Dexter Community Schools
Board of Education
Executive Summary and Recommendation

Purpose: Provide students at DHS the opportunity to complete the second portions of AP Physics representing one full year of collegiate level physics.

Explanation: The title of the course is Advanced Placement Physics 2. Five years ago, the AP College Board reorganized the AP Physics program from a one year, high paced content course to a two-year program that goes more in depth. Our current AP Physics 1 course only covers first semester college physics. The physics program at DHS has grown and we have more students taking physics than ever before. Students have shown enough interest to sustain the second portion of AP Physics at Dexter High School.

AP Physics 2 includes study in the areas of advanced circuits, magnetism, optics and fluid dynamics. These topics, seen in a second semester college physics course, provide our students a solid foundation for their continued success after graduation. In order to earn a full year of college credit students must complete both AP Physics 1 & AP Physics 2. The integration of AP physics 2 into our courses of study provides further opportunity for our students interested in exploring the fields of physics and engineering after graduation.

Recommendation: The Science and Instructional Departments would like to recommend the addition of AP Physics 2 at Dexter High School for the 2020/21 school year, including the resources needed to fund the course ($3000 in resources, $1000 in professional development).

DEXTER COMMUNITY SCHOOLS
Application to request the adoption of a new course

Date of application: 12/10/18
Course Title: AP Physics 2
Department: Science
Duration: 1 year
Prerequisite(s): AP Physics 1
Applicant(s): Ms. Jones, Mr. Kimmey
Building Involved: DHS
Targeted population: Juniors and Seniors
Targeted year for implementation: 2020-2021

Describe your course request:
AP Physics 2 is the second half of the AP physics offering. It covers the content of second semester of college physics: fluids, thermodynamics, electric force, field and potential, magnetism, optics and atomic and nuclear physics

Rationale: Why is a new course necessary?

A number of years ago the AP College Board broke up an intensive 1 year college physics course into a 2 year sequence so that more depth and concepts could be taught instead of a fast paced superficial physics formula math course. Dexter adopted AP Physics 1 that teaches first semester college physics (mechanics, sound, introduction to electricity). So unlike AP Chemistry and AP Calculus, that supply a student the equivalent to 1 year of college content, taking AP Physics 1 only prepares students for first semester college physics. We would like to complete the AP physics course by offering AP Physics 2.

Connection to specific goals within the strategic framework/What are the "big ideas" or "core concepts" that will be covered in the course?

HS-PS1-8 Matter and its Interactions

PS2.B: Types of Interactions

- **Newton's law of universal gravitation and Coulomb's law provide the mathematical models to describe and predict the effects of gravitational and electrostatic forces between distant objects. (HS-PS2-4)**
- **Forces at a distance are explained by fields (gravitational, electric, and magnetic) permeating space that can transfer energy through space. Magnets or electric**

currents cause magnetic fields; electric charges or changing magnetic fields cause electric fields. (HS-PS2-4),(HS-PS2-5)

PS3.A: Definitions of Energy

- "Electrical energy" may mean energy stored in a battery or energy transmitted by electric currents. *(secondary to HS-PS2-5)*

ETS1.A: Defining and Delimiting an Engineering Problem

- Criteria and constraints also include satisfying any requirements set by society, such as taking issues of risk mitigation into account, and they should be quantified to the extent possible and stated in such a way that one can tell if a given design meets them. *(secondary to HS-PS2-3)*

ETS1.C: Optimizing the Design Solution

- Criteria may need to be broken down into simpler ones that can be approached systematically, and decisions about the priority of certain criteria over others (trade-offs) may be needed. *(secondary to HS-PS2-3)*

PS4.A: Wave Properties

- The wavelength and frequency of a wave are related to one another by the speed of travel of the wave, which depends on the type of wave and the medium through which it is passing. (HS-PS4-1)
- Information can be digitized (e.g., a picture stored as the values of an array of pixels); in this form, it can be stored reliably in computer memory and sent over long distances as a series of wave pulses. (HS-PS4-2),(HS-PS4-5)
- [From the 3–5 grade band endpoints] Waves can add or cancel one another as they cross, depending on their relative phase (i.e., relative position of peaks and troughs of the waves), but they emerge unaffected by each other. (Boundary: The discussion at this grade level is qualitative only; it can be based on the fact that two different sounds can pass a location in different directions without getting mixed up.) (HS-PS4-3)

PS4.B: Electromagnetic Radiation

- Electromagnetic radiation (e.g., radio, microwaves, light) can be modeled as a wave of changing electric and magnetic fields or as particles called photons. The wave model is useful for explaining many features of electromagnetic radiation, and the particle model explains other features. (HS-PS4-3)
- When light or longer wavelength electromagnetic radiation is absorbed in matter, it is generally converted into thermal energy (heat). Shorter wavelength electromagnetic radiation (ultraviolet, X-rays, gamma rays) can ionize atoms and cause damage to living cells. (HS-PS4-4)

- Photoelectric materials emit electrons when they absorb light of a high-enough frequency. (HS-PS4-5)

PS4.C: Information Technologies and Instrumentation

- Multiple technologies based on the understanding of waves and their interactions with matter are part of everyday experiences in the modern world (e.g., medical imaging, communications, scanners) and in scientific research. They are essential tools for producing, transmitting, and capturing signals and for storing and interpreting the information contained in them. (HS-PS4-5)

ETS1.A: Defining and Delimiting Engineering Problems

- Criteria and constraints also include satisfying any requirements set by society, such as taking issues of risk mitigation into account, and they should be quantified to the extent possible and stated in such a way that one can tell if a given design meets them. (HS-ETS1-1)
- Humanity faces major global challenges today, such as the need for supplies of clean water and food or for energy sources that minimize pollution, which can be addressed through engineering. These global challenges also may have manifestations in local communities. (HS-ETS1-1)

ETS1.B: Developing Possible Solutions

- When evaluating solutions, it is important to take into account a range of constraints, including cost, safety, reliability, and aesthetics, and to consider social, cultural, and environmental impacts. (HS-ETS1-3)
- Both physical models and computers can be used in various ways to aid in the engineering design process. Computers are useful for a variety of purposes, such as running simulations to test different ways of solving a problem or to see which one is most efficient or economical; and in making a persuasive presentation to a client about how a given design will meet his or her needs. (HS-ETS1-4)

ETS1.C: Optimizing the Design Solution

- Criteria may need to be broken down into simpler ones that can be approached systematically, and decisions about the priority of certain criteria over others (trade-offs) may be needed. (HS-ETS1-2)

Connection to District Improvement Plan or School Improvement Plan(s):
As we move to enhance the curriculum offered at Dexter High School we have noticed an increasing interest in physics and engineering. As we currently do not have engineering specific courses, our AP Physics courses represent the most important foundation courses for students wishing to enter the fields of physics, engineering, and medicine. Since we have shifted our core required courses to the ninth and tenth grade years of school, we now have expanded the ability for our students to take advanced science courses as electives for their junior and senior year. Because of this shift we have more students able to take advanced courses, and many of them have shown an interest in advanced physics courses.

How will technology be integrated into the course?
Digital multimeters, lasers and slow motion video imaging will be used in labs. Swivl will be used to record lectures for online/remote viewing.

How does the resource support various learning styles, multiple intelligences of the students, and differentiated instruction?
The course will include oral and graphical presentations with guided note templates. Hands on labs will be a significant part of the course work. Online virtual labs will be used where applicable. Custom designed problem sets will be assigned to guide student progress throughout the course. Student work time is built into the weekly schedule to allow for one on one mentoring with the instructor as well as to allow peer to peer learning on assignments.

