EdReports Background Information

(1) Details of Walch CCSS Integrated Math I, II, and III, and the Development Process

Corporate Summary: BW Walch has a rich history dating back to 1926 when founder J. Weston Walch started a small printing operation for debate booklets. Over the years, the company has grown into a leading provider of educational resources, publishing materials in diverse, teacher- and student-friendly formats that adapt to the changing needs of the classroom. Today, as BW Walch, the company is a leader in building aligned math courses and custom resources for U.S. school districts, focused on providing teachers with tools to support all learners. The CCSS Math I, II, and III course suite is designed by a team of experienced math educators and aligns precisely to the CCSS Integrated Pathway curriculum and the eight Standards of Mathematical Practice (SMP). Our CCSS math courses offer students a comprehensive, standards-aligned education with real-world examples, equipping them with necessary math skills for high school, college, and future careers.

BW Walch Mission: Our corporate leaders and mathematics content development team understand the multi-faceted and long-standing challenges teachers face in the classroom. At BW Walch, we place teachers at the forefront of our mission and our team focuses on delivering personalized content and technology that aligns with each district's needs, teacher preferences, and student profiles. By providing teachers with resources tailored to their specific instructional styles, we aim to support academic rigor, meaningfully impact teachers' experiences, and promote job satisfaction. With superior resources in-hand that fully address each standard, teachers are freed from the burden of developing their own materials and can focus on what they do best: engaging their students and fostering their growth as learners.

Current Initiatives and Future Directions: BW Walch continues to expand, offering cutting-edge EdTech solutions that enhance teaching and learning. Last year, we established a presence in the UK, complementing our existing print and digital learning tools. We are continuously pushing the boundaries by launching innovative math applications that improve math literacy and track students' attitudes and expectations in the math classroom. Our selected applications and curriculum resources are accessible through leading LMS (eliminating the need to manage multiple platforms), our Curriculum Engine (CE), and / or in print.

Content Structure & Included Materials

Overview: BW Walch's CCSS program is a complete set of materials built around the CCSS Mathematics Standards for the High School Integrated Pathway. Our program utilizes problem-based learning, provides extensive practice opportunities, identifies opportunities for additional instructional support, and assesses student skills in multiple formative and summative assessment formats. BW Walch materials are all-inclusive, with over one-hundred and fifty (150+) hours of lessons covering each course's units. The set of printed unit materials or digital versions of the program include a wide range of resources that include essential questions,

vocabulary, instruction and practice, problem-based tasks and coaching questions, graphing calculator instructions, multiple assessment types, and collaborative learning activities.

Instructional Core: In the development process, the instructional core of BW Walch's CCSS program is anchored by the Key Concepts resource for instructors. The Key Concepts are presented in a straightforward, bullet-point format, which streamlines instruction by highlighting crucial ideas, processes, and examples. This core is complemented by resources such as standards prerequisites, introductory topics, and information on common errors / misconceptions, enabling instructors to address and prevent potential learning roadblocks.

Practice Opportunities: Students are first invited to engage with the material by completing an application-based warm-up. The program then guides students through a series of Guided Practice that starts with simpler procedural content and advances to more complex, real-world problems. BW Walch authors carefully consider how to present initial concepts, progress through the material to build a solid mathematical foundation, and advance to content that is appropriate to the standard while challenging students' critical thinking abilities. Students can then complete print- or digital- practice sets, as well as online interactive practice that employs technology-enhanced questions to promote technological fluency.

Real-World Applications: Central to our content writing process at BW Walch is the development of real-world Problem-Based Tasks (PBT). With PBTs, students move away from repetitive, procedurally-focused problems and into the multi-step mindset required for problem-solving as an engineer, scientist, or other profession involving mathematics. The problems are carefully crafted to align with the CCSS standards, meet the learning needs of students, and foster independent thinking. We offer a series of coaching questions that aid teachers in differentiating instruction and supporting English Language Learners (ELL) and students with exceptionalities. Our CCSS courses also include Conceptual Tasks that further promote collaborative-learning and problem-solving skills.

