ESHB 2224 Webinar

OSPI Mathematics & Assessment Departments

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WEBPAGE LINK FOR HB 2224:

HTTP://WWW.K12.WA.US/ASSESSMENT/STATETESTING/ESHB2224.ASPX

Welcome – Our Time Together Today

- Commonly Asked Questions – and Answers – FAQ
- 10th Grade Assessment
- Supports for Locally Determined Courses
  - Bridge to College
  - 3rd Credit of Math
- Alternative Assessments
  - Possible Access to COE Tasks

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Overview of Sections of HB 2224

I. COE Eliminated/Expedited Appeals Waiver

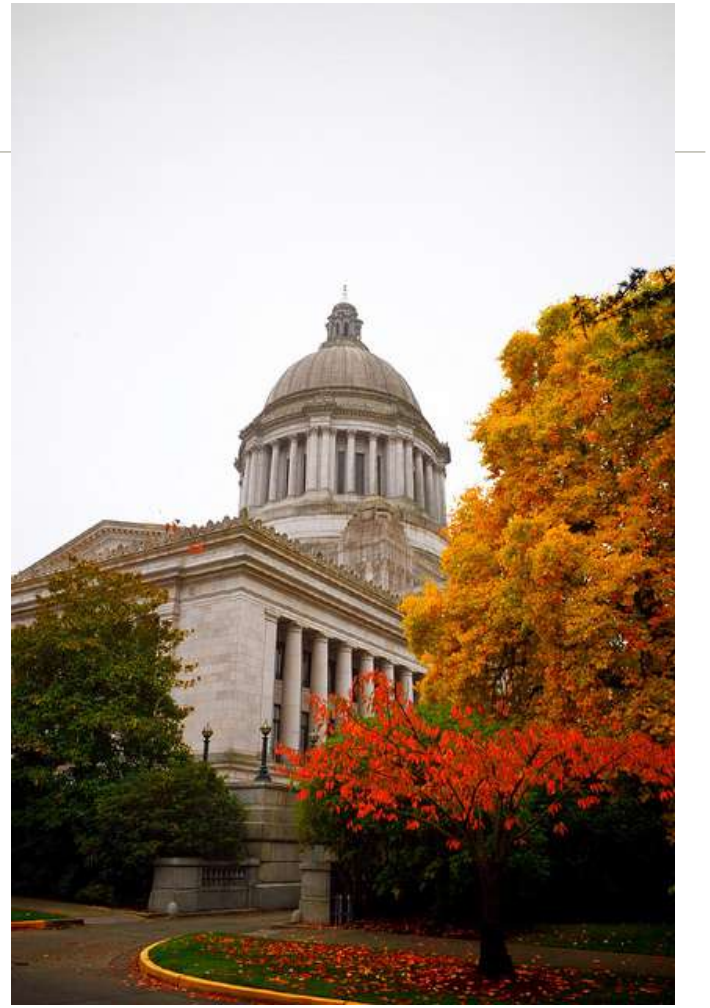
II. LDC/LAA/Dual Credit/Bridge to College Course

III. Grade 10 SBA

IV. HSBP – begins in 8th grade

V. Interventions and Supports

VI. Science Assessment -postponed for a graduation requirement - yes need to test in science starting spring 2018



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Let’s Begin With – Common Questions

MANY OF THE ANSWERS TO THESE QUESTIONS WILL BE ADDRESSED IN GREATER DETAIL THROUGHOUT THE WEBINAR

HB 2224 Questions – 10th Grade Smarter Balanced Assessment - FAQ

In Spring 2018, which high school students should take the Smarter Balanced Math assessment?

The 10th grade SBA will be given to BOTH 10th and some 11th graders in spring 2018.

