

The Washington State BOARD OF EDUCATION

# **Performance-based Pathway Tools and Resources**

# **Performance-based Pathway Description:**

This packet contains tools and resources to support the implementation of the **Performance-based Graduation Pathway** in Washington schools. In order to graduate from high school, students in Washington State must complete 1) a High School and Beyond Plan, 2) the credit and subject area requirements, and 3) a graduation pathway option (see linked graphic), along with any other local requirements. The graduation pathway options provide students multiple ways to show readiness for their individual education and career goals. The pathway a student completes must align with the student's postsecondary goals as described in their High School and Beyond Plan. School districts decide which pathways to offer, and are encouraged to offer as many options as possible.

The **Performance-based Pathway** allows students to show what they know and can do in real-world, hands-on ways that align with their individual goals for life after high school. This student-centered pathway is intended to be customizable, with the aim of being relevant and engaging to the student. There is a lot of flexibility as the learning experience:

- May take a variety of forms;
  - Examples: project, practicum, work-related experience, community service, cultural activity
- May result in a variety of student work that can be evaluated
  - Examples: performance, presentation, portfolio, report, film, exhibit
- May, or may not, be done as part of a class where the student also earns credit

The performance-based pathway is combinable with other ELA and math pathway options, meaning the student can do one pathway in ELA and another pathway in math. For example, a student could pass the state assessment in ELA and then focus their performance-based pathway in math.

To meet the graduation pathway requirement, the learning experience must:

- Provide evidence that the student meets or exceeds state learning standards in English language arts (ELA) and/or mathematics (depending on if the student plans to or needs to meet their pathway in both subjects, or in only one)
- Align with the student's High School and Beyond Plan goals



• Meet state requirements (<u>WAC 180-51-230 (7)(f)</u>) regarding the safety and quality of the learning experience and the assessment criteria for determining the student has demonstrated the learning standards

# **Local Policy**

School districts must adopt a local policy that meets state requirements before offering the performance-based pathway option. The <u>Washington State School Directors'</u> <u>Association</u> has developed a model policy and procedure for the performance-based pathway (2415 and 2415P) that districts can locally customize then adopt.

Most school districts that are interested in offering this pathway should be able to offer it beginning with the Class of 2025. Some districts that have already laid groundwork may be able to begin with the Class of 2024. For example, districts that are already doing mastery-based learning and districts that have a local culminating project requirement may be able to develop this new pathway faster.

## **Tools and Resources**

This packet contains guidance and resources that educators can use to help students design their projects, to help students manage their work, and to guide educators in evaluating the students' work. The resources provided are:

- 1. **Focus Standards Lists:** These documents explain which standards from the Washington State Standards have been selected as focus standards for Math or ELA Performance-based Graduation Pathway projects. The lists were vetted and feedback provided by educators from across the state, and finalized by staff from the State Board of Education and the Office of the Superintendent of Public Instruction.
- 2. **Rubrics**: These sets of scoring criteria provide clear guidance to educators about how to evaluate students' final products and determine whether the student has successfully completed the pathway. The rubrics were vetted and feedback provided by educators from across the state, and they were revised and finalized by staff from the State Board of Education and the Office of the Superintendent of Public Instruction.
- 3. Task Models: The task models outline the required components that must be included in each student's work, regardless of how they design their project. These documents also provide examples of what student projects could look like and checklists that students can use to keep track of their progress as they work on the various components of their project.

4. **Student Checklists:** These simple checklists will help students manage their projects and ensure that they have completed all the requirements.

# **Project Support Strategies:**

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 project, receiving feedback and revising along the way. During this process, both the students and the mentors use the Graduation pathway rubric/s to self-assess or give feedback.
- 4. The student turns in a final product and is evaluated using the ELA and/or Math Graduation Pathway Rubric. 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 approximately a semester to complete.

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# ELA Focus Standards for Graduation Pathways

The State Board of Education, in collaboration with the Office of Superintendent of Public Instruction, is developing resources to support implementation of a performancebased pathway to graduation for high school students across the state of Washington. This is in alignment with the following requirement: <u>HB 1308: High School Graduation</u> <u>Pathway Options - Various Provisions</u>.

The intent of this document is to provide guidance for schools and districts on the number and assortment of **ELA** standards which must be incorporated into the design of the learning experience and assessed within the performance-based graduation pathway. *Throughout this document "learning experience" is used as it was explained in related legislation: "may take a variety of forms, such as a project, practicum, work-related experience, community service, or cultural activity, and may result in a variety of products that can be evaluated, such as a performance, presentation, portfolio, report, film, or exhibit" (please see HB 1308 for more information). Flexibility with the selection of some of the standards is necessary in order to ensure that the learning experience can be designed to be both student-centered and responsive to interests and goals of the student.* 

Since the ultimate goal is for students to produce evidence of meeting high school ELA learning standards by demonstrating knowledge and skills in a real-world context, aligned to the student's <u>High School and Beyond Plan</u>, performance-based learning experiences<sup>1</sup> will be created by students, teachers, and in some cases community mentors working together, guided by the <u>ELA Task Model</u>.

Students who wish to utilize the Performance-Based Pathways for ELA will work with an advisor to select and/or design cohesive and coherent learning experiences that provide them the opportunity to carry out activities and solve problems in a way that reflects the complex nature of such tasks in the world outside of the classroom. The learning experiences must be designed to enable students to provide evidence of meeting all of the focus standards listed below; the final product produced by the student could be a piece of writing, a performance, a presentation, a portfolio, a report, a film, animation, or another product that enables the student to show evidence of meeting the learning standards identified. While the focus of this document is to describe the ELA focus

<sup>&</sup>lt;sup>1</sup> Defined in <u>HB 1308: High School Graduation Pathway Options - Various Provisions</u> (p. 4 lines 33 - 37).