By the end of the course, students will be able to:
Students will be working through the AP Physics 2 syllabus which will drive the content knowledge. Each unit will take into consideration the cross cutting concepts as outlined by the Michigan Science Standards.

1. Patterns. Observed patterns of forms and events guide organization and classification, and they prompt questions about relationships and the factors that influence them.
2. Cause and effect: Mechanism and explanation. Events have causes, sometimes simple, sometimes multifaceted. A major activity of science is investigating and explaining causal relationships and the mechanisms by which they are mediated. Such mechanisms can then be tested across given contexts and used to predict and explain events in new contexts.
3. Scale, proportion, and quantity. In considering phenomena, it is critical to recognize what is relevant at different measures of size, time, and energy and to recognize how changes in scale, proportion, or quantity affect a system's structure or performance.
4. Systems and system models. Defining the system under study—specifying its boundaries and making explicit a model of that system—provides tools for understanding and testing ideas that are applicable throughout science and engineering.
5. Energy and matter: Flows, cycles, and conservation. Tracking fluxes of energy and matter into, out of, and within systems helps one understand the systems' possibilities

and limitations. 6. Structure and function. The way in which an object or living thing is shaped and its substructure determine many of its properties and functions.
7. Stability and change. For natural and built systems alike, conditions of stability and determinants of rates of change or evolution of a system are critical elements of study.

Students will also engage in numerous activities that incorporate the Science & Engineering practices as outlined in the Michigan Science Curriculum. These practices are integrated into AP Physics 2 activities enhancing each student's application of concepts learned in class as they utilize their information in meaningful ways.

1. Asking questions (for science) and defining problems (for engineering)
   Asking questions and defining problems in 9–12 builds on K–8 experiences and progresses to formulating, refining, and evaluating empirically testable questions and design problems using models and simulations.
   a. Ask questions o that arise from careful observation of phenomena, or unexpected results, to clarify and/or seek additional information.
      i. that arise from examining models or a theory, to clarify and/or seek additional information and relationships.
      ii. to determine relationships, including quantitative relationships between independent and dependent variables.
      iii. to clarify and refine a model, an explanation, or an engineering problem.
   b. Evaluate a question to determine if it is testable and relevant.
   c. Ask questions that can be investigated within the scope of the school laboratory, research facilities, or field (e.g., outdoor environment) with available resources and, when appropriate, frame a hypothesis based on a model or theory.
   d. Ask and/or evaluate questions that challenge the premise(s) of an argument, the interpretation of a data set, or the suitability of a design.
   e. Define a design problem that involves the development of a process or system with interacting components and criteria and constraints that may include social, technical, and/or environmental considerations.
2. Developing and using models
   Modeling in 9–12 builds on K–8 experiences and progresses to using, synthesizing, and developing models to predict and show relationships among variables between systems and their components in the natural and designed worlds.
   a. Evaluate merits and limitations of two different models of the same proposed tool, process, mechanism or system in order to select or revise a model that best fits the evidence or design criteria.
   b. Design a test of a model to ascertain its reliability.

c. Develop, revise, and/or use a model based on evidence to illustrate and/or predict the relationships between systems or between components of a system. Develop and/or use multiple types of models to provide mechanistic accounts and/or predict phenomena, and move flexibly between model types based on merits and limitations.
d. Develop a complex model that allows for manipulation and testing of a proposed process or system.
e. Develop and/or use a model (including mathematical and computational) to generate data to support explanations, predict phenomena, analyze systems, and/or solve problems.

3. Planning and carrying out investigations

Planning and carrying out investigations in 9-12 builds on K-8 experiences and progresses to include investigations that provide evidence for and test conceptual, mathematical, physical, and empirical models.

a. Plan an investigation or test a design individually and collaboratively to produce data to serve as the basis for evidence as part of building and revising models, supporting explanations for phenomena, or testing solutions to problems. Consider possible confounding variables or effects and evaluate the investigation's design to ensure variables are controlled.
b. Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly.
c. Plan and conduct an investigation or test a design solution in a safe and ethical manner including considerations of environmental, social, and personal impacts. Select appropriate tools to collect, record, analyze, and evaluate data. Make directional hypotheses that specify what happens to a dependent variable when an independent variable is manipulated.
d. Manipulate variables and collect data about a complex model of a proposed process or system to identify failure points or improve performance relative to criteria for success or other variables.

4. Analyzing and interpreting data

Analyzing data in 9–12 builds on K–8 experiences and progresses to introducing more detailed statistical analysis, the comparison of data sets for consistency, and the use of models to generate and analyze data. Analyze data using tools, technologies, and/or models (e.g., computational, mathematical) in order to make valid and reliable scientific claims or determine an optimal design solution.

a. Apply concepts of statistics and probability (including determining function fits to data, slope, intercept, and correlation coefficient for linear fits) to

scientific and engineering questions and problems, using digital tools when feasible.

b. Consider limitations of data analysis (e.g., measurement error, sample selection) when analyzing and interpreting data.
c. Compare and contrast various types of data sets (e.g., self-generated, archival) to examine consistency of measurements and observations.
d. Evaluate the impact of new data on a working explanation and/or model of a proposed process or system. Analyze data to identify design features or characteristics of the components of a proposed process or system to optimize it relative to criteria for success.

5. Using mathematics and computational thinking

Mathematical and computational thinking in 9- 12 builds on K-8 experiences and progresses to using algebraic thinking and analysis, a range of linear and nonlinear functions including trigonometric functions, exponentials and logarithms, and computational tools for statistical analysis to analyze, represent, and model data.

a. Simple computational simulations are created and used based on mathematical models of basic assumptions.
b. Create and/or revise a computational model or simulation of a phenomenon, designed device, process, or system.
c. Use mathematical, computational, and/or algorithmic representations of phenomena or design solutions to describe and/or support claims and/or explanations.
d. Apply techniques of algebra and functions to represent and solve scientific and engineering problems. Use simple limit cases to test mathematical expressions, computer programs, algorithms, or simulations of a process or system to see if a model “makes sense” by comparing the outcomes with what is known about the real world.
e. Apply ratios, rates, percentages, and unit conversions in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m3 , acre-feet, etc.).

6. Constructing explanations (for science) and designing solutions (for engineering)

Constructing explanations and designing solutions in 9–12 builds on K–8 experiences and progresses to explanations and designs that are supported by multiple and independent student-generated sources of evidence consistent with scientific ideas, principles, and theories.

a. Make a quantitative and/or qualitative claim regarding the relationship between dependent and independent variables.
b. Construct and revise an explanation based on valid and reliable evidence obtained from a variety of sources (including students’ own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future.

c. Apply scientific ideas, principles, and/or evidence to provide an explanation of phenomena and solve design problems, taking into account possible unanticipated effects.
d. Apply scientific reasoning, theory, and/or models to link evidence to the claims to assess the extent to which the reasoning and data support the explanation or conclusion.
e. Design, evaluate, and/or refine a solution to a complex real-world problem, based on scientific knowledge, student-generated sources of evidence, prioritized criteria, and trade-off considerations.

