

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.

Note: The first page of this form is the cover sheet and proposal checklist for use as you edit or create your final draft to ensure each section has the required information. The proposal request form begins on page 3.

Title of Proposal: Forensic Science Course

Proposal Author(s): Rejean Kangas, Tina Porter

Department and Curriculum Area: VHS Science

Building: VHS

Committee Members: Rejean Kangas, Tina Porter, Mandy Keiser

❖ This proposal is for: (check all that apply)

- 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

❖ 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 School Improvement Goals

❖ Complete Description of Proposed Change(s):

- 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 content expectations, course outline, and/or general syllabus.

❖ Implementation Plan

- 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 resource needed to support change. (texts, soft/hardware, web-based license, consumables, training, substitute cost for training, equipment, personnel). **Include attachment if needed.*

❖ Anticipated/Expected Impact

- Explain 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.

❖ Proposal Evaluation Plan and Student Achievement

- 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.
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Dates of Anticipated Review and Action: DCILT 3/2/22

BOE April 11, 2022

Proposal Background & Overview:

Proposal History and Background.

The current VHS science graduation requirements are for students to take biology, and either chemistry or physics, and a third course. Outside of those three core classes, the rest of the offerings are heavily skewed toward life science, with only AP Chemistry, AP Physics and Astronomy as physical science electives. The AP courses are very rigorous, and appeal mostly to students planning on pursuing careers in science. The Astronomy course curriculum and resources are woefully outdated (circa 1993) and do not incorporate the 3D practices of the Next Generation Science Standards that the State of Michigan adopted in 2015. It has also gained the reputation of being a lower level class. Research has shown that students learn best when they are actively engaged with content that has real-world applications and relevance to them. We are in need of an engaging course that will appeal to a wide variety of students that incorporates physical science objectives. To this end, the VHS Science department would like to offer a new class, Forensic Science, as an elective course (which can be used as a 3rd required science class to meet graduation requirements) to Juniors and Seniors who have taken Biology and either Chemistry or Physics. This is an activities based class that incorporates math, chemistry, physics, earth science, and biology concepts reinforcing and expanding upon NGSS Disciplinary Core Ideas and Science and Engineering Practices learned in previous courses. It also includes many Common Core Literacy standards. We believe by offering this course and increasing student engagement and exposure to science we will increase student science literacy and college readiness.

Relevant portion of VCS Continuous Improvement Goal

Goal #1 “ 55% of High School Juniors will achieve a college ready score in math and EBRW as measured by the district and state assessments by June 15, 2024.

District Vision Statement

All students will graduate college and career ready.

Complete Description of Proposed Change(s):

Major changes, components or strategies of proposal.

A new Forensic Science course will be offered beginning the fall, 2022. Forensic Science is geared toward 11-12th grade students who have taken Biology and Chemistry and/or Physics. This course would replace astronomy in the master schedule for at least three years. At that point in time we will consider the need to reinstate astronomy or another science elective.

Proposed Topics/Syllabus

Unit	Unit Title/Topic	Unit	Unit Title/Topic
1	<i>Forensic Science and Observation</i>	11	<i>Forensic Entomology</i>
2	<i>Crime Scene Investigation</i>	12	<i>Death Manner, Mechanism, Cause</i>
3	<i>Hair Analysis</i>	13	<i>Soil Evidence</i>
4	<i>Fiber Analysis</i>	14	<i>Forensic Anthropology</i>
5	<i>Forensic Botany</i>	15	<i>Glass Evidence</i>
6	<i>Fingerprints</i>	16	<i>Casts and Impressions</i>
7	<i>DNA Profiling</i>	17	<i>Tool Marks</i>

8	<i>Blood and Blood Spatter</i>	18	<i>Ballistics</i>
9	<i>Forensic Toxicology</i>		<i>Capstone Project</i>
10	<i>Handwriting Analysis</i>		

<i>Grade</i>	<i>New Textbook Title/Instructional Resource</i>	<i>Previous Textbook/Instructional Resource To Be Replaced</i>
	<i>Forensic Science Fundamentals and Investigations by Bertino published by Cengage</i>	<i>New</i>

Please see the document linked below for the Next Generation Science Standards and Common Core correlations.

- <https://www.nextgenscience.org/standards/standards>

Implementation Plan:

a. Implementation strategies

Timeline	Action	Person(s) Responsible
Jan, 2022	Write Curriculum Proposal	Tina Porter, Rejean Kangas
Jan, 2022	Submit course description in Red Book (for scheduling).	Rejean Kangas
Feb, 2022	Submit Curriculum Proposal and Materials Request for new course	
Summer 2022	Professional Learning Day with new Text Resources (webinar)	Rejean Kangas and Mandy Keiser and Cengage book rep (free).
Fall 2022	Full year course begins/Start utilizing new text and resources	Rejean Kangas
Fall 2022	Science Teacher Professional Learning - review student data and progress, plan 2nd quarter units of instruction and assessments.	Rejean Kangas Tina Porter
Winter 2022-2023	Science Teacher Professional Learning student data and progress , plan 3rd quarter units of instruction assessments.	Rejean Kangas Tina Porter
Spring 2023	Science Teacher Professional Learning - review student data and progress, plan 4th quarter units of instruction and assessments.	Rejean Kangas Tina Porter

b. Proposal Costs

Description	Number Needed/ Cost per Unit	Total Cost	Funding Source
Materials <i>(add rows if needed)</i>			
Student Bundle - Forensic Science: Fundamentals and Investigations 3rd Ed + MindTap Digital Courseware 6-year license	35 student books & license x \$138	\$4830	District General Fund
Student Licenses - MindTap Digital Courseware 6-year license	90 digital licenses x \$106.50	\$9585	District General Fund
Annotated Instructor's Edition and Working Teacher Edition	2 Teachers Editions (Free)	\$0	NA
Laboratory Supplies	Itemized in <u>Forensic Science Laboratory Supplies</u>)	Year 1 - \$4500 Annual - \$865	District & Building
Professional Learning/Summer Curriculum Work			
Professional Learning Webinar with Cengage Representative for Text Resources - July/August	Stipends for 1 day x 2 ppl @ \$113/person	\$226	Title IIA
Professional Learning 22-23 school year	Subs for 3 days x 2 ppl @ \$90 each	\$540	Title IIA
Total Costs	\$19,681		

Anticipated/Expected Impact:

Proposal outcomes

- Increased student engagement while solving real-world issues.
- Students engaged in critical thinking and problem solving with higher order learning activities.
- Students will experience lessons that follow the 3 Dimensions of the Next Generation Science Standards which include cross-cutting concepts, science and engineering practices, and disciplinary core ideas.
- Students will improve scientific discourse with teachers and fellow students.
- Increase in science literacy and college readiness.

Proposal Evaluation Plan and Student Achievement:

Evaluation and assessment

Action	Timeline	Person/ Team Responsible
Analysis of Unit Tests/Midterm and Final Exam	After each unit/semester	Rejean Kangas
Analysis of MSTEP and SAT data	Post MSTEP	HS Science Team and Instructional Coach

when available		
Informal student self assessments - collect and discuss	After each unit	Rejean Kangas

Prior to submitting this form, review your proposal using the checklist outlined on page one of this document to ensure each section has the required information. Incomplete proposals will be returned.