Vicksburg Community Schools Proposal Form with Guidance

Please review *VCS General Guidelines for Program Review and Proposal Development* prior to completion of this form. Send completed *Proposal Form* and supporting documents to the Curriculum office by March 1st.

Title of Proposal: Advanced Mathematics Curriculum Proposal Author(s): A. Walton, N. Foley, J.Koning

Department and Curriculum Area: Mathematics Building: VHS and VMS

Committee Members: A. Walton, N. Foley, J.Koning, Mandy Keiser

❖ This proposal is for: *(put an X next to all that apply)*

- X Textbook and other teaching resources *(requires planned pilot process as part of the proposal request)*
- ☐ New courses or course revisions
- ☐ Full program or curriculum area reviews
- ☐ Program or curriculum area modifications
- ☐ Supplemental Instructional/Intervention Resource

Dates of Anticipated Review and Action: DCILT: 2.22.24 BOE 3.11.24

Principal's Signature(s): *Adam Brush*

(To be completed by Director of Curriculum and Instruction upon receipt of proposal.)

Date Received: 2/8/24

Comments on proposal:

RESPONSE:

☐ Need more information: _____

☑ Proceed as outlined in the proposal

Gail VanDaff — 2/22/24

Director of Curriculum and Instruction — Date

[signature] — 2/23/24

Director of Technology — Date

I. **Proposal Background & Overview** – Write a narrative that includes *all* of the following:

- ☐ Relevant background/history.
- ☐ Problem or other basis for the proposal (i.e. student needs, etc.).
- ☐ Reasons for making the change.
- ☐ Targeted Continuous Improvement Goals

This past year, our district piloted the Big Ideas Math program, and it proved to be a success. This program was implemented to address the need for a more cohesive and comprehensive approach to math education, particularly as students advance into more advanced courses. The previous curriculum lacked cohesion, as it was authored by different individuals, leading to inconsistencies in content and teaching methods.

The decision to make the change to the Big Ideas Math program was driven by the need to provide students with a more rigorous and structured learning experience as they progress through advanced math courses. The success of the pilot program highlighted the reasons for making the change, including the program's ability to foster a deeper understanding of mathematical concepts, increased student engagement, enhanced critical thinking skills, and an emphasis on meeting state standards. Additionally, the program demonstrated potential for improving state test scores, aligning with our continuous improvement goals.

MathType is a graphical editor for mathematical equations, staff in VCS schools need to have the ability to construct complex mathematical and scientific notations within word processing, spreadsheets, presentation applications, and in testing settings. MathType will enable us to do this. The resources that Big Ideas provides are composed in Microsoft Word using this equation editor - having annual licenses for MathType will allow teachers using these resources to edit and customize the resources to the needs of their students. Not having this access would only allow educators to delete questions, not insert or edit items.

The targeted continuous improvement goals for implementing the Big Ideas Math program include aligning the curriculum across different levels of math education, fostering a more seamless transition for students as they advance, ensuring consistency in content and teaching methods, and ultimately improving state test scores. This change aims to provide a more cohesive unit of study, addressing the needs of students as they progress through advanced math courses and preparing them for success in higher-level mathematics while meeting state standards and improving overall academic performance.

Targeted Continuous Improvement Goals:

2.3: Building and district teams will ensure implementation of instructional practices, interventions and supports that are organized along a continuum to meet the academic needs of each and every learner and are aligned to the district curriculum. **[MTSS Academic]**

A. All teachers will implement *Tier 1 instruction* with fidelity.

II. **Complete Description of Proposed Change(s)** – Write a narrative that includes *all* of the following:

- ☐ List all major changes, components and/or strategies of the proposal.
- ☐ Give rationale for each change (base the rationale on research or best practice information).
- ☐ Include new course/textbook title, course/textbook replaced, credit, and prerequisite(s).
- ☐ Attach the current standards, course outline, and/or general syllabus.