7. Engaging in argument from evidence

   Engaging in argument from evidence in 9–12 builds on K–8 experiences and progresses to using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed world(s).

   a. Arguments may also come from current scientific or historical episodes in science.
   b. Compare and evaluate competing arguments or design solutions in light of currently accepted explanations, new evidence, limitations (e.g., trade-offs), constraints, and ethical issues.
   c. Evaluate the claims, evidence, and/or reasoning behind currently accepted explanations or solutions to determine the merits of arguments.
   d. Respectfully provide and/or receive critiques on scientific arguments by probing reasoning and evidence, challenging ideas and conclusions, responding thoughtfully to diverse perspectives, and determining additional information required to resolve contradictions.
   e. Construct, use, and/or present an oral and written argument or counter-arguments based on data and evidence.
   f. Make and defend a claim based on evidence about the natural world or the effectiveness of a design solution that reflects scientific knowledge and student-generated evidence.
   g. Evaluate competing design solutions to a real-world problem based on scientific ideas and principles, empirical evidence, and/or logical arguments regarding relevant factors (e.g. economic, societal, environmental, ethical considerations).

8. Obtaining, evaluating, and communicating information

   Obtaining, evaluating, and communicating information in 9–12 builds on K–8 experiences and progresses to evaluating the validity and reliability of the claims, methods, and designs.

   a. Critically read scientific literature adapted for classroom use to determine the central ideas or conclusions and/or to obtain scientific and/or technical information to summarize complex evidence, concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms. Compare, integrate and evaluate sources of information

presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a scientific question or solve a problem.

b. Gather, read, and evaluate scientific and/or technical information from multiple authoritative sources, assessing the evidence and usefulness of each source. Evaluate the validity and reliability of and/or synthesize multiple claims, methods, and/or designs that appear in scientific and technical texts or media reports, verifying the data when possible.
c. Communicate scientific and/or technical information or ideas (e.g. about phenomena and/or the process of development and the design and performance of a proposed process or system) in multiple formats (i.e., orally, graphically, textually, mathematically).

How does the material support cultural diversity and gender equity?
Story problems are written with culturally diverse names and there are as many females as men in action in the problems.

How will career or "real world" experiences be integrated into the course?
Story problems always include real life examples/scenarios with realistic answers. Students will do hands on labs that show how real world devices work and are engineered such as a solenoid electrical-magnetics automatic lock on a car.

How does the material encourage critical thinking and problem solving?
All labs and worksheets are problems in which students need to critically and logically determine what they know and how to find out an unknown. Inquiry based labs are performed where students self design a lab and must come up with the controls and how and what data will be experimentally collected.

What summative and formative assessments will be used to measure student achievement?
Custom worksheets and book problems provide students with practice, and laboratories and tests will be the summative assessments as well as the final exam.

What Teacher aids are provided?
My Canvas site provides students with pdf files of all assignments as well as the guided notes for each unit, the key to the guided notes, and video of the unit lectures. Extra videos on topics are also provided on the Canvas site. As a teacher-taught AP class, the College Board also provides an online classroom for students and teachers containing unit review questions, practice tests, and progress checks.

Describe what other alternatives were considered and why were they are not being proposed:
There is no alternative to AP Physics 2, it is the second half of the AP Physics coursework mandated by the AP College Board.

Projected costs (explain each as needed, some items may not be applicable):

Additional personnel:	$0
Textbooks, materials, technology:	$3000 (to fill out a class set)
Professional Development:	$500
Release time:	$0
Teacher stipends:	$0
Speaker/Consultant stipends:	$0
Registration fees:	$0
Travel expenses:	$0
Summer work:	$500
Other expenses (please explain below)	$0
GRAND TOTAL:	**$4000**

Instructional Resource Review
Date of department review/discussion: January 15, 2019
Location of meeting: DHS Main Office Conference Room
Number of attendees: 12
Record of the meeting including comments & recommendations:

- This will offer classes that help our students entering the fields of Engineering
- We got a thumbs from the department chairs to offer this course for the 2020/2021 school year.

Date of admin review/discussion: October 8, 2019
Location of meeting: Mill Creek
Number of attendees: 10
Record of the meeting including comments & recommendations: Admin supportive. No revisions recommended.

Date of adjacent building review/discussion: Not necessary as it is a junior/senior class only. All pre-requisite courses at DHS
Location of meeting: Admin mtg @Mill Creek - October 8, 2019
Number of attendees: 10
Record of the meeting including comments & recommendations: MC Admin supportive. No revisions recommended.

Date of community review/discussion: Oct. 24, 2019 at 7 PM
Location of meeting: DHS Media Center DHS

Number of attendees: 56 parents attended.
Keep a record of the meeting(s):
Record of the meeting including comments & recommendations: Parents were very surprised that we were not teaching a full AP Physics two year course since the College Board made that change a couple of years ago. They were happy that their engineering-minded students would now have the opportunity to earn a year of Physics credit at the college level because they were not earning by only taking AP Physics I. Overall, parents felt this was a necessary move.

Date of Board of Education review/discussion: October 14, 2019
Record of the meeting including comments & recommendations: Beau Kimmey presented on behalf of the DHS Science department. The Board of Education was supportive of the course and alignment with AP Physics 1 which is currently offered.

Date of Board of Education action: November 11, 2019

Dexter Community Schools
Board of Education
Executive Summary and Recommendation

Purpose: Establish a one-year AP Computer Science Principles and Coding course at Dexter High School.

Explanation: Computer programming is one of the fastest growing fields and we currently offer no courses that introduce students to computer science and computer programming. Computing is fundamental to understanding and participating in society, and is valuable for students to learn as part of a modern education. Computer science prepares students to be active and informed contributors to our increasingly technological society whether or not they pursue careers in a technology field.

Last fall, 600 DHS students in grades 9-11 were surveyed to find out their interest in taking a computer science course. 200 respondents indicated they would like to take a class focused on programming and computers if available in the future.

The curriculum comes from code.org. All code.org curriculum resources and tutorials are developed as an open source project and free to use and are updated to reflect the changing landscape of Computer Science. The cost for the course would be about $1000 for training and travel expenses to train a teacher (this has already been paid). There are no additional or yearly costs.

Recommendation: The Math and Instructional departments would like to recommend the addition of an introduction to computer science and coding course at Dexter High School for the 2020/21 school year.

DEXTER COMMUNITY SCHOOLS
Application to request the adoption of a new course and/or resources

Date of application: October 2019
Course Title: CS Principles AP
Department: Mathematics
Duration: Year Long (2 semesters)
Prerequisite(s): Algebra 1
Applicant(s): Brian Baird on behalf of DHS math dept.
Building Involved: Dexter High School
Targeted population: 9-12
Targeted year for implementation: 2020-2021

Describe your course request:

Rationale: Why is/are a new course or new resources necessary?

We believe that computing is so fundamental to understanding and participating in society that it is valuable for every student to learn as part of a modern education. We see computer science as a liberal art, a subject that provides students with a critical lens for interpreting the world around them. Computer science prepares all students to be active and informed contributors to our increasingly technological society whether they pursue careers in technology or not. Computer science can be life-changing, not just skill training.

A survey of 600 students (Freshmen through Juniors) were returned with 200 students indicating they would like to take a class focused on programming and coding. Computer programming is one of the fastest growing fields and we offer no courses that introduce students to this.

Connection to specific goals within the strategic framework/What are the “big ideas” or “core concepts” that will be covered in the course/resources?

From the ISTE Standards

Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.
Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.
Creative Communicator
Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

Connection to District Improvement Plan or School Improvement Plan(s):

Goal 1: All students in Dexter Community Schools will become proficient writers.
Coding is a language that students need to be able to read and write.

Goal 2: All students in Dexter Community Schools will increase proficiency in mathematics.
Computer science is a field of mathematics that we do not address at DHS.