1. 10th graders (Class of 2020) will take the Smarter Balanced mathematics test in the spring of 2018. 10th grade will be the federal accountability testing grade for 2017–18 (and subsequent) school years for math.
2. In addition to 10th graders, 11th graders (Class of 2019) who did not attempt the Smarter Balanced math tests last year (as 10th graders) should take the tests for purposes of high school assessment graduation requirements.
3. Class of 2019 students who took the Smarter Balanced math tests as a 10th grader but did not achieve the graduation cut-score should retake the test.

HB 2224 Questions – 10th Grade Smarter Balanced Assessment

Will the Smarter Balanced test be the same test as previous years or will it be adjusted because it is for 10th graders? Will the test assess different learning standards?

The 10th grade mathematics test will be adjusted to include learning standards expected of 10th grade students, introduced during the first two years of high school mathematics courses. Content that is exclusively introduced in a third-year course or subsequent courses will not be included.

We will share more about the content of the SBA later in the webinar.

HB 2224 Questions – Cut Scores on 10th Grade SBA

What will be the cut score for 10th graders (class of 2020) and 11th graders (class of 2019)?

- There are two types of cut scores that are likely important. Both types are set by the State Board of Education (SBE), based on input from Smarter Balanced and Washington educators. First are the achievement Levels 2, 3, and 4 cut scores. On January 11, the SBE approved the achievement level cut scores shown.
- **The second type is the graduation cut score.** Those cut scores will stay the same as they have been for the past few years: 2548 for ELA and 2595 for math.

"On Track to Career- and College-Ready" Cut Scores		
	ELA	**Math**
Level 2	2491	2533
Level 3	2577	2614
Level 4	2678	2697

HB 2224 Questions – 10th Grade SBA - FAQ

Who is eligible to take the 10th grade SBA?

http://www.k12.wa.us/assessment/GraduationAlternatives/Eligibility.aspx

Do students need to take the SBA at least once to access the objective alternative assessments?

- Yes

Will you make a new test map (test blueprint) available?

- If there are new test blueprints, yes, they will be posted on the WCAP Portal where the current summative blueprints are posted.

HB 2224 Questions – FAQ

Collections of Evidence are no longer an option for meeting assessment graduation requirements.

Locally Administered Assessments (LAA) and Locally Determined Courses (LDC)

Information about the LAA/LDC will be available by the end of January on the

ES HB 2224 webpage - http://www.k12.wa.us/Assessment/StateTesting/ESHB2224.aspx

Bridge to College Questions

What about Bridge to College?

- Bridge to College is an approved alternative to the assessment graduation requirement. A workgroup of high school teachers and college faculty will be convening to discuss and determine what needs to be in place to maintain the placement agreement for access to post secondary credit bearing math courses.

Who is the target audience for Bridge to College?

- The Bridge to College course is designed for 12th grade students who are interested in attending college after high school. The placement agreement only applies to students who take the Bridge to College course in their senior year. Schools should continue to administer the Bridge to College course consistent with this design.

10th Grade SBA

ESHB 2224: 10TH GRADE TESTING FAQ

HTTP://WWW.K12.WA.US/ASSESSMENT/STATETESTING/FAQ222410THGRADE.ASPX

The Process to Shift to 10th Grade SBA

During fall 2017, OSPI worked with groups of Washington educators to evaluate the content that would be included in 10th grade testing. As the high school tests previously were based on the expectations for students after three years of high school, the question posed to educators was what would be appropriate content to include for a test to be administered in 10th grade? The educators reviewed the high school learning standards to evaluate the content for the new grade of testing.

For the 10th grade test, educators identified and recommended excluding high school Mathematics K–12 Learning Standards content that is usually first introduced in a third-year mathematics course such as Algebra 2, Integrated III, or a CTE equivalent. Educators also identified content usually introduced in subsequent courses after a third-year mathematics course and recommended excluding this content as well. Based on the educators' recommendations, OSPI worked with the test vendor to modify the content of the Smarter Balanced high school mathematics test bank for spring 2018.