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standards for the performance-based graduation pathway, learning experiences that are developed may also inherently give students the opportunity to practice and provide evidence of skills present in <u>Washington's Profile of a Graduate</u>.

The student's evidence of meeting the ELA focus standards will be assessed using the <u>Performance-Based Graduation Pathway statewide rubric</u>.

Educators can use this list of standards in the following ways:

- As they meet with students to design individualized projects for the performance based pathways;
- As they work with other educators at their school to design projects that could be used by many students for the performance based pathways;
- As they work with community partners to design projects that could be used by many students for the performance based pathways;

# **Focus Standards**

## **Reading Standards for Informational Text:**

**Key Ideas and Details: (1)** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

**Craft and Structure: (4)** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10, or how Martin Luther King defines "just l-aws" and "unjust laws" in Letter From Birmingham Jail.)

## Writing Standards:

**Production and Distribution of Writing: (4)** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**Integrate Knowledge and Ideas: (7)** Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem or inform creative work.\*.

a. Gather relevant information from multiple authoritative sources {including information presented in text as well as other media or formats], using advanced searches effectively;

- b. Assess the strengths and limitations of each source in terms of the task, purpose, and audience
- c. Integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

## Language Standards:

**Conventions of Standard English: (1)** Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

## **Choice Standards**

In addition to the above standards, the student must choose one of the standards below. This will determine the type of product they create - a written text, or an oral/visual/video presentation.

## Speaking and Listening Standards:

**Presentation of Knowledge and Ideas: (4)** Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

## Writing Standards:

**Text Types and Purposes: (2)** Write informative, explanatory, persuasive or creative texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and/or analysis of content.\*

\*The wording of these standards has been slightly modified to enable students to produce a wide variety of types of product including presentations.

## Resources

Colorado Department of Education (2014). Portfolio and Capstone Guidebook.

National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). <u>Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects</u>. Washington, DC.

Student Achievement Partners. (2020). *<u>Priority instructional content in English language</u> <u>arts/literacy and Mathematics</u>. Achieve The Core.* 

https://achievethecore.org/page/3267/priority-instructional-content-in-englishlanguage-arts-literacy-and-mathematics

Vermont Agency of Education. *Critical Proficiencies in English Language Arts Llteracy*. Unpublished draft resource shared with the Washington State Board of Education. 2023.

Washington Office of the Superintendent of Public Instruction. <u>Considerations for K-12</u> <u>Language Arts and Literacy Instruction</u>. September, 2020.



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# **ELA Performance-Based Pathway Task Model**

## **Background Information:**

In order to complete the Performance-Based Pathway in ELA, 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. (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 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 <u>ELA Graduation</u> <u>Pathways rubric</u> as they envision what the student will create.

**Task Model**: Any performance task that aims to assess the focus standards for the ELA Performance-Based Graduation Pathway must require students to gather sources of information or exemplars of craft, to read and respond to those sources or exemplars, and to create a product (either written or spoken) in which they engage in expression using the English language. The final product may take the form of any genre: narrative, exposition, argument, poetry, oral presentation, video, or another genre as defined by the student.

The student's final product and reading response must demonstrate these indicators:



CHOICE STANDARDS: The student may choose either of these two standards, depending on whether they would like to create a presentation or spoken-word product, or a written product

SPEAKING & LISTENING: Presentation of Knowledge and Ideas:	WRITING: Text Types and Purposes
<ul> <li>SPEAKING &amp; LISTENING: Presentation of Knowledge and Ideas: Indicator 1: The student conveys a clear and distinct perspective, idea, storyline, or argument, such that listeners can follow the line of reasoning or narrative through the presentation.</li> <li>SPEAKING &amp; LISTENING: Presentation of Knowledge and Ideas: Indicator 2: The student acknowledges and addresses possible alternative perspectives on their argument or ideas. <i>(If the student's final product is narrative or poetry, this indicator should be demonstrated in their text analysis.)</i></li> <li>SPEAKING &amp; LISTENING: Presentation of Knowledge and Ideas: Indicator 3: The student's slides, visual aids, or other props or supports for their presentation are clear, effective, and crafted with attention to detail. Their organization, substance, and style are appropriate to the purpose and audience.</li> </ul>	<ul> <li>WRITING: Text Types and Purposes: Indicator 1: The student conveys a clear and distinct perspective, idea, storyline or argument, such that readers can follow the line of reasoning or narrative through the text.</li> <li>WRITING: Text Types and Purposes: Indicator 2: The student acknowledges and addresses possible alternative perspectives on their argument or ideas (<i>If the student's final product is narrative or poetry, this indicator should be demonstrated in their text analysis.</i>)</li> <li>WRITING: Text Types and Purposes: Indicator 3: The student uses sensory, concrete, figurative, or technical language that conveys their meaning effectively</li> </ul>

**The student must** 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, meaning, or narrative. Some possible products could include: essays, short stories, persuasive pieces, brochures, websites, posters, speeches, presentations, plays, spoken-word poetry, oral storytelling, videos, animations (with voice-over), infographics, or any other product that uses text or speech to communicate.

#### FOCUS STANDARD READING: Key Ideas and Details

**READING Key Ideas & Details: Indicator 1.** The student uses relevant and appropriate quotes or paraphrases from the text to help them explain their inferences and ideas about what the text says. They explain clearly why these quotes are connected to their ideas or interpretations about the text's message or central ideas.

**READING Key Ideas & Details: Indicator 2.** The student uses relevant and appropriate quotes from the text to explain where the text is ambiguous or to identify questions that the text does not answer.

#### Task Features:

- □ 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 <u>along with</u> the final product.)

## FOCUS STANDARD READING: Craft and Structure

**READING Craft and Structure: Indicator 1.** The student identifies at least 3 key words or phrases in a text, and for each one, provides interpretation of what the word means in the context of the text, and analysis of why the author may have chosen this word, or ways in which the author uses the word creatively.