How will technology be integrated into the course?

The curriculum uses both online and offline materials to understand principles. Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st century.

How do the resources support various learning styles, multiple intelligences of the students, and differentiated instruction?

The material is project based and collaborative, allowing students with different strengths to work together to create the projects.

We believe that students learn best when they are intrinsically motivated. We prioritize learning experiences that are active, relevant to students' lives, and provide students authentic choice. We encourage students to be curious, solve personally relevant problems and to express themselves through creation. Learning is an inherently social activity, so we interweave lessons with discussions, presentations, peer feedback, and shared reflections. As students proceed through our pathway, we increasingly shift responsibility to students to formulate their own questions, develop their own solutions, and critique their own work.

By the end of the course, students will be able to:

- Create and Innovate using computer language
- Communicate and Collaborate with fellow students
- Gather Information from Online sources
- Solve Digital Problems
- Learn online etiquette
- Explore Computer Career opportunities

How does the material support cultural diversity and gender equity?

From Code.org:
We believe that acknowledging and shining a light on the historical inequities within the field of computer science is critical to reaching the goal of bringing computer science to all students. We provide tools and strategies to help teachers understand and address well-known equity gaps within the field. We recognize that some students and classrooms need more supports than others, and so those with the greatest needs should be prioritized.

How will career or "real world" experiences be integrated into the course and resources?

This course is built around the application of mathematical modelling in context, and thus is focused on extending mathematics into the "real world".

How does the material encourage critical thinking and problem solving?

Many of the projects, assignments, and activities in our curriculum ask students to be creative, to express themselves and then to share their creations with others. While certain lessons focus on learning and practicing new skills, our goal is always to enable students to transfer these skills to creations of their own. Everyone seeks to make their mark on society, including our students, and we want to give them the tools they need to do so. When computer science provides an outlet for personal expression and creativity, students are intrinsically motivated to deepen the understandings that will allow them to express their views and carve out their place in the world.

What summative and formative assessments will be used to measure student achievement?

Each chapter has a test that assesses student learning and prepares them for the AP test at the end of the course. Each chapter has projects and assignments that will be used as formative to prepare students for the summative chapter tests. There are also end concept projects that will be used for summative assessments.

What teacher aids are provided?

Code.org provides all materials for the course through their online resources at no cost to the schools. The curriculum is updated constantly with new material and is aligned with the state standards and prepares them for the AP Computer Science Test.

Describe what other alternatives were considered and why were they are not being proposed:

Codehs.com was another source that I considered. It didn't align with what we are using in the lower grades (they use Code.org material). Codehs also costs $2000 a classroom. We might consider classes from them in the future as the program develops.

Over 300 teachers in Michigan have become involved with code.org and their teaching resources in the last two years. It is a vibrant and active support community here in the state.

Projected costs (explain each as needed, some items may not be applicable):

Additional personnel:	$0
Textbooks, materials, technology:	$0
Professional Development:	$0
Release time:	$0
Teacher stipends:	$0
Speaker/Consultant stipends:	$0
Registration fees:	$0
Travel expenses:	$400 (paid summer 2019)
Summer work:	$400 (paid summer 2019)
Other expenses (please explain below)	$0
GRAND TOTAL:	**$800**

Instructional Resource Review Process

Date of department/committee review/discussion: October 8, 2019
Location of meeting: DHS
Number of attendees: 15
Record of the meeting including comments & recommendations: Colleagues are supportive. No revisions recommended.

Date of admin review/discussion: October 8, 2019
Location of meeting: Mill Creek
Number of attendees: 10
Record of the meeting including comments & recommendations: Admin are supportive. No revisions recommended.

Date of adjacent building review/discussion: October 17, 2019
Location of meeting: Mill Creek Middle School Tech Room
Number of attendees: 3
Record of the meeting including comments & recommendations: We talked about how we can coordinate between the middle school and high school curriculum to make programming and computer science a continuous learning situation. We have a few parts, but they are not connected. We have kids at very high and very low exposure levels, and we need to figure out

how to engage both. The middle school really likes Code.Org and is happy to work with me to build a continuous program.

Date of community review/discussion: October 24, 2019
Location of meeting: DHS Media Center, 7pm
Number of attendees: 56
Record of the meeting including comments & recommendations: The parents in attendance said things like, “it’s about time we offer some computer science courses,” and “hopefully this will lead to more computer science options for DHS kids”. They clearly saw the need and were happy that we were addressing it.

Date of Board of Education review/discussion: October 14, 2019
Record of the meeting including comments & recommendations: Mr. Baird presented the course to the Board and community. The Board was supportive of the option to offer a computer science AP elective. Questions asked included clarification of students in all levels having access to the AP course and the opportunity for additional courses in computer science.

Date of Board of Education action: November 11, 2019
Action taken:

Dexter Community Schools
Board of Education
Executive Summary and Recommendation

Purpose: Establish IB Mathematics: Applications and Interpretation SL as an option for diploma candidates who are not pursuing science and engineering in their post-high school plans.

Explanation: This course is the replacement in the IB Diploma Programme for IB Math Studies SL, a very popular course at DHS for upperclassmen. The course focuses on applications of mathematics and modeling real phenomena using technology. There is a heavy emphasis on statistics, in addition to topics in algebra, geometry, and introductory calculus.

Three high school staff members are currently trained to teach this course, and we anticipate a maximum of $8500 necessary for textbooks aligned to the IB curriculum.

Recommendation: The Math and Instructional departments would like to recommend the addition of IB Mathematics: Application and Interpretation SL at Dexter High School for the 2020/21 school year, including $8500 in funding for the teacher and student resources.

DEXTER COMMUNITY SCHOOLS
Application to request the adoption of a new course and/or resources

Date of application: 9/10/2019
Course Title: IB Mathematics: Applications and Interpretation SL
Department: DHS Mathematics
Duration: 1 year
Prerequisite(s): Algebra 2 or equivalent
Applicant(s): Ryan Fisher
Building Involved: DHS
Targeted population: 11th and 12th grade
Targeted year for implementation: 2020-2021

Describe your course request:

From the IB course guide: *This course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course also includes topics that are traditionally part of pre-university mathematics courses such as calculus and statistics.*

The course makes extensive use of technology to allow students to explore and construct mathematical models. Mathematics: applications and interpretation will develop mathematical thinking, often in the context of a practical problem and using technology to justify conjectures.

Rationale: Why is/are a new course or new resources necessary?

In the upcoming IB curriculum review, the mathematics courses are undergoing significant changes, including the elimination of the current IB Math Studies course. This course is the replacement course for diploma candidates who, in the past, would have registered for IB Math Studies.

Connection to specific goals within the strategic framework/What are the "big ideas" or "core concepts" that will be covered in the course/resources?

This course will cover the topics outlined in the IB Mathematics: Applications and Interpretation SL guide and will align with its syllabus with the overarching goal of preparing students appropriately for the IB exam.

Connection to District Improvement Plan or School Improvement Plan(s):

It links directly with the goal of increased math achievement in the District Improvement Plan.

How will technology be integrated into the course?

From the IB guide: *Students can also use technology to engage with the learning process in many ways including the following:*

- *to develop and enhance their own personal conceptual understanding*
- *to search for patterns*
- *to test conjectures or generalizations*
- *to justify interpretations*
- *to collaborate on project based work*
- *to help organize and analyse data.*

In the classroom teachers and students can use technology, working individually or collaboratively, to explore mathematical concepts. The key to successful learning of mathematics with technology is the fine balance between the teacher and student use of technology, with carefully chosen use of technology to support the understanding and the communication of the mathematics itself.