10th Grade SBA Documents

WA K-12 Mathematics Learning Standards - Pathway

It is important to remember that students should receive instruction toward the entirety of the high school Mathematics K–12 Learning Standards throughout their high school experience. This includes the Standards for Mathematical Practice and Content Standards. This generally requires three or four years of instruction.

Content on SBA for 10th Grade

The document highlights, in yellow, the mathematical practices and high school content standards, clusters, and domains included for 10th grade testing starting in spring 2018. Students should receive instruction toward the entirety of the high school standards, not just the tested standards, throughout their high school experience.

The Standards for Mathematical Practices are all included in the 10th Grade SBA and assessed within the Claims 2, 3 and 4.

10th Grade SBA Documents

Number & Quantity

The Real Number System

- Extend the properties of exponents to rational exponents
- Use properties of rational and irrational numbers.

Quantities

- Reason quantitatively and use units to solve problems

The Real Number System — N-RN

Extend the properties of exponents to rational exponents.

1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. *For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5^{(1/3)3}$ to hold, so $(5^{1/3})^3$ must equal 5.*
2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.

Use properties of rational and irrational numbers.

3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

Quantities* — N-Q

Reason quantitatively and use units to solve problems.

1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
2. Define appropriate quantities for the purpose of descriptive modeling.
3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Algebra Overview

Seeing Structure in Expressions

- Interpret the structure of expressions
- Write expressions in equivalent forms to solve problems

Arithmetic with Polynomials and Rational Expressions

- Perform arithmetic operations on polynomials
- Understand the relationship between zeros and factors of polynomials
- Use polynomial identities to solve problems
- Rewrite rational expressions

Creating Equations

- Create equations that describe numbers or relationships

Reasoning with Equations and Inequalities

- Understand solving equations as a process of reasoning and explain the reasoning
- Solve equations and inequalities in one variable
- Solve systems of equations
- Represent and solve equations and inequalities graphically

Algebra - Deeper Dive Example

Arithmetic with Polynomials and Rational Expressions **A-APR**

Perform arithmetic operations on polynomials

1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

Understand the relationship between zeros and factors of polynomials

2. Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.

3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.

Use polynomial identities to solve problems

4. Prove polynomial identities and use them to describe numerical relationships. *For example, the polynomial identity* $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ *can be used to generate Pythagorean triples.*

Functions

Interpreting Functions

- Understand the concept of a function and use function notation
- Interpret functions that arise in applications in terms of the context
- Analyze functions using different representations

Building Functions

- Build a function that models a relationship between two quantities
- Build new functions from existing functions

Linear, Quadratic, and Exponential Models

- Construct and compare linear, quadratic, and exponential models and solve problems
- Interpret expressions for functions in terms of the situation they model

Trigonometric Functions

- Extend the domain of trigonometric functions using the unit circle
- Model periodic phenomena with trigonometric functions
- Prove and apply trigonometric identities

Geometry

Congruence

- Experiment with transformations in the plane
- Understand congruence in terms of rigid motions
- Prove geometric theorems
- Make geometric constructions

Similarity, Right Triangles, and Trigonometry

- Understand similarity in terms of similarity transformations
- Prove theorems involving similarity
- Define trigonometric ratios and solve problems involving right triangles
- Apply trigonometry to general triangles

Circles

- Understand and apply theorems about circles
- Find arc lengths and areas of sectors of circles

Expressing Geometric Properties with Equations

- Translate between the geometric description and the equation for a conic section
- Use coordinates to prove simple geometric theorems algebraically

Geometric Measurement and Dimension

- Explain volume formulas and use them to solve problems
- Visualize relationships between two-dimensional and three-dimensional objects

Modeling with Geometry

- Apply geometric concepts in modeling situations

Geometry – Deeper Dive

Expressing Geometric Properties with Equations G-GPE

Translate between the geometric description and the equation for a conic section

1. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.
2. Derive the equation of a parabola given a focus and directrix.
3. (+) Derive the equations of ellipses and hyperbolas given the foci, using the fact that the sum or difference of distances from the foci is constant.