#### Task Features:

- □ The student must annotate a printed copy of one text, using underlining or highlighting and margin notes to indicate these features of the text:
  - $\Box$  3 key words or phrases in the text
  - $\hfill\square$  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.

## FOCUS STANDARD WRITING: Production and Distribution of Writing

WRITING Production and Distribution of Writing: Indicator 1. The style and tone (of the writing or presentation) are well-chosen for the audience and purpose.

**WRITING Production and Distribution of Writing: Indicator 2.** The organization of ideas (in the writing or presentation) is clear, and the student uses a variety of transitional strategies to clarify the relationships between and among ideas, paragraphs, and sections.

#### **Task Features:**

□ The student must produce a final product, either oral or written, in any genre, that uses tone and transitions effectively to communicate to the reader or audience.3 key words or phrases in the text.

#### FOCUS STANDARD WRITING: Integrate Knowledge and ideas

WRITING Integrate Knowledge and Ideas: Indicator 1. The student has gathered relevant information from at least five authoritative sources {including information presented in text as well as other media or formats, including interviews], using advanced searches effectively.

WRITING Integrate Knowledge and Ideas: Indicator 2. The student has assessed the strengths and limitations of each source in terms of the task, purpose, audience, and the validity and integrity of the source. The student's analysis addresses each of these four resource elements, as defined by the National Association of Media Literacy Education: authorship, purpose, economics, and content.

WRITING Integrate Knowledge and Ideas: Indicator 3. The student has integrated information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source, and following a standard format for citation.

#### **Task Features:**

- □ 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 above 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 should address these four resource elements, as defined by the <u>National Association of Media Literacy Education</u>: 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.

## FOCUS STANDARD LANGUAGE: Conversations of Standard English

**LANGUAGE Conversations of Standard English: Indicator 1.** The student has reviewed their work for correct sentence formation and fixed grammatical errors or instances of lack of agreement. There may still be a few small errors, but they do not stop the reader or listener from understanding the student's meaning.

**LANGUAGE Conversations of Standard English: Indicator 2.** The student has reviewed their work and fixed capitalization and punctuation errors. There may still be a few small errors, but they do not get in the way of the reader.

#### **Task Features:**

□ Because some portions of some student's work may be oral or recorded, the teacher should review all of the written components of the student's work to assess this standard - the text analysis, reflection on sources, and final product (if appropriate).

#### Here are three hypothetical examples of projects that could be designed using this task model.

Note: the creation of these projects/learning experiences will be very individualized and connected to the context of the student, school and community. These hypothetical examples are intended to serve as samples of possibilities, rather than exemplars.

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 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: 1. A text analysis of the written sources, including an annotated copy of at least one text, discussing the central ideas of each. 2. An annotated bibliography explaining	The student is passionate about a form of creative writing - for example, poetry or sports writing. They seek out exemplars of that type of writing to read, or perhaps a few exemplars plus some critical writing. Once their reading is complete, they produce these items: 1. A text analysis of the exemplars/criticism, including an annotated copy of at least one text, discussing the central ideas of each. 2. An annotated bibliography explaining	<ul> <li>The student is passionate about a school, local, tribal, state, national, or international issue.</li> <li>They seek out resources to deepen their understanding of this issue. After their research is complete, they produce these items:</li> <li>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.</li> <li>2. An annotated bibliography explaining how they searched for and selected sources</li> </ul>

how they searched for and	how they searched for and	<ol> <li>A piece or pieces of</li></ol>
selected sources	selected sources	writing or presentation in
3. A brochure, presentation.	3. A piece or pieces of	which they communicate
website or other resource about the most important regulations pertaining to beauty salons in Washington and detailing the most important things for new business owners to know. Ideally, their teacher would work with them to find a way to publish or share this piece with an appropriate audience.	writing or oral work in the genre that they are passionate about. If this project is done relatively early in the year, the work could be submitted (if the student wants) in national contests such as the Scholastic Art and Writing Awards. Alternatively, the student may find some other way to publish or share their creative work.	their position on the issue or propose solutions to a problem. Ideally, their teacher would work with them to find a way to publish or share this piece with an appropriate audience.

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 Graduation Pathway Rubric. 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 approximately a semester to complete.

## **Student Checklist**

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 <u>ELA Graduation Pathways rubric</u> to review, self-assess, and revise the components of your project, and/or to seek feedback from others?



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## **Background Information:**

- **Purpose:** This rubric is intended to support students and educators as they assess progress and completion of the performance-based graduation pathway requirements for English Language Arts.
- Audience: This document was written in language that is accessible to students and families, as well as educators, so that everyone can understand the expectations for successful completion of the pathway.
- Rubric Design Considerations:
  - Driving question: "What do we see in the student work when the student has mastered a particular high school ELA standard?" Each of the standards has several descriptive Indicators which describe the most important features that we will see in the student's work when the student has mastered the standard.
  - The single point rubric allows educators to assess and document their feedback to the student in a way that is more specific to the learning experience the student chose. Because this Graduation Pathway is intended to provide validation of that student's ability to meet the standards, and not a numerical grade, a yes/no judgment is all that is required.

## Directions:

- 1. Assess a student's learning experience using the rubric provided below. Select "yes" or "no" depending on whether evidence of the indicator described is present in the student's work.
  - a. If you select "no," you must include a description of areas for improvement (Grows).
  - b. If you select "yes," you must include a description of strengths or places where there is strong evidence (Glows).
    - i. Note: You may provide both Glows and Grows when selecting "yes."
- 2. In order to "meet the standard," students must provide evidence for each of the indicators listed.
- 3. In order to complete the pathway, students must "meet the standard" for:
  - a. All of the following standards: READING (Key Ideas and Details), WRITING: Production and Distribution of Writing, WRITING: Integrate Knowledge and Ideas, and LANGUAGE: Conventions of Standard English.
  - b. The student must also choose between meeting the standard for **either** SPEAKING and LISTENING: Presentation of Knowledge and Ideas **or** WRITING: Text Types and Purposes.
- 4. Students are allowed to resubmit their evidence if needed. The feedback in the Glows and Grows sections should be incorporated into their revisions.