How do the resources support various learning styles, multiple intelligences of the students, and differentiated instruction?

Mathematics Core Topics SL1 and Mathematics Applications and Interpretation SL2 by Haese Mathematics offer a wide range of examples, diagrams, and exercises to aid in student learning. A sample of the text rates the book at a 10th grade reading level, which is appropriate for the students who will take the course. Additionally, the books come with online supplements for students to use, in addition to the printed textbook.

By the end of the course, students will be able to:

From the IB guide, the aims of this, and all IB math courses, are the following:

1. Develop a curiosity and enjoyment of mathematics, and appreciate its elegance and power
2. Develop an understanding of the concepts, principles and nature of mathematics
3. Communicate mathematics clearly, concisely and confidently in a variety of contexts
4. Develop logical and creative thinking, and patience and persistence in problem solving to instil confidence in using mathematics
5. Employ and refine their powers of abstraction and generalization
6. Take action to apply and transfer skills to alternative situations, to other areas of knowledge and to future developments in their local and global communities
7. Appreciate how developments in technology and mathematics influence each other 30 Mathematics: applications and interpretation guide
8. Appreciate the moral, social and ethical questions arising from the work of mathematicians and the applications of mathematics
9. Appreciate the universality of mathematics and its multicultural, international and historical perspectives
10. Appreciate the contribution of mathematics to other disciplines, and as a particular "area of knowledge" in the TOK course
11. Develop the ability to reflect critically upon their own work and the work of others
12. Independently and collaboratively extend their understanding of mathematics.

How does the material support cultural diversity and gender equity?

One of the central goals of all IB courses, this included, is to encourage international mindedness. An excerpt from the IB syllabus:

One way of fostering international-mindedness is to provide opportunities for inquiry into a range of local and global issues and ideas. Many international organisations and bodies now exist to promote mathematics, and students are encouraged to access the resources and often-extensive websites of such mathematical organisations. This can enhance their appreciation of the international dimension of mathematics, as well as providing opportunities to engage with global issues surrounding the subject.

Examples of links relating to international-mindedness are given in the "Connections" sections of the syllabus.

How will career or "real world" experiences be integrated into the course and resources?

This course is built around the application of mathematical modeling in context, and thus is focused on extending mathematics into the "real world."

How does the material encourage critical thinking and problem solving?

From the IB syllabus:

Mathematics encourages the development of strong written, verbal, and graphical communication skills; critical and complex thinking; and moral and ethical considerations influenced by mathematics that will assist students in preparing for the future global workplace. This in turn fosters the IB learner profile attributes that are transferable to the entire CP, providing relevance and support for the student's learning.

What summative and formative assessments will be used to measure student achievement?

Students will take the international IB Math: Applications and Interpretation SL exam at the end of the course. A full description of the assessment can be found in the IB course syllabus. Formatively, students will have regular practice problem sets that will be checked in class, as well as hands-on, technology driven data analysis activities to reinforce the core concepts addressed throughout the course.

What teacher aids are provided?

The books we're proposing to purchase include solution manuals for teachers, as well as online problem sets and additional materials for the instructors. IB instructors also have access to the IB Portal with resources that are shared by other teachers and schools across the world.

Describe what other alternatives were considered and why were they are not being proposed:

We also previewed textbooks from Oxford Publishing and Pearson. Of the three textbooks we previewed, the books from Haese publishing provided the most flexibility in their organization for our non-typically structured IB courses. Additionally, the Haese textbooks have a wider variety of practice problems and worked out examples than the other two books.

Projected costs (explain each as needed, some items may not be applicable):

Additional personnel:	$0
Textbooks, materials, technology:	$7500
Professional Development:	$2500 (every 5 years)
Release time:	$0
Teacher stipends:	$0
Speaker/Consultant stipends:	$0
Registration fees:	$0
Travel expenses:	$0
Summer work:	$500
Other expenses (please explain below)	$0
GRAND TOTAL:	**$8000**

**Three staff members are currently trained to teach this course. New, course aligned textbooks will need to be purchased, as well as time to develop the course to fit the course progression at DHS will be needed.

Instructional Resource Review Process

Date of department/committee review/discussion: 9/10/2019
Location of meeting: DHS media center
Number of attendees: 9
Record of the meeting including comments & recommendations:
All HS math department members were in favor of adding this course.

Date of admin review/discussion: October 8, 2019
Location of meeting: Mill Creek
Number of attendees: 10
Record of the meeting including comments & recommendations: Admin supportive. No revisions recommended.

Date of adjacent building review/discussion: Not applicable - Pre-requisite courses at DHS
Location of meeting:
Number of attendees:
Record of the meeting including comments & recommendations:

Date of community review/discussion: October 24, 2019
Location of meeting: DHS Media Center, 7pm
Number of attendees: 56 parents attended
Record of the meeting including comments & recommendations:
The parents were supportive of the new course. They wondered how many students from the current IB Math Studies class would actually be taking the class, but I clarified that it would not be for the students currently in IB Math Studies, that it would be replacing the current class for students wishing to earn an IB Diploma or take a weighted math class instead of Math Studies for the future. One parent recommended that whoever teaches the course be excited and passionate about it because they wanted students to enroll,because that parent believed that students were taking the current Math Studies class because of the teacher teaching it. I explained that we'd make sure that a well-trained teacher would teach the class, and that it would be a really great class for non-math major kinds of students seeking either the IB Diploma or a weighted senior level math class.

Date of Board of Education review/discussion: October 14, 2019
Record of the meeting including comments & recommendations: Ryan Fisher presented on behalf of the DHS Math department. The Board of Education was supportive of the name change and course focus per IB recommendations.

Date of Board of Education action: November 11, 2019
Action taken:

Dexter Community Schools
Board of Education
Executive Summary and Recommendation

Purpose: Establish a one-semester elective Forensic Science course at Dexter High School.

Explanation: The title of the course is Forensic Science, and it will concentrate on how law enforcement uses biochemistry to solve crimes. The emphasis of the class will be studying the different laboratory techniques used in association with evidence found at a crime scene. Students will analyze the results obtained from these tests to try and identify a suspect in a case-study crime. The reliability of these techniques will be evaluated and their use in convicting or exonerating a suspect will be discussed throughout the course.

The course is a one-semester elective course aimed at students who have successfully completed Biology, Chemistry and/or Physics, and who are interested in science and/or criminal justice, but do not necessarily wish to take an advanced class. There will be a strong emphasis on the real-world applications of the practical skills practiced in class, and their relevance not just nationally but on a global level too. Local and federal law enforcement officers will be invited to come to class to share their experiences with forensic science, and there will be efforts made to arrange field trips to see forensic scientists in action in their respective laboratories.

Recommendation: The Science and Instructional departments would like to recommend the addition of a Forensic Science course at Dexter High School for the 2020/21 school year.

DEXTER COMMUNITY SCHOOLS
Application to request the adoption of a new course and/or resources

Date of application: September 27, 2019
Course Title: Forensic Science
Department: Science
Duration: 1 Semester
Prerequisite(s): Successful completion of: Biology, Chemistry and/or Physics, (concurrent enrollment in chemistry and/or physics accepted)
Applicant(s): Ruth Hamilton
Building Involved: Dexter High School
Targeted population: Students who are interested in real-world application of biochemistry.
Targeted year for implementation: 2020/2021

Describe your course request: The Forensic Science course will concentrate on how law enforcement uses biochemistry to solve crimes. The emphasis of this class will be studying the different laboratory techniques used in the forensic science, and where possible implementing these techniques in mock crime scenes staged in the lab. Students will analyze the the results from these tests to try and identify a suspect in a crime. Students will evaluate these techniques and their reliability to be used as evidence to convict a person of a crime. Students will also follow the history and development of these techniques and some of the cases in which they were first used.