The advanced pathway of mathematics courses at VCS that we are proposing changes to are the following: Advanced Algebra 1 in the 8th grade, Advanced Geometry in the 9th grade, and Advanced Algebra 2 in the 10th grade. These three courses will continue the usage of the Big Ideas series with classroom-sets of textbooks and online-access to the textbook materials in addition to the printed text. An exercise of vertical alignment among the classes is a necessity for

being productive, efficient and effective for students. *K-12 Michigan Common Core State Standards*

Grade	***New Textbook Title/Instructional Resource***	***Previous Textbook/Instructional Resource To Be Replaced***
8	*Big Ideas Algebra 1* • *Cengage Publisher* • *(Ron Larson, Laurie Boswell)* • *Advanced Algebra 1 (required 1 math credit)*	*Algebra 2 - McDougal Littel 2001 ed.*
9	*Big Ideas Geometry* • *Cengage Publisher* • *(Ron Larson, Laurie Boswell)* • *Advanced Geometry (required 1 math credit)* • *Prerequisite course - Advanced Algebra 1 (8th grade)*	*Geometry*
10	*Big Ideas Algebra 2* • *Cengage Publisher* • *(Ron Larson, Laurie Boswell)* • *Advanced Algebra (required 1 math credit)* • *Prerequisite courses - Advanced Algebra 1 (8th grade) and Advanced Geometry (10th grade)*	*Algebra and Trigonometry - second ed. 1980 Paul A. Foerster*

- *K-12 Michigan Common Core State Standards*

III. **Implementation Plan** – include *all* of the following:

☐ Give a full explanation of the implementation timeline, action items, and responsibilities for implementing.

☐ Itemize, in detail, all proposal costs. Include 1st year costs and a budget to maintain the proposal after implementation. Include resources needed to support change. (texts, soft/hardware, web-based license, consumables, training, substitute cost for training, equipment, personnel). **Include attachment if needed.*

a. Implementation strategies

Timeline	**Action**	**Person(s) Responsible**
Feb 2024	Submit Curriculum Proposal and Materials Request for new course	Angie Walton, Jen Koning, Nick Foley
February 22, 2024	Proposal to DCILT	Angie Walton/Adam Brush
March 2024	Proposal to Board of Education	Angie Walton
July-August 2024	Course Planning Summer Curriculum Work (5 days) to update Student Journals Jen K = 2 days; Angie W = 2 days; Nick F = 1 day	Angie Walton, Jen Koning, Nick Foley

July, 2024	Order materials	Gail VanDaff
Fall 2024	Full-year course begins/Start utilizing new online text and resources	Angie Walton, Jen Koning, Nick Foley
January-February, 2025	Evaluation of implementation (end of semester) Analyze student data and progress as well as implementation notes to evaluate the effectiveness of the resource.	Angie Walton, Jen Koning, Nick Foley
May-June, 2025	Evaluation of implementation (end of semester) Analyze student data and progress as well as implementation notes to evaluate the effectiveness of the resource.	Angie Walton, Jen Koning, Nick Foley
2024 - 2025	Continuing support from Big Ideas staff, 2 Pull-out Days, with or without Big Ideas trainers	Angie Walton, Jen Koning, Nick Foley

b. Proposal Costs

Description	**Number Needed/ Cost per Unit**	**Total Cost**	**Funding Source**
Materials *(add rows if needed)*			
Student Accounts - Big Ideas - Annually Recurring expense	Adv. Alg 1 (8th) - 67 x $10 Adv. Geo (9th) - 68 x $10 Adv. Alg 2 (10th) - 63 x $10	$1970/year	General Fund
Student Textbooks *continued use of class-sets* • *Big Ideas Algebra I* text for 8th Graders • *Big Ideas Geometry* text for 9th graders • *Big Ideas Algebra 2* text for 10th graders	Adv. Alg 1 (8th) Adv. Geo (9th) Adv. Alg 2 (10th)	$0	
Teacher Edition (print and digital) *continued access* *Annually Recurring Expense*	Adv. Alg 1 (8th) - 2 Adv. Geo (9th) - 2 Adv. Alg 2 (10th) - 2	(included with student license)	
Student Journals per student *if this resource is updated to match the style of 2019 with the content of 2022 editions.*	Copied at building level	n/a	Building Funds
Math Type Licenses (Annual recurring cost) Website	3 x $61.95	$185.85	General Fund
Professional Learning/Summer Curriculum Work			
Summer Curriculum Work - Course Planning 5 days total Jen K = 2 days Angie W. = 2 days Nick F. = 1 day	5 x $100+$53	$765	General Fund