\* The wording of these standards has been slightly modified to enable students to produce a wide variety of types of product including presentations.

**CHOICE STANDARDS:** Two standards are listed in the section below, "**SPEAKING and LISTENING**: Presentation of Knowledge and Ideas" and "**WRITING**: Text Types and Purposes." Depending on whether the student has chosen to create an oral or written final project, the student work should be assessed using the appropriate indicators. Use this rubric to indicate whether the student has met the three indicators for <u>EITHER</u> *Speaking and Listening: Presentation of Knowledge and Ideas (pink)* <u>OR</u> Writing: Text Types and Purposes (blue).

		Evidence		Cloure	Grouve
ELA Focus Standard	Meets the Standard	Does Not Meet the Standard	Not Selected	(evidence of meeting standard)	(areas for improvement)

## CHOICE STANDARD ONE: SPEAKING and LISTENING: Presentation of Knowledge and Ideas

Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

<b>Indicator 1</b> The student conveys a clear and distinct perspective, idea, storyline, or argument, such that listeners can follow the line of reasoning, narrative, or meaning through the presentation.			
Indicator 2 The student acknowledges and addresses possible alternative perspectives on their argument or ideas. (If the student's final product is a creative performance such as a narrative or spoken-word poetry, this indicator should be demonstrated in their text analysis.)			

ELA Focus Standard	Meets the	Evidence Does	Not	Glows (evidence of	Grows (areas for
	Standard	Not Meet the Standard	Selected	meeting standard)	improvement)
Indicator 3 The student's slides, visual aids, or other props or supports for their presentation are clear, effective, and crafted with attention to detail. Their organization, substance, and style are appropriate to the purpose and audience.					

CHOICE STANDARD TWO: WRITING: Text Types and Purposes: (2) Write informative, explanatory, persuasive, or creative texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and/or analysis of content.\*

<b>Indicator 1</b> The student conveys a clear and distinct perspective, idea, storyline, or argument, such that readers can follow the line of reasoning or narrative through the text.			
Indicator 2 The student acknowledges and addresses possible alternative perspectives on their argument or ideas (If the student's final product is narrative or poetry, this indicator should be demonstrated in their text analysis)			
<b>Indicator 3</b> The student uses sensory, concrete, and figurative language that conveys their meaning effectively.			

For each of the standards below, use the Evidence column to indicate whether the student has demonstrated that they have met each indicator.

	Evide	ence	Glows	Grows
ELA Focus Standard	Meets the Standard	Does Not Meet the Standard	(evidence of meeting standard)	(areas for improvement)

**READING: Key Ideas and Details: (1)** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

Indicator 1 The student uses relevant and appropriate quotes or paraphrases from the text to help them explain their inferences and ideas about what the text says. They explain clearly why these quotes are connected to their ideas or interpretations about the text's message or central ideas.		
Indicator 2 The student uses relevant and appropriate quotes from the text to explain where the text is ambiguous or to identify questions that the text does not answer.		

**READING: Craft and Structure: (4)** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text

#### Indicator 1

The student identifies at least 3 key words or phrases in a text, and for each one, provides interpretation of what the word means in the context of the text, and analysis of why the word is important, why the author may have chosen this word, or ways in which the author uses the word creatively.

	Evide	ence	Glows	Grows
ELA Focus Standard	Meets the Standard	Does Not Meet the Standard	(evidence of meeting standard)	(areas for improvement)

WRITING: Production and Distribution of Writing: (4) Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

<b>Indicator 1</b> The style and tone (of the writing or presentation) are well- chosen for the audience and purpose.		
Indicator 2 The organization of ideas (in the writing or presentation) is clear, and the student uses a variety of transitional strategies to clarify the relationships between and among ideas, paragraphs, and sections.		

WRITING: Integrate Knowledge and Ideas: (7) The student integrates and evaluates multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question, solve a problem, or inform creative work.\*.

#### Indicator 1

The student has gathered relevant information from at least five authoritative sources [including information presented in text as well as other media or formats, including interviews, infographics, videos, podcasts, observations], using advanced searches effectively. The student should use strategies beyond search engines to search for sources (including databases, interviews with experts, or consulting bibliographies).

	Evidence		Glows	Grows
ELA Focus Standard Meets the Standard		Does Not Meet the Standard	(evidence of meeting standard)	(areas for improvement)
Indicator 2 The student has assessed the strengths and limitations of each source in terms of the task, purpose, audience, and the validity of the source. The student's analysis addresses each of these four resource elements, as defined by the <u>National Association</u> <u>of Media Literacy Education</u> : authorship, purpose, economics, and content.				
Indicator 3 The student has integrated information into the text selectively to maintain the flow of ideas, avoiding overreliance on any one source. (If the student's final product is a creative product in which it would be inappropriate to include information, this indicator should be demonstrated in the text analysis)				
Indicator 4 The student has avoided plagiarism by following a standard format for in-text citations and works cited list, including citations for any text generated by artificial intelligence (MLA, APA or Chicago style). <i>(If the student's final product is a creative product in which it would be inappropriate to include citations, this indicator should be demonstrated in the text analysis)</i>				

LANGUAGE: Conventions of Standard English (1): Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

	Evidence		Glows	Grows
ELA Focus Standard	Meets the Standard	Does Not Meet the Standard	(evidence of meeting standard)	(areas for improvement)
Indicator 1 The student has reviewed their work for correct sentence formation and fixed grammatical errors or instances of lack of agreement. There may still be a few small errors, but they do not get in the way of the reader's or listener's understanding				
<b>Indicator 2</b> The student has reviewed their work and fixed capitalization and punctuation errors. There may still be a few small errors, but they do not get in the way of the reader's or listener's understanding.				