Rationale: The Forensic Science course gives students the option to take a one semester long course that combines both the biological and chemical science in a practical setting. This course will be lab based and will allow students to investigate and apply scientific concepts in the real world. This course should be of interest to students who are considering a career in a variety of fields including law enforcement, criminal justice, and research science.

Connection to specific goals within the strategic framework/What are the "big ideas" or "core concepts" that will be covered in the course/resources?
One of the main ideas of this course is that students will be immersed in the world of forensic science; in its early evolution to the still developing cutting edge technologies being utilized in the field. Students will learn transferable skills that replicate professionals in the field and across the globe, and they will analyze the data obtained from these labs to problem solve a crime. Students will have the opportunity to use equipment that it usually reserved for advanced classes such as AP and IB, such as a PCR thermal cycler and electrophoresis. The course will be studied in distinct units that will constitute the core concepts:

Unit 1: Introduction to the Forensic Sciences
- History and Development of Forensic Science Deductive Reasoning
- Organization of a Crime Laboratory
  Services of the Crime Laboratory

- Functions of the Forensic Scientist Other Forensic Science Services

Unit 2: The Crime Scene
- Securing and Recording the Crime Scene
- Evidence Collection Techniques
- Crime Scene Photography & Photographic Forensic Archaeology and Buried Remains Recovery
- Mock Crime Scene: Combine Techniques to Process and Document a Crime Scene

Unit 3: Forensic Use of the Microscope
- The Compound Microscope
- The Comparison Microscope
- The Stereoscopic Microscope
- The Microspectrophotometer
- The Scanning Electron Microscope (SEM) Case Study: Microscopic Trace Evidence

Unit 4: Identifying Human Remains
- Identifying the Body: Human or Nonhuman? Skin Coloration
- Defensive Wounds and Other Visible Marks Postmortem Lividity
- Rigor Mortis Processes of Decay Bodies Underwater

Unit 5: Forensic Anthropology
- Introduction to Forensic Anthropology
- Human Bone vs. Animal Bone
- Skeletal Comparison of Human Males & Females Ancestry from Skeletal Remains
- Determining Types of Trauma from Skeletal Remains Forensic Odontology

Unit 6: Forensic Entomology
- Introduction to Forensic Entomology

Unit 7: Hair, Fiber and Botanical Remains
- Identification and Comparison of Hair
- Collection and Preservation of Hair Evidence
- Types of Fibers
- Identification and Comparison of Manufactured Fibers Collection and Preservation of Fiber Evidence Botanical Remains: Pollen, Seeds, and Other Remains

Unit 8: Organic Materials Analysis
- Selecting an Analytical Technique Chromatography Spectrophotometry
- Mass Spectrometry

Unit 9: Forensic Toxicology
- Toxicology of Alcohol
- The Role of the Toxicologist
- Techniques Used in Toxicology
  The Significance of Toxicological Findings
- The Drug Recognition Expert

Unit 10: Forensic Serology

- The Nature of Blood
- Immunoassay Techniques
- Forensic Characterization of Bloodstains Stain Patterns of Blood
- Principles of Heredity
- Forensic Characterization of Semen Collection of Rape Evidence

Unit 11: DNA
- PCR Technique
- Recombinant DNA: Cutting and Splicing DNA
- DNA Typing
- Mitochondrial DNA
- The Combined DNA Index System (CODIS)

Unit 12: Fingerprints
- Fundamental Principles of Fingerprints Classification of Fingerprints
- Automated Fingerprint Identification Systems Preservation of Developed Prints
- Digital Imaging for Fingerprint Enhancement

Connection to District Improvement Plan or School Improvement Plan(s):
The Forensic Science course offers students the opportunity to use techniques that scientists in the field are using as opposed to learning about these techniques in a vacuum. Students will work collaboratively and use their analytical and reasoning skills to 'solve crimes'. Students will be encouraged to think 'outside the box' and develop skills that will serve them well in any career path they venture down after they leave DHS.

How will technology be integrated into the course?
Technology will be utilized as closely as possible, and within the limitations of a high school setting, as it is used in the field by actual forensic scientists. Students will be collecting data through remote sensors, utilizing databases for research purposes, and creating detailed graphs and data tables using Excel. Students will also be using equipment such as photo-spectrometers, PCR thermal cyclers, and a variety of simulation software. The integration of technology will be determined by how the technology is used by professionals in the forensic science field.

How do the resources support various learning styles, multiple intelligences of the students, and differentiated instruction?
Due to the nature of the class, students will learn in collaborative lab groups, where each student will be an integral member of that team. Class discussions will be open-ended allowing students to thoroughly explore the concepts being discussed. The hands-on nature of the course will allow students with all learning styles to thrive, and will allow each student to be a team leader throughout the duration of the course. The diversity and the differentiation of instruction will allow all students the pathway to succeed.

By the end of the course, students will be able to:

- acquire the knowledge and understandings of a variety of techniques used in forensic science
- apply the knowledge, methodologies, and skills to learned throughout the course to analyze simulated crime scenes
- appreciate the history of the development of techniques used in the field of forensic science
- analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, to encourage critical thinking
- analyze, evaluate, make inferences, and predict trends from data
- communicate valid conclusions supported by the data through methods such as investigative reports, lab reports, labeled drawings, graphic organizers, journals, summaries, oral reports, and technology-based
- draw inferences based on data related to criminal investigation
- plan and implement descriptive, comparative, and experimental investigations, including asking questions, formulating testable hypotheses, and selecting equipment and technology
- collect and organize qualitative and quantitative data and make measurements with accuracy and precision using tools such as calculators, spreadsheet software, data-collecting probes, computers, standard laboratory glassware, microscopes, various prepared slides, stereoscopes, metric rulers, electronic balances, gel electrophoresis apparatuses, micropipettors, hand lenses, Celsius thermometers, hot plates, lab notebooks or journals, timing devices, cameras, petri dishes, lab incubators, dissection equipment, meter sticks, and models, diagrams, or samples of biological specimens or structures

How does the material support cultural diversity and gender equity?
Case studies will be chosen throughout the course to represent a variety of crime scenes from all over the world and from a diverse set of cultures.

How will career or "real world" experiences be integrated into the course and resources?
Every element of the course will be related back and referenced to the real-world experiences of the forensic scientist. Case studies will come from actual crimes. Local law enforcement will be invited to come and share their experiences and put the students' learning further into context. Field trips to working forensic labs will be researched with the potential to see these scientists in action, hopefully inspiring some students to want to pursue a career in this important field. Students will demonstrate professional standards such as meeting deadlines, working towards personal/team goals, and will use technology ethically; all of which are necessary skills for any career.

How does the material encourage critical thinking and problem solving?
With the continual use of real-life case studies, students will be continually using critical thinking and problem-solving skills to plan and implement descriptive, comparative, and experimental investigations to try and solve the crime at issue.

What summative and formative assessments will be used to measure student achievement?
A variety of both summative and formative assessments will be used including:

1. Demonstrate knowledge and understanding of relevant:
    - facts and concepts
    - methodologies and techniques
    - values and attitudes.

