-type: none"> 1. A text analysis of the written sources that they consulted, including an annotated copy of at least one text, discussing the central ideas of each. 2. An annotated bibliography explaining how they searched for and selected sources 3. A piece of writing, presentation or other communication in which they communicate their position on the issue or propose solutions to a problem. The writing/presentation also explains their mathematical problem-solving process and conclusions, and the implications for the proposed solution. Ideally, their teacher would work with them to find a way to publish or share this piece with an appropriate audience.
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Schools may design a variety of ways to support students in crafting their projects, engaging in research and creation, getting feedback, revising, and polishing final products. Some schools may design elective or core classes in which students work on Graduation Pathways; other schools may bring in community volunteers to mentor students in their Pathway projects; some schools may use enrichment blocks or Advisory classes to support this work; other schools may design other creative approaches. No matter how the school chooses to provide student support, these steps will probably be helpful:

1. The student works with a mentor or mentors to design their project in alignment with their own High School and Beyond Plan.
2. The student and mentor/s establish a timeline with specified project benchmarks, check-ins, and opportunities to get feedback
3. The student works on their reading and product creation, receiving feedback and revising along the way. During this process, both the students and the mentors use the Graduation pathway rubric to self-assess or give feedback.
4. The student turns in a final product and is evaluated using the ELA and Math Graduation Pathway Rubrics. The final product must include a short reflection (written, oral or recorded) about how this project connects with the student's High School and Beyond Plan, including a self-evaluation of the skills and learning that were gained.
5. We estimate that this process would take at least a semester to complete.

Student Checklist for Math

Student projects will all be unique and personalized to connect with the High School and Beyond Plan. However, no matter what you will be creating for your project, the following elements must be included in your work:

Learning Experience Design & Planning

- Did you select a learning experience that has an authentic, real-world problem (aligned to your High School and Beyond Plan)? *Note: Throughout this checklist, the word "problem" is a general term for "a question that needs to be answered, or something that needs to be figured out, addressed, or solved."*
- Did you identify a problem within that learning experience that has enough complexity to be addressed with multiple approaches?
- Did you show that you could break down, analyze, and translate the context of the problem into mathematical representations?
- Did you develop a written plan to address that problem?

Reflection

- Throughout the process, did you create a reflection (written, oral*, or video) or set of reflections that show you are able to:
 - (1) make strategic assumptions and approximations to simplify complex problems?
 - (2) decompose complicated quantities into single objects or compositions of several objects?
 - (3) use recognized patterns or structures to make predictions or decisions?
 - (4) recognize calculations or results that repeat and use them mathematically through substitution or other processes?

- At the end of the learning experience, did you produce a reflection (written, oral*, or video) that explains how you:
 - (1) correctly, efficiently, and strategically used a variety of tools and external mathematics resources to solve the problem?
 - (2) monitored and evaluated your progress, created procedural shortcuts, checked your work using different methods, adjusted your approach, and persevered through challenges?
 - (3) clearly identified which high school mathematics standards you learned and/or created evidence for during your learning experience?
 - (4) connected your learning to your preparation for your post high school goals (from your High School and Beyond Plan) - including a self-evaluation of the skills and learning gained?

Creation of a Final Product:

- Does your final product contain some elements (for example, a diagram, two-way table, graph, flowchart, and/or formulas) that demonstrate your ability to identify important quantities and map relationships?
- Did you describe the relationship between quantities, mathematically recognizing patterns, trends, and functions as applicable, and then use them to draw conclusions and make decisions?
- Did you create a written text, oral presentation, or video explanation that uses applicable vocabulary to communicate the following information (along with your final solution):
 - (1) stated assumptions, definitions, and previously established results that frame the problem?
 - (2) arguments and tentative conclusions through a series of logical statements that offer a hypothesis on the solution to the problem, including addressing counter-arguments or examples?
 - (3) description of a problem-solving process that highlights the meaning of symbols chosen, units of measure, precise calculations, patterns and structures within resulting quantities and expressions, and a way to determine if the result is plausible?

Proofreading and Attention to Detail:

- In all of the evidence you plan to submit, have you reviewed your work using multiple methods and checked all solutions for reasonableness within the context of your learning experience?
- Have you used the [Math Performance-Based Graduation Pathways rubric](#) to review, self-assess, and revise the components of your project, or to seek feedback from others?

Student Checklist for ELA

Student projects will all be unique and personalized to connect with the High School and Beyond Plan. However, no matter what you will be creating for your project, the following elements must be included in your work:

Research

- Did you seek out five different resources on your topic, with at least two being written texts)?
- Did you assess each source for relevance and (if appropriate) reliability?
- Did you produce an annotated bibliography which includes:
 - an alphabetical list of sources, with citations formatted in an accepted style (for example MLA or APA);
 - A paragraph for each source explaining how the source was found, and why you thought it was relevant and reliable. In this paragraph you should address the following questions:
 - Who created this resource?
 - What did they hope to achieve?
 - Who paid for this or makes money from it?
 - What values or perspective does it represent?
- Notes on elements that you found interesting or noteworthy about that source?

Text Analysis

- Did you annotate a printed copy of one text, using underlining or highlighting and margin notes to indicate these features:
 - A sentence or group of sentences/phrases that best communicate the central idea or core message of the text?
 - A place where the text is ambiguous or where the reader may have questions that are not answered by the text?
 - A section of the text that could be used to support your interpretation of what the text says?
 - Three different important words in the text, using, margin notes to define them in the context of the text, and to briefly explain **either** why they are important, why the author chose them, or how the author uses this word creatively?
- Did you produce a written analysis of the texts in which you explain your interpretation of the texts using quotes or paraphrases from the texts to support your argument? **(If an essay or written argument of some kind will be your final product, then this analysis may be contained in their final product. If you are producing a narrative, poetry, or any kind of oral or recorded presentation/creative work, then this analysis must be written and turned in along with the final product.)**

Final Product:

- Did you produce a final product, either oral or written, in any genre, that conveys a clear and distinct perspective, idea, storyline, or argument, such that listeners can follow the line of reasoning or narrative through the presentation?
- Did you use tone and transitions to communicate effectively to your reader or audience?
- Did you integrate information, perspectives or quotes from your sources into your final product? *(If you have created a narrative, poetry, or other product in which it would be inappropriate to integrate information, then have you integrated information from the sources into your text analysis?)*
- Did you ensure that the products you have created are clear, effective, and crafted with attention to detail, with organization, substance, and style that are appropriate to the purpose and audience?
- Did you create a short reflection (written, oral or recorded) about how this project connects with your High School and Beyond Plan, including a self-evaluation of the skills and learning you gained?

Proofreading and Attention to Detail:

- In all of the written items for your Pathway, have you reviewed your work and fixed grammatical errors, instances of lack of agreement, or punctuation errors?
- Have you used the [ELA Graduation Pathways rubric](#) to review, self-assess, and revise the components of your project, and/or to seek feedback from others?