## SUMMARY TABLE

Focus Standards Result	Did the student meet ALL indicators for each of the following standards: READING (Key Ideas and Details), WRITING: Text Types and Purposes, WRITING: Production and Distribution of Writing, WRITING: Integrate Knowledge and Ideas, and LANGUAGE: Conventions of Standard English?			
	YES	NO		
Choice Focus Standards Result	Did the student meet the standard for <b>either</b> SPEAKING and LISTENING: Presentation of <b>Result</b> Knowledge and Ideas <b>or</b> WRITING: Text Types and Purposes.			
	YES	NO		

Final Pathway Result	If the answer to both summary questions above is YES, the student has passed their Gradation pathway.         If the answer to either summary questions above is NO, then the student should receive feedback, revise, and submit again.         PASS       NOT YET			
Additional Comments				



The Washington State BOARD OF EDUCATION

# **ELA Performance-Based Pathway Student Checklist**

## **Student Checklist**

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 <u>ELA Graduation Pathways rubric</u> to review, self-assess, and revise the components of your project, and/or to seek feedback from others?



The Washington State **BOARD OF EDUCATION** 

# Math Focus Standards for Graduation Pathways

The State Board of Education, in collaboration with the Office of Superintendent of Public Instruction, is developing resources to support implementation of a performance-based pathway to graduation for high school students across the state of Washington. This is in alignment with the following requirement: HB 1308: High School Graduation Pathway Options - Various Provisions.

The intent of this document is to provide guidance for schools and districts on the number and assortment of **mathematics** standards and practices which must be incorporated into the design of the learning experience and assessed within the performance-based graduation pathway. Throughout this document "learning experience" is used as it was explained in related legislation: "may take a variety of forms, such as a project, practicum, work-related experience, community service, or cultural activity, and may result in a variety of products that can be evaluated, such as a performance, presentation, portfolio, report, film, or exhibit" (please see HB 1308 for more information). Flexibility with the selection of some of the standards is necessary in order to ensure that the learning experience can be designed to be both studentcentered and responsive to interests and goals of the student.

Since the ultimate goal is for students to produce evidence of meeting high school mathematics learning standards by demonstrating knowledge and skills in a real-world context, aligned to the student's High School and Beyond Plan, performance-based learning experiences<sup>1</sup> will be created based on a combination of the high school mathematics standards and mathematics practices (Figure 1). Both the standards and practices are identified by the Washington State Mathematics Standards for High School.

## Figure 1. Guidance on selection of mathematical practices

Mathematical Practices <sup>2</sup>	Guidance
<ol> <li>Make sense of problems and persevere in solving them.</li> </ol>	Educators should support the design of projects that allow students to
2. Reason abstractly and quantitatively.	produce evidence of meeting all eight
<ol><li>Construct viable arguments and critique the reasoning of others.</li></ol>	of the mathematical practices, however, if that isn't authentically
4. Model with mathematics.	evidence for the majority of them (5+).
5. Use appropriate tools strategically.	

<sup>&</sup>lt;sup>1</sup> Defined in HB 1308: High School Graduation Pathway Options - Various Provisions (p. 4 lines 33 - 37).

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<sup>&</sup>lt;sup>2</sup> Taken directly from the <u>Washington State Mathematics Standards for High School</u>

Figure 1. Guidance on selection of mathematical practices			
Mathematical Practices <sup>2</sup>	Guidance		
6. Attend to precision.			
7. Look for and make use of structure.			
<ol> <li>Look for and express regularity in repeated reasoning.</li> </ol>			

In order to complete the Mathematics Performance-Based Graduation Pathway, students should select and/or design cohesive and coherent learning experiences that provide them the opportunity to carry out activities and solve problems in a way that reflects the complex nature of such tasks in the world outside of the classroom. The learning experiences must be designed to enable students to provide evidence of meeting at least two high-school level math standards in each of at least two conceptual categories - meaning they will produce evidence for a minimum of four standards (Figure 2). Note that these are individual standards (not a whole cluster). The student's evidence for the math standards will be assessed using local scoring criteria, while evidence of meeting the mathematical practices will be assessed using the Performance-Based Graduation Pathway <u>statewide rubric</u>.

Figure 2. Guidance on selection of standards from conceptual categories				
Conceptual Categories <sup>3</sup>	Guidance			
1. Number and Quantity	1. Modeling of the standards is inherent.			
2. Algebra	2. Where authentically possible, educators			
3. Functions	should support the design of projects that			
4. Geometry	elicit a balance of evidence of procedural knowledge and concentual			
5. Statistics and Probability	understanding.			

Students and educators should be able to work together to identify these high-school level standards without restriction, while still ensuring that they will be able to produce evidence of meeting ideally eight (8), but no less than five (5), mathematics practices in order to complete the performance-based graduation pathway (Figure 3).

<sup>&</sup>lt;sup>3</sup> Taken directly from the <u>Washington State Mathematics Standards for High School</u>

Figure 3. Evidence Requirement	ts		
At least two high-school level math standards in each of at least two conceptual categories	+	Ideally eight (8), but no less than five (5), mathematics practices	Completion of performance- based graduation
<i>(selected and scored using local criteria)</i>		(assessed with statewide	pathway
<i>*Not the whole cluster of standards.</i>			
<i>*Evidence is needed for 4+ standards.</i>			

These requirements will create the conditions for students, educators, or other stakeholders across the state of Washington to successfully create authentic learning experiences that ultimately allow the student to produce evidence of meeting high school mathematics learning standards by demonstrating knowledge and skills in a real-world context, aligned to the student's <u>High School and Beyond Plan</u>.