2. Apply this knowledge and understanding in the analysis of:
    - explanations, concepts and theories
    - data and models
    - case studies in unfamiliar contexts
    - arguments and value systems.

3. Evaluate, justify and synthesize, as appropriate:
    - explanations, theories and models
    - arguments and proposed solutions
    - methods of fieldwork and investigation
    - cultural viewpoints and value systems.

4. Engage with investigations of societal issues in the context of a crime at the local and global level through:
    - evaluating the political, economic and social contexts of issues
    - selecting and applying the appropriate research and practical skills necessary to carry out investigations
    - suggesting collaborative and innovative solutions that demonstrate awareness and respect for the cultural differences and value systems of others.

What teacher aids are provided?
None

Describe what other alternatives were considered and why were they are not being proposed:

Projected costs (explain each as needed, some items may not be applicable):

Additional personnel:	$0
Textbooks, materials, technology:	$0
Professional Development:	$0

Release time:	$0
Teacher stipends:	$0
Speaker/Consultant stipends:	$0
Registration fees:	$0
Travel expenses:	$0
Summer work:	$500
Other expenses (please explain below)	$0
GRAND TOTAL:	**$500**

Instructional Resource Review Process
Date of department/committee review/discussion:
Location of meeting: Department chair meeting, DHS October 9, 2019
Number of attendees: 10
Record of the meeting including comments & recommendations: Recommendation was made for the forensics course to offer a one semester elective within the science department. Prerequisites were revised as recommended by the review committee to allow more access to students.

Date of admin review/discussion: October 8, 2019
Location of meeting: Mill Creek
Number of attendees: 10
Record of the meeting including comments & recommendations: Admin are supportive. No revisions recommended.

Date of adjacent building review/discussion: This is not applicable because it will only be open to students who have completed both Biology and Chemistry or Physics, which are the 9th and 10th grade required Science classes.
Location of meeting:
Number of attendees:
Record of the meeting including comments & recommendations:

Date of community review/discussion: October 24
Location of meeting: DHS Media Center
Number of attendees: 56 parents attended
Record of the meeting including comments & recommendations: Parents were very enthusiastic about this course, with one saying that her daughter loves CSI and that she will certainly be excited to take the class. Most parents nodded in agreement, with one or two suggesting that they wish they could take it.

Date of Board of Education review/discussion: October 14, 2019 Discussion
Record of the meeting including comments & recommendations: Beau Kimmey was available to present the rationale for the class and answer questions for the Board.

Date of Board of Education action: November 11, 2019
Action taken:

Dexter Community Schools
Board of Education
Executive Summary and Recommendation

Purpose: The International Baccalaureatte Environmental Systems & Societies, IB ESS, provides a one year standard level IB course for students wishing to explore topics related to environmental systems and how they affect the societies in which we live. This course offers an entry level advanced course designed for all students at DHS in their junior and senior year of school.

Explanation: Through studying environmental systems and societies (IB ESS) students will be provided with a coherent perspective of the interrelationships between environmental systems and societies; one that enables them to adopt an informed personal response to the wide range of pressing environmental issues that they will inevitably come to face. The content delivered in IB ESS course places students as lead scientists exploring changes in our local and global environmental systems and their impacts on society. As lead scientists, each student plays an integral role in the understanding of the global and local impacts each event presents at an economic and societal level. Scientists present information in an unbiased way utilizing fact based outcomes to consider implications caused by current changes in our environmental systems.

Recommendation: The science department and the Dread Scholars recommend IB ESS for non-science majors looking to continue their education beyond Dexter High School. This course will service juniors and seniors beginning in the school year of 2020/2021.

DEXTER COMMUNITY SCHOOLS
Application to request the adoption of a new course and/or resources

Date of application: September 17, 2019
Course Title: IB Environmental Systems & Societies SL
Department: Science
Duration: 1 year
Prerequisite(s): Biology & Chem or Physics
Applicant(s): Kimmey
Building Involved: Dexter High School
Targeted population: Non science major students enrolled in the IB programme of study. This course may also service non diploma candidates that are interested in the impact on societies caused by environmental issues.
Targeted year for implementation: 2020/2021

Describe your course request: IB Environmental Systems & Societies concentrates on the impacts on humans and societies created by environmental changes. The emphasis on this class is the social, economical, and agricultural impacts caused by the world we live in. Students explore topics related to environmental systems and how humans rely on the stability of these systems. Through case studies students investigate local and global environmental issues and analyze the impacts these events cause.

Rationale: The IB Environmental Science course offers students the option to take a one year high level course. This course works to make direct connections between concepts students learn in school and events going on around them. This course also implements analytical skills where students work to investigate and apply scientific concepts into the real world.

Connection to specific goals within the strategic framework/What are the "big ideas" or "core concepts" that will be covered in the course/resources?

Practical work is an important aspect of the ESS course, whether in the laboratory, classroom, or out in the field. The syllabus not only directly requires the use of field techniques, but many components can only be covered effectively through this approach. Practical work in ESS is an opportunity for students to gain and develop skills and techniques beyond the requirements of the assessment model and should be fully integrated with the teaching of the course.

Topic 1—Foundations of environmental systems and societies

Topic 2—Ecosystems and ecology

Topic 3—Biodiversity and conservation

Topic 4—Water and aquatic food production systems and societies

Topic 5—Soil systems and terrestrial food production systems and societies

Topic 6—Atmospheric systems and societies

Topic 7—Climate change and energy production

Topic 8—Human systems and resource use

Connection to District Improvement Plan or School Improvement Plan(s):
The IB Environmental Systems and Societies course offers students enrolled in the IB Programme of study the option to complete a one year elective science course. This course will provide students with a collaborative environment to explore the concepts of being a scientist rather than learning about being a scientist.

How will technology be integrated into the course?
Technology will be utilized as a tool that scientists utilize. This could be for data collection through remote sensing, research utilizing databases, or the use of handheld devices for logging data and collecting field observations. The integration of technology into this course will be developed based on the applications utilized by professionals in the field. Emphasis on compilations of information and communication of information will be the emphasis of this class.

How do the resources support various learning styles, multiple intelligences of the students, and differentiated instruction?
The class will be administered through collaborative work where each student becomes an integral part of our research team. By keeping class discussions and assignments open ended each student is able to create their own path to our learning goals. By clearly defining each topic of study students learn to develop their own modes of learning to reach each goal. The diversity in our learning styles and personalities are utilized to emphasize the myriad of methods used to obtain information and apply in different unique ways. This concept represents a responsive classroom where students thoughts, ideas, and social emotional well being help to guide the entire class as students are the experts and share ideas with each other.

By the end of the course, students will be able to:

1. acquire the knowledge and understandings of environmental systems at a variety of scales
2. apply the knowledge, methodologies and skills to analyse environmental systems and issues at a variety of scales
3. appreciate the dynamic interconnectedness between environmental systems and societies
4. value the combination of personal, local and global perspectives in making informed decisions and taking responsible actions on environmental issues
5. be critically aware that resources are finite, and that these could be inequitably distributed and exploited, and that management of these inequities is the key to sustainability
6. develop awareness of the diversity of environmental value systems

7. develop critical awareness that environmental problems are caused and solved by decisions made by individuals and societies that are based on different areas of knowledge
8. engage with the controversies that surround a variety of environmental issues
9. create innovative solutions to environmental issues by engaging actively in local and global contexts.