Pull-out Days for training (2 Days, 3 Teachers (sub-cost)	6 x $130.46	$783	Title IIA
Other Costs			
Total Costs	**$2155.85 annual cost; $1548 1x cost = $3704**		

IV. Anticipated/Expected Impact – include *all* of the following:

☐ List the anticipated proposal outcomes. Describe how the proposal will impact students, staff, and the instructional program. Include expected gains in student success. Include how this proposal articulates with other courses/levels in this subject area & across the curriculum.

The anticipated outcomes of implementing the Big Ideas Math curriculum include increased rigor, improved student understanding, heightened engagement, and enhanced critical thinking. This proposal will impact students by providing a more rigorous, interactive, and comprehensive approach to learning math, leading to improved academic performance and heightened confidence. For staff, it offers professional development opportunities and fosters a more collaborative teaching environment. The proposal aligns with state standards, fostering a deeper understanding of mathematical concepts, leading to improved test scores and better retention of knowledge. It also provides a foundation for advanced mathematical concepts and promotes interdisciplinary connections across the curriculum. Being that this course sequence is intended to prepare students for Advanced Placement Calculus, the anticipated impact should be an improved passing-rate for the AP Calculus exam.

V. Proposal Evaluation Plan and Student Achievement – include *all* of the following:

☐ Explain how this proposal will be evaluated, the timeline used, what data is to be collected (survey results, national, state, district, or classroom assessments), and how the evaluation will be reported.

How Proposal Will Be Evaluated (who, process)	**Timeline**	**Data to Be Collected**	**How Evaluation Will Be Shared/Reported**
Analysis of Summative Assessments - Advanced Math Team and Instructional Coach	After each unit/semester	Unit Tests/Midterm and Final Exam	Shared with advanced math team and admin
Analysis of state assessments- Advanced Math Team and Instructional Coach	Post SAT	SAT Data when available	Shared with advanced math team and admin
Analysis of formative assessments- Advanced Math Team and Instructional Coach	Each Unit	Informal student formative assessments	Shared with advanced math team and admin

VI. PLC Foundation – Write a narrative that includes responses to *all* of the following questions:

☐ Is the implementation of this plan consistent with our purpose as a district?
☐ Will implementing this proposed plan help us become the school/district we envision?
☐ Are the people responsible for implementing this plan prepared to commit to doing it fully and well?
☐ Will implementing this plan enable us to achieve our goals as a school district?

The implementation of the Big Ideas Math curriculum is fully consistent with our district's purpose and educational vision. By embracing this proposed plan, we are taking a significant step towards becoming the school/district we envision. The emphasis on increased rigor, improved student understanding, heightened engagement, and enhanced critical thinking aligns perfectly with our goal of providing a rigorous and comprehensive education for our students.

The individuals responsible for implementing this plan are not only prepared but also committed to doing it fully and well. The proposal includes professional development opportunities for staff, ensuring that they are equipped to effectively implement the curriculum and utilize innovative teaching methods. This commitment to preparation and support is crucial for the successful implementation of the plan and demonstrates our dedication to providing the best possible education for our students.

Implementing this plan will enable us to achieve our goals as a school district by fostering a deeper understanding of mathematical concepts, leading to improved academic performance, heightened confidence, and better retention of knowledge among our students. Additionally, the integration of real-world applications within the curriculum promotes interdisciplinary connections across the curriculum, aligning with our goal of providing a well-rounded education that prepares students for success in various fields. This holistic approach to education supports our district's mission of preparing students to be college and career ready by providing them with the skills and knowledge they need to succeed.

Prior to submitting this form, review your proposal using the checklist outlined under each section to ensure required information has been provided. Incomplete proposals will be returned.