This approach also ensures the learning experience can be adjusted in such a way that it is meaningful for students and communities. For example, if the learning experience requires students to design a business plan, they would need to create and solve equations in order to predict business expenses and profits, to identify important quantities within a practical situation connected to their business proposal and map their relationships, and they would need to test propositions or conjectures with specific examples, using appropriate equations.

Learning experiences have to be designed in such a way that they require students to model and utilize math within the context of a real-world situation, in doing so the student will both contextualize and decontextualize the mathematics to demonstrate knowledge and skills.

While the focus of this document is to describe the mathematics focus standards for the performance-based graduation pathway, learning experiences that are developed may also inherently give students the opportunity to practice and provide evidence of skills present in <u>Washington's Profile of a Graduate</u>.

## Resources

National Council for the Teachers of Mathematics (NCTM) Essential Concepts for High School

O\*Net OnLine <u>https://www.onetonline.org/</u> (Use the search field in the upper right corner of page to search a career, results list "mathematics" under skills for different careers. The + to the left of that will list math disciplines.)



The Washington State BOARD OF EDUCATION

# Math Performance-Based Pathway Task Model

## **Background Information:**

In order to complete the Performance-Based Pathway in mathematics, 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. (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 a Mathematics 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 <u>Mathematics Graduation Pathways rubric</u> as they envision what the student will create.

This document is designed to serve as a guide for educators who will be supporting a student who is developing a proposal for a learning experience that allows them to successfully complete the Performance-Based Graduation Pathway. **The task model is a list of required features of that learning experience.** 

## **Performance Indicators**

While students only need to have evidence of meeting five or more of the mathematical practices, the assessment should be designed with all of these performance indicators in mind in order to provide students with the opportunity to practice all eight of these practices:

## Mathematical Practice #1: Make sense of problems and persevere in solving them.

A. Clearly break down the problem by explaining the existing conditions, requirements, limitations, assumptions, and goals of the project.

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- B. Develop and describe a well-thought out solution pathway after considering multiple approaches to the problem.
- C. Document regular monitoring and evaluation of progress, adjust methods when needed, and continue to work even when challenged.
- D. Check work using two or more approaches and make any necessary modifications. Explain the reasonableness of the solution within context and why it makes sense.

#### Mathematical Practice #2: Reason abstractly and quantitatively.

- A. Translates the context of the problem into mathematical representations (expressions, equations, graphs, etc.) to create a coherent representation of the problems at hand.
- B. Use applicable mathematical reasoning and calculation to manipulate their symbolic representation in problem solving.

## Mathematical Practice #3: Construct viable arguments and critique the reasoning of others.

- A. Provide an introduction that includes stated assumptions, definitions, and previously established results to construct a compelling and well-supported mathematical argument.
- B. Create a logical progression of statements that support tentative conclusions.
- C. Provide an explanation of reasoning that others can follow including addressing one or more counter-arguments or examples.

## Mathematical Practice #4: Model with Mathematics.

- A. Make reasonable assumptions and approximations to simplify a complicated problem.
- B. Identify important quantities and map relationships using tools such as diagrams, twoway tables, graphs, flowcharts, and formulas.
- C. Interpret and describe the relationship between quantities, mathematically recognizing patterns, trends, and functions as applicable, and then use them to draw conclusions and make decisions.

## Mathematical Practice #5: Use appropriate tools strategically.

- A. Consider a wide range of available tools and then make sound decisions about which of these tools might be helpful and when to use them.
- B. Select and use external mathematical resources to pose and solve problems, and describe their application and benefit in solving the problem.

#### Mathematical Practice #6: Attend to precision.

A. Consistently and appropriately use clear definitions, state the meaning of the symbols chosen, specify units of measure, and when needed, label graphs and diagrams to clarify correspondence with quantities within the problem.

- B. Use applicable vocabulary to explain and support the reasoning and solution pathway.
- C. Perform calculations accurately and efficiently. Then express numerical answers with a degree of precision appropriate to the problem context.

## Mathematical Practice #7: Look for and make use of structure.

- A. Recognize patterns and structures within quantities and expressions.
- B. Use recognized patterns or structures to make predictions or decisions (rather than repeated calculations).
- C. Decompose complicated quantities into single objects or a composition of several objects.

## Mathematical Practice #8: Look for and express regularity in repeated reasoning.

- A. Recognize calculations or results that repeat and use them mathematically through substitution or other processes.
- B. Identify and use progressions of calculations to create procedural shortcuts.

## Task Model

Any Performance Assessment that is designed to elicit student work that will allow the student to demonstrate they have met the learning standards in the Performance-Based Graduation Pathway for Mathematics, must include these elements:

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, twoway 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

Here are three hypothetical examples of learning experiences that could be designed using this task model. *Note: the creation of these projects/learning experiences will be very individualized and connected to the context of the student, school and community. These hypothetical examples are intended to serve as samples of possibilities, rather than exemplars. The expectation is that the products represent the students' own work, recognizing that students learn within communities and their work is often built from multiple conversations and active use of supportive tools.* 

Here are three hypothetical examples of projects that could be designed using this task model. Note: the creation of these projects/learning experiences will be very individualized and connected to the context of the student, school and community. These hypothetical examples are intended to serve as samples of possibilities, rather than exemplars.