Assessment Materials: BW Walch CCSS courses feature assessments at both topic and unit levels. Our assessments are designed with real-world applications and scaffolded content, and include pre-assessments to gauge students' prior knowledge; progress assessments with multiple-choice and constructed response questions; and well-structured unit and end-of-course evaluations. These assessments provide teachers with a clear understanding of students' performance, and can be delivered in print or digital formats. The assessment style also prepares students for future state assessments and evaluations.

Use of SMPs: BW Walch integrates all eight (8) SMPs in our CCSS curriculum. Our writers examine each practice and determine how it can be incorporated into standards-level content instruction, practice-sets, problem-solving activities, and assessments. For example, "Making sense of problems, and persevere in solving them," is addressed by providing applied examples that require students to apply standards-level knowledge to solve multi-step problems. Students are encouraged to persist in solving problems where they will encounter difficulties (such as our PBTs), and teachers are provided with coaching questions that prompt students to think critically throughout the process. Similarly, when addressing "Model with Mathematics," we provide students with opportunities to use models that represent real-world situations and to understand the relationships between different variables. In assessments, students are evaluated on their ability to use models to solve problems, make predictions, and draw conclusions. The curriculum scaffolds content appropriately with each of the eight SMPs, ensuring that students build a strong foundation in each of these "processes and proficiencies."

Overarching Instructional Strategies: BW Walch integrates research-based instructional strategies across our CCSS program. The strategies are divided into four categories - Literacy, Discourse, Annotation, and Graphic Organizers - and provide teachers with support to address the diverse range of student needs. Each lesson includes suggestions for best practices to enhance student outcomes, including ELLs and students with exceptionalities. We provide recommendations for strategies in each PBT and also provide an implementation guide for each strategy type. These strategies align to the Mathematics Standards and Mathematical Practices, English Language Development Standards, English Language Arts Standards, and WIDA English Language Development Standards, as shown below in **Figure 1**.

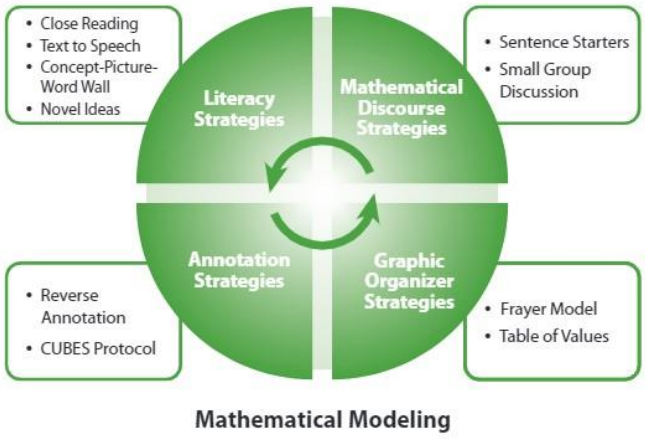

Figure 1: Instructional Strategies incorporated in BW Walch CCSS Math I, II, and III Resources

(2) Evidence of Efficacy

BW Walch partners with school districts across the United States to provide high-quality educational resources for the Integrated Pathway aligned to CCSS. Community High School District (CSD) 99 in Downers Grove, Illinois selected BW Walch resources in 2021 after previously facing challenges adapting traditional resources to meet CCSS requirements. BW Walch's resources were designed specifically for the integrated pathway, which helped inspire confidence in teacher adaptation and implementation. The results of adaptation were apparent; for example, at CSD's South High, the percentage of students meeting standards on the state-administered ACT rose from 15% to an average of 23% following implementation. In addition, Juniors that exceeded standards in South High's traditional precalculus class went from 52% and 56% prior to the change, up to 70% and 69%, respectively in the last two years.

Our company also maintains a secondary headquarters in Charlotte, NC, where we have long standing relationships with the Charlotte-Mecklenburg Schools (CMS). CMS schools have used BW Walch resources for their CCSS Math I, II, and III integrated courses and over the course of implementation (with data collected from 2014 to 2017), CMS grade-level proficiency increased from 63.8% to 68.9%, and consistently outperformed state-level metrics. Data collected from high-implementation schools in CMS– where BW Walch resources were implemented with the most fidelity– saw even stronger gains. CMS's Olympic HS BioTech Health saw grade-level mathematics proficiency increase from 50.9% to 60% following implementation from 2016 to 2017, and West Mecklenburg High School saw proficiency increase from 18.6% to 27.6% over the same

time period. Educators and reviewers cited BW Walch's Problem-Based Tasks, clear Guided Practice, and standards alignment as key highlights to our integrated CCSS Math I, II, and III resources.