Use coordinates to prove simple geometric theorems algebraically

4. Use coordinates to prove simple geometric theorems algebraically. *For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1, √3) lies on the circle centered at the origin and containing the point (0, 2).*
5. Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
6. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.
7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.*

Geometric Measurement and Dimension G-GMD

Explain volume formulas and use them to solve problems

1. Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. *Use dissection arguments, Cavalieri's principle, and informal limit arguments.*
2. (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.
3. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.*

Statistics & Probability

Interpreting Categorical and Quantitative Data

- Summarize, represent, and interpret data on a single count or measurement variable
- Summarize, represent, and interpret data on two categorical and quantitative variables
- Interpret linear models

Making Inferences and Justifying Conclusions

- Understand and evaluate random processes underlying statistical experiments
- Make inferences and justify conclusions from sample surveys, experiments and observational studies

Conditional Probability and the Rules of Probability

- Understand independence and conditional probability and use them to interpret data
- Use the rules of probability to compute probabilities of compound events in a uniform probability model

Using Probability to Make Decisions

- Calculate expected values and use them to solve problems
- Use probability to evaluate outcomes of decisions

Statistics & Probability – Deeper Dive

Summarize, represent, and interpret data on two categorical and quantitative variables

5. Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.
   a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. *Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.*
   b. Informally assess the fit of a function by plotting and analyzing residuals.
   c. Fit a linear function for a scatter plot that suggests a linear association.

Interpret linear models

7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
8. Compute (using technology) and interpret the correlation coefficient of a linear fit.
9. Distinguish between correlation and causation.

Grade 10 Mathematics Testing: Further Focus

Standard[A]	Functions of Focus
A-SSE.2	Linear, Quadratic, Exponential, Polynomial
A-CED.1 and A-CED.2 A-REI.10 F-IF.8 and F-IF.8b F-BF.1, F-BF.1a, F-BF.1b, and F-BF.3 S-ID.6a and S-ID.6c	Linear, Quadratic, Exponential
A-REI.5	Linear, Quadratic

[A] Includes all Claim 1 task models aligned to these standards.

10th Grade SBA Documents

Claim 1 Targets

Function Type Focus by Task Model

Smarter Balanced Claim 1 Target and Task Model (Version 3.0 Item Specifications)	Functions of Focus
Target C, Task Model 2c Target J, Task Model 2a Target K, Task Models 1b, 1c, and 1g Target L, Task Models 2 and 3d Target M, Task Models 1a, 1b, 4a, 4b, 4c, and 4d	Linear, Quadratic, Exponential

Claim 1 Task Models

Smarter Balanced Claim 1 Target	**Task Models of Focus (Version 3.0 Item Specifications)**
Target A	TM1a, TM2a, TM2b, TM3a, TM3b, TM4a, TM4c, TM5b, and TM5c
Target B	All
Target C	All
Target D[B]	TM1a, TM1b, TM1d, and TM1f
Target E	TM1a, TM1b, TM2a, TM2b, TM3a, TM3b and TM3c
Target F	All
Target G[B]	All
Target H	TM1a, TM1b, TM1d, TM3a, and TM3b
Target I	TM1, TM2a, TM2b, TM3a, TM3c, and TM4
Target J[B]	TM1a, TM1b, TM1c, TM1d, TM2a, TM2d, TM2f, TM3a, TM3b, TM3c, TM4a, TM4b, TM4c, and TM4d
Target K	All
Target L	All
Target M[B]	TM1a, TM1b, TM3, TM4a, TM4b, TM4c, and TM4d
Target N[B]	TM1a and TM1c
Target O	All
Target P	All

Questions?

Supports for Locally Determined Courses

Bridge to College and LDC/LAA

- Approved as a Locally Determined Course and the embedded assessments are already approved.