Career Exploration	Creative Endeavor	Civic Action, Environmental Concern, or Research
The student has a vision of a	The student is passionate about	The student is passionate about
business that they would like to	a form of creative expression.	a school, local, tribal, state,
create or design after leaving	They articulate some	national, or international issue.
high school - for example, a	mathematical problems that	They seek out resources to
beauty salon. They articulate	they would need to solve in	deepen their understanding of
some mathematical problems	order to create a particular	this issue. They also identify rich
that they will need to solve as a	piece of art (for example, the	mathematical questions or
business owner (such as setting	geometry behind a sculpture,	problems that need to be
prices for services, rates of pay	mural, or other piece of visual	solved in order to understand
for staff, costs for products sold,	art, or the mathematics behind	the issue or propose solutions.
etc. in such a way that the	chord progressions in music.)	Using their research and
business can yield a profit).	They produce these items:	calculations they make
They produce these items:		decisions or propose solutions
	1. A product that expresses	to address the problem and,
1. A product that expresses	their learning in some way	produce these items:
their learning in some way	to an audience of their	
to an audience of their	choice (i.e. business plan,	1. A product that expresses
choice (i.e. business plan,	website, brochure, etc.).	their learning in some way
website, brochure, etc.).	This product should	to an audience of their

<ul> <li>This product should document their process as well as the end result of their reasoning, calculations, and recommendations or solutions. This should include key elements, such as diagrams, two-way tables, graphs, flowcharts, and/or formulas that identify important quantities and map relationships.</li> <li>Description of problem- solving process including all the necessary calculations and reasoning needed to assess for completion of the Pathway.</li> <li>Reflections on how they have demonstrated at least five of the mathematics practices.</li> </ul>	<ul> <li>document their process as well as the end result of their reasoning, calculations, and recommendations or solutions. This should include key elements, such as diagrams, two-way tables, graphs, flowcharts, and/or formulas that identify important quantities and map relationships.</li> <li>2. Description of problem-solving process including all the necessary calculations and reasoning needed to assess for completion of the Pathway.</li> <li>3. Reflections on how they have demonstrated at least five of the mathematics practices.</li> </ul>	<ul> <li>choice (i.e. business plan, website, brochure, etc.). This product should document their process as well as the end result of their reasoning, calculations, and recommendations or solutions. This should include key elements, such as diagrams, two-way tables, graphs, flowcharts, and/or formulas that identify important quantities and map relationships.</li> <li>2. Description of problemsolving process including all the necessary calculations and reasoning needed to assess for completion of the Pathway.</li> <li>3. Reflections on how they have demonstrated at least five of the mathematics practices.</li> </ul>

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 Graduation Pathway Rubric. 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 approximately a semester to complete.

# **Student Checklist**

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?

## Checking Your Work 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 <u>Math Performance-Based Graduation Pathways rubric</u> to review, self-assess, and revise the components of your project, or to seek feedback from others?



## **Background Information:**

- **Purpose:** This rubric is intended to support students and educators as they assess progress and completion of the performance-based graduation pathway requirements for mathematics.
- Audience: This document was written in language that is accessible to students and families, as well as educators, so that everyone can understand the expectations for successful completion of the pathway.
- Rubric Design Considerations:
  - Driving question: "What do we see in the student work when the student has demonstrated a particular mathematical practice?" Each of the practices has several descriptive indicators which describe the most important features that we will see in student work when the student has demonstrated the practice.
  - The single point rubric allows educators to assess and document their feedback to the student in a way that is more specific to the learning experience the student chose. Because this Graduation Pathway is intended to provide validation of that student's ability to meet the standards, and not a numerical grade, a yes/no assessment is all that is required

## Directions:

- 1. Assess a student's learning experience using the rubric provided below. Select "yes" or "no" depending on whether evidence of the indicator described is present in the student's work.
  - a. If you select "no," you must include a description of areas for improvement (Grows).
  - b. If you select "yes," you must include a description of strengths or places where there is strong evidence (Glows).
    - i. Note: You may provide both Glows and Grows when selecting "yes."
- 2. In order to complete the pathway, students must "meet the standard" for at least five (5) out of the eight mathematical practices AND for 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).
  - a. In order to "meet the standard" for the mathematical practices, students must provide evidence for each of the indicators listed.
  - b. In order to "meet the standard" for the high-school level mathematics standards, students must provide evidence that satisfies local scoring criteria.
- 3. Students are allowed to resubmit their evidence if needed. The feedback in the Glows and Grows sections should be incorporated into their revisions.



For each of the standards below, use the Evidence column to indicate whether the student has demonstrated that they have met each indicator.

		Evidence		Glows	Grows
Mathematical Practices & Indicators	Meets the Standard	Does Not Meet the Standard	Not Selected	(evidence of meeting standard)	(areas for improvement)

**1. Make sense of problems and persevere in solving them.** *Note: Throughout this rubric, 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."* 

A. The student clearly breaks down the problem I explaining the existing conditions, requiremen limitations, assumptions, and goals of the projections.	by ts, ect.		
B. The student develops and describes a well-tho out solution pathway after considering multipl approaches to the problem.	ught e		
C. The student documents regular monitoring an evaluation of progress, adjusts their method w needed, and continues to work even when cha	d hen llenged.		
D. The student checks work using two or more approaches and makes any necessary modifica They explain the reasonableness of their soluti within this context and why it makes sense.	itions.		

		Evidence		Glows	Grows (areas for improvement)	
Mathematical Practices & Indicators		Does Not Meet the Standard	Not Selected	(evidence of meeting standard)		
2. Reason abstractly and quantitatively.		-				
A. The student translates the context of the problem into mathematical representations (expressions, equations, graphs, etc.) to create a coherent representation of the problems at hand.						
B. The student uses applicable mathematical reasoning and calculation to manipulate their symbolic representation in problem solving.						
3. Construct viable arguments and critique the reasoning of others.						
A. The student provides an introduction that includes stated assumptions, definitions, and previously established results to construct a compelling and well- supported mathematical argument.						
B. Throughout the learning experience, the student creates a logical progression of statements that support their tentative conclusions.						