(3) Supplemental Services BW Walch provides to support materials implementation

BW Walch offers a wide-ranging set of Professional Development (PD) options for educators using our CCSS program, as presented below in **Figure 2**. Additionally, BW Walch is investing in a research-based professional development program to help teachers improve student outcomes through ongoing assessment and increased content knowledge. This will allow our partner educators to identify opportunities for targeted instruction on a student-by-student basis.

PROFESSIONAL DEVELOPMENT WEBINARS	
These live webinars will show you how to effectively use the Curriculum Engine tools to meet the needs of your students:	
➔ **The 5 Practices for Orchestrating Productive Mathematics Discussion**	➔ **Understanding Coherence and Standards-Based Instruction in the Curriculum Engine**
Using rich mathematical resources in the Curriculum Engine to support the 5 practices	Providing students with effective learning experiences
➔ **Tailoring the Curriculum Engine Content to Meet the Needs of ALL Learners**	➔ **Effective Use of the Curriculum Engine's Online Summative and Formative Assessments**
Support mastery of math concepts for ALL learners	Technology-enhanced resources to improve student achievement in the classroom
➔ **Using the Curriculum Engine to Streamline the Curriculum Planning Process**	
Tools for district supervisors and teacher leaders to create coherent curriculum and standards-aligned pacing	

RESEARCH-BASED STRATEGY WEBINARS	
These live webinars will show you how to customize curriculum on the platform using research-based strategies to meet the needs of ALL learners:	
➔ **Language Literacy Strategies**	➔ **Annotation Literacy Strategies**
Understanding the language of mathematics	Understanding mathematical content
➔ **Graphic Organizers Literacy Strategies**	➔ **Mathematical Discourse Literacy Strategies**
Organizing mathematical content	Using speaking and listening skills with mathematics

"HOW-TO" RECORDED WEBINARS	
These recorded training sessions will walk you through using key features of the Curriculum Engine.	
→ **How to Use the Curriculum Engine: An Introduction**	→ **How to Create an Online Assessment**
This introductory video will give you a high-level overview of the curriculum engine and review key features and functionality	This video will show you how to build an online assessment in the Curriculum Engine and then assign it to your students
→ **How to Navigate the Course Manager in the Curriculum Engine**	→ **How to Align Standards and Learning Objectives Using the Curriculum Engine**
This session will show you how to edit and update existing courses as well as build a new course from scratch to meet your classroom needs.	This class will show you how to use the power of the Curriculum Engine to be sure your courses align with your state standards.
→ **How to Monitor Student Progress in the Curriculum Engine**	→ **How to Align Standards and Learning Objectives using the Curriculum Engine**
This video will show you how to use the reporting functionality in the Curriculum Engine to monitor progress and access your data.	This video will show district supervisors how to manage the Curriculum Engine for teachers and students.

CONSULTING SERVICES	
Our consulting services cover a variety of curriculum-based projects to help educators get the most from the Curriculum Engine:	
→ **Course Review**	→ **Aligned Resources**
We will review a course that your district has developed and help refine and optimize it to meet your objectives.	We can help your district build supporting resources that align to your core standards both OER or otherwise.
→ **Purpose-Built Courses**	→ **Custom Learning Objects**
We can help you build courses to match specific objectives, such as the state requirements for a 4th year of math, or for credit recovery.	Do you have math resources that you are currently using and would like to be able to pull from in the Curriculum Engine? We will set those up in the Learning Object repository.
→ **Digitize Existing Content**	
We can take your existing course materials and digitize them in the Curriculum Engine.	

Figure 2: BW Walch's Robust Suite of PD Services

Empowering Educators to be their best – both in the classroom and beyond.