Requirements for using Bridge to College continue to remain:

- Designed for 12th graders
- Teachers teaching the course for the first time must attend professional development to teach the course
- Bridge to College course code must be used

- Audience for B to C:
  - Seniors who are interested in attending college and need a little extra to ensure success in credit bearing math courses.
- Recommended changes to the Smarter Balanced Placement Agreement (which includes Bridge to College) are under review by the community and technical college system, in light of the SBA moving to 10th grade.

http://www.k12.wa.us/CurriculumInstruct/BridgetoCollege/

3rd Credit of Math

A newly developed Washington Math Advisory Committee (WA MAC) is working to develop a course specifically designed for 11th grade students that incorporates the best practices of the Bridge to College course. This new course can serve as a third-credit option for students. The work of designing this course will include considering how the course might meet requirements and expectations of a Locally Determined Course with a Locally Administered Assessment.

- focused on supporting students who do not meet proficiency by the end of 10th grade
- focus on filling the gaps students have in high school mathematics to support success future math courses.
- create opportunities for various pathways during the senior year – options could include:

  Bridge to College

  Algebra 2

  CTE Equivalency Course

  Computer Science

COE Task Banks

Exploring the possibility of using Collection of Evidence tasks to support an alternative assessment.

This is why we have not released the COE tasks for classroom use.

More Questions?

Alternatives to the Assessment

Expedited Appeals Waiver

Some students in the Classes of 2014 through 2018 are eligible to have their assessment graduation requirements (English language arts (ELA), math, or both) waived **IF they have met all other graduation** requirements.

http://www.k12.wa.us/assessment/GraduationAlternatives/ExpeditedAppeals.aspx

Appeal Submission Eligibility Requirements

Appeal Submission Process

Waiver Approval Requirements

Waiver Approval Process

Documentation Required for Submitting an Expedited Assessment Appeal

Pathways for the Expedited Appeals Waiver

(A) Successful completion of a college level class in the relevant subject area;
(B) Admission to a higher education institution or career preparation program;
(C) Award of a scholarship for higher education; or
(D) Enlistment in a branch of the military.
(E) Other**

Other:

For those who wish to use the “other” category in the Expedited Assessment Appeal tool, a District [Assessment] Coordinator (or designee) must enter a description that includes details on:

how the student has demonstrated the necessary skills and knowledge to **meet the high school ELA and/or Mathematics standards**. **Having passed required content area courses is a **prerequisite** for this appeal*
-AND-

how the student's **post-secondary** academic progression or technical training/occupation is related to their college and career goals, as outlined in their high school and beyond plan.

Dual Credit

A student who completes a dual credit course in ELA or math and earns college credit may use passage of the course as an objective alternative assessment. More information will be forthcoming about this pathway to meeting the graduation requirement

http://www.k12.wa.us/assessment/GraduationAlternatives/Options.aspx

Additional Assessment Alternatives

Each alternative is described in detail on the Graduation Alternatives webpage

Alternatives for a CAA:

- GPA Comparison
- College Admission (ACT, SAT), AP, and IB Tests

Alternatives for a CIA:

- CIA Cut Score (formerly called L2/Basic)
- Off-grade level assessments
- Locally determined assessments (not related to ESHB 2224)

Resources

ESHB 2224 Information webpage: http://www.k12.wa.us/Assessment/StateTesting/ESHB2224.aspx

Assessment Graduation Alternatives webpage: http://www.k12.wa.us/assessment/GraduationAlternatives/default.aspx

Dual Credit: http://www.k12.wa.us/assessment/GraduationAlternatives/Options.aspx

Bridge to College: http://www.k12.wa.us/CurriculumInstruct/BridgetoCollege/

Bridge to College Instructional Materials: http://www.k12.wa.us/CurriculumInstruct/BridgetoCollege/MathCourseMaterials.aspx

High School and Beyond Plan: http://www.k12.wa.us/GraduationRequirements/Requirement-HighSchoolBeyond.aspx

Thank You!

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