Mathematical Practices & Indicators		Evidence		Glows	Grows
		Does Not Meet the Standard	Not Selected	(evidence of meeting standard)	(areas for improvement)
C. As part of the conclusion, the student provides an explanation of their reasoning that others can follow including addressing one or more counter-arguments or examples.					
4. Model with Mathematics.					
A. The student makes reasonable assumptions and approximations to simplify a complicated problem.					
B. The student identifies important quantities and maps their relationships using tools such as diagrams, two- way tables, graphs, flowcharts, and formulas.					
C. The student interprets and describes the relationship between quantities, mathematically recognizing patterns, trends, and functions as applicable, and then uses them to draw conclusions and make decisions.					

	Evidence		Glows	Grows	
Mathematical Practices & Indicators		Does Not Meet the Standard	Not Selected	(evidence of meeting standard)	(areas for improvement)
5. Use appropriate tools strategically.	-				
A. The student considers a wide range of available tools and then makes sound decisions about which of these tools might be helpful and when to use them.					
B. The student seeks out and uses external mathematical resources to pose and solve problems, and describes their application and benefit in solving this problem.					
6. Attend to precision.	-	-	_	-	-
A. The student consistently and appropriately uses clear definitions, states the meaning of the symbols they choose, specifies units of measure, and appropriately labels graphs and diagrams to clarify correspondence with quantities within the problem.					
B. The student uses applicable vocabulary to explain and support their reasoning and solution pathway.					

			Evidence		Glows	Grows	
	Mathematical Practices & Indicators	Meets the Standard	Does Not Meet the Standard	Not Selected	(evidence of meeting standard)	(areas for improvement)	
C.	The student performs calculations accurately and efficiently. They then express numerical answers with a degree of precision appropriate to the problem context.						
7. Loo	k for and make use of structure.						
A.	The student recognizes patterns and structures within quantities and expressions.						
B.	The student uses recognized patterns or structures to make predictions or decisions (rather than repeated calculations).						
C.	The student decomposes complicated quantities into single objects or a composition of several objects						
8. Look for and express regularity in repeated reasoning.							
A.	The student recognizes calculations or results that repeat and uses them mathematically through substitution or other processes.						

		Evidence		Glows	Grows
Mathematical Practices & Indicators	Meets the Standard	Does Not Meet the Standard	Not Selected	(evidence of meeting standard)	(areas for improvement)
B. The student identifies and uses progressions of calculations to create procedural shortcuts.					

## SUMMARY TABLE

	Result		
Math Practice	Meets the Standard	Does Not Meet the Standard	
1. Make sense of problems and persevere in solving them.			
2. Reason abstractly and quantitatively.			
3. Construct viable arguments and critique the reasoning of others.			
4. Model with Mathematics.			
5. Use appropriate tools strategically.			
6. Attend to precision.			

7. Look for and make use of structure.		
8. Look for and express regularity in repeated reasoning.		
<b>Practices Result:</b> Did the student complete the pathway with 5+ practices met?	YES	NO

As part of the Performance-Based Graduation Pathway, students are also expected to meet the standard for at least **two high school mathematical standards** in each of two separate conceptual categories (limited to: Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability). Please list the standards that the student provided evidence for as part of their graduation pathway learning experience and select whether the standard has been met. These standards are scored using local criteria. Note that students may provide evidence of more than two standards.

		Meets the Standard	Does Not Meet the Standard
Conceptual Category 1: (circle category) Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability	Standard 1		
Standard 1: Standard 2: Additional Standard(s) met (optional)	Standard 2		
Conceptual Category 2: (circle category) Number and Quantity, Algebra, Functions, Geometry, Statistics and Probability	Standard 1		
Standard 1: Standard 2: Additional Standard(s) met (optional)	Standard 2		

## TOTAL SUMMARY

Standards Result	Did the student meet the standard for at least two mathematical standards from each of at least two separate conceptual categories?				
	YES	NO			
Final (Practices & Standards) Result:	Did the student complete the pathway practices AND standards?	y with evidence for the required number of			
	YES	NO			
	If the answer to both summary questions above is YES, the student has passed their Gradation pathway.				
Final Pathway Result	If the answer to either summary ques feedback, revise, and submit again.	tions above is NO, then the student should receive			
	PASS	NOT YET			
Additional Comments					

#### **Resources:**

Single point mastery rubric and guidance adapted from: <u>https://aurora-institute.org/cw\_post/the-single-point-mastery-rubric/</u>

Common Good Learning Tools' Standards Satchel: Common Core Standards for Mathematics: <u>https://satchel.commongoodlt.com/c6496676-d7cb-11e8-824f-0242ac160002/6b9e9614-d7cc-11e8-824f-0242ac160002/5</u> (referenced on OSPI's

K-12 Mathematics Learning Standards Site: <u>https://ospi.k12.wa.us/student-success/resources-subject-area/mathematics/mathematics-k-12-learning-standards</u>)



## Math Performance-Based Pathway Student Checklist

## **Student Checklist**

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 <u>Math Performance-Based Graduation Pathways rubric</u> to review, self-assess, and revise the components of your project, or to seek feedback from others?



# **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 <u>ELA Graduation</u> <u>Pathways rubric</u> and the <u>Math Graduation Pathways rubric</u> 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, twoway 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 <u>National Association of Media Literacy Education</u>: 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 <u>along with</u> 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:
  - $\Box$  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 <u>Mathematics Task Model</u>.) 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

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 such a way that the business can yield a profit). They also	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.) They also seek out sources that discuss some aspect of this	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 calculations are complete, they produce these items:
research the federal and state regulations pertaining to salons, utilizing at least two written texts along with videos,	creative endeavor. After their research is complete, they produce these items:	<ol> <li>A text analysis of the written sources that they consulted, including an</li> </ol>

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:

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, checkins, 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 <u>Math Performance-Based Graduation Pathways rubric</u> 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 <u>ELA Graduation Pathways rubric</u> to review, self-assess, and revise the components of your project, and/or to seek feedback from others?