How does the material support cultural diversity and gender equity?
Support materials are selected by the students. The emphasis of the course is for students to understand how to locate and select valid resources. These resources represents environmental impacts from all over the world that represents a very diverse range of cultures.

How will career or "real world" experiences be integrated into the course and resources?
ESS is an interdisciplinary group 3 and 4 course that is offered only at standard level (SL). As an interdisciplinary course, ESS is designed to combine the methodology, techniques and knowledge associated with group 4 (sciences) with those associated with group 3 (individuals and societies). Because it is an interdisciplinary course, students can study ESS and have it count as either a group 3 or a group 4 course, or as both. If students choose the latter option, this leaves the opportunity to study an additional subject from any other group, including an additional group 3 or group 4 subject.

ESS is a complex course, requiring a diverse set of skills from its students. It is firmly grounded in both a scientific exploration of environmental systems in their structure and function and in the exploration of cultural, economic, ethical, political, and social interactions of societies with the environment. As a result of studying this course, students will become equipped with the ability to recognize and evaluate the impact of our complex system of societies on the natural world. The interdisciplinary nature of the course requires a broad skill set from students and includes the ability to perform research and investigations and to participate in philosophical discussion. The course requires a systems approach to environmental understanding and problem-solving, and promotes holistic thinking about environmental issues. It is recognized that to understand the environmental issues of the 21st century and suggest suitable management solutions, both the human and environmental aspects must be understood. Students should be encouraged to develop solutions from a personal to a community and to a global scale.

How does the material encourage critical thinking and problem solving?

Through the exploration of cause and effect, the course investigates how values interact with choices and actions, resulting in a range of environmental impacts. Students develop an understanding that the connections between environmental systems and societies are diverse, varied and dynamic. The complexity of these interactions challenges those working towards understanding the actions required for effective guardianship of the planet and sustainable and equitable use of shared resources.

What summative and formative assessments will be used to measure student achievement?

1. Demonstrate knowledge and understanding of relevant:
    - facts and concepts
    - methodologies and techniques
    - values and attitudes.
2. Apply this knowledge and understanding in the analysis of:
    - explanations, concepts and theories
    - data and models
    - case studies in unfamiliar contexts
    - arguments and value systems.
3. Evaluate, justify and synthesize, as appropriate:
    - explanations, theories and models
    - arguments and proposed solutions
    - methods of fieldwork and investigation
    - cultural viewpoints and value systems.
4. Engage with investigations of environmental and societal issues at the local and global level through:
    - evaluating the political, economic and social contexts of issues
    - selecting and applying the appropriate research and practical skills necessary to carry out investigations
    - suggesting collaborative and innovative solutions that demonstrate awareness and respect for the cultural differences and value systems of others.

What teacher aids are provided?

Describe what other alternatives were considered and why were they are not being proposed:

Projected costs (explain each as needed, some items may not be applicable):

Additional personnel:	$0
Textbooks, materials, technology:	$0
Professional Development:	$0
Release time:	$0
Teacher stipends:	$0
Speaker/Consultant stipends:	$0
Registration fees:	$0
Travel expenses:	$0
Summer work:	$500
Other expenses (please explain below)	$0

GRAND TOTAL: **$500**

Instructional Resource Review Process
Date of department/committee review/discussion:
Location of meeting:
Number of attendees:
Record of the meeting including comments & recommendations:

Date of admin review/discussion: Sept. 17, 2019
Location of meeting: Main Office Conference
Number of attendees: Department Chairs
Record of the meeting including comments & recommendations: This was presented near the end of the meeting. This course has been discussed previously and represented a SL level IB course giving more students access to IB type of courses without the heavy caseload of an HL two year commitment.

Date of adjacent building review/discussion: Not necessary because it is a junior/senior course only. Pre-requisite courses at DHS
Location of meeting: Admin mtg @Mill Creek, October 8, 2019
Number of attendees: 10
Record of the meeting including comments & recommendations: Admin supportive. No revisions recommended.

Date of community review/discussion: October 24
Location of meeting: DHS Media Center 7 PM
Number of attendees: 56 parents attended
Record of the meeting including comments & recommendations: The parents were intrigued about the course and asked about the units of study (see above). They thought it would be a very good course for younger students (sophomores) to take, but I explained that students need to meet the state of Michigan requirements of Biology and Chemistry or Physics, before they took elective science classes. One parent seemed especially happy about her younger child not needing to take IB Biology for 2 years, take this instead and still be eligible for a full IB Diploma (the student favors Social Studies and English classes). Overall it was well received and at least 2 parents said they wish they could take the course.

Date of Board of Education review/discussion: October 14, 2019
Record of the meeting including comments & recommendations: Beau Kimmey presented on behalf of the DHS Science department. The Board of Education was in support of adding additional science elective opportunities to the DHS schedule.

Date of Board of Education action: November 11, 2019
Action taken:

Dexter Community Schools
Board of Education
Executive Summary and Recommendation

Purpose: Establish a year-long IB Global Politics SL/HL course

Explanation: The title of the course is IB Global Politics SL, with the potential to grow it into an HL course in the future. Our current semester long International Affairs class will be replaced by this year long course. The course will be another Group 3 course, which will expand our offerings at the SL level, as well as give students an option besides IB 20th Century World History, to meet the state of Michigan graduation requirements. This will allow for students to take their Government requirement during their sophomore year (instead of World History).

The course explores fundamental political concepts such as power, liberty and equality, in a range of contexts and at a variety of levels. It allows students to develop an understanding of the local, national, international and global dimensions of political activity, as well as allowing them the opportunity to explore political issues affecting their own lives.

The global politics course helps students to understand abstract political concepts by grounding them in real world examples and case studies.

Additionally, as Dexter Community Schools seeks to be a school focusing on mentoring students to become "Change Agents," in their broader world, what better way than for them to enroll in a course that encourages examination of how issues such as power, liberty, and equality are understood, measured, and evaluated across the global political spectrum. We have already had the teacher trained, so the only real expense will be the books for the class.

Recommendation: The Social Studies Department and the IB Diploma Programme would like to recommend the addition of the IB Global Politics SL course at Dexter High School for the 2020/21 school year.

DEXTER COMMUNITY SCHOOLS
Application to request the adoption of a new course and/or resources

Date of application: September 2019, Presentation to the Board of Education (October 14th, 2019)
Course Title: International Baccalaureate Global Politics SL/HL (I.B. Global Politics, Standard Level and/or High Level)
Department: Social Studies Department
Duration: Two Semester Course, Year ONE: 150 Teaching hours (SL-Standard Level), Year TWO: 240 Teaching hours (HL-High Level) Initial Plan is to offer the course as an "SL" course
Prerequisite(s): None
Applicant(s): Jaime Dudash, Social Studies Department Chair, Debora Marsh, DHS IB Coordinator
Building Involved: Dexter High School
Targeted population: Any 11th/12th Grade student enrolled at Dexter High School that is interested in the rigor and relevance of an International Baccalaureate Course
Targeted year for implementation: 2020-2021 School Year

Describe your course request:

This course hopes to expand and *replace* the existing social studies elective titled *International Affairs* which was offered as a one- semester social studies course. The IB themes of "People, Power, and Politics" encompass many of the existing units and approaches utilized in International Affairs, but also offer an opportunity for more students to explore an I.B. elective in the social studies area, or to select it as a part of their I.B. Diploma Programme track.

Rationale: Why is/are a new course or new resources necessary?

The most exciting part of this course is that it would grow our offerings in Group Three IB courses and allow Dexter Community Schools to offer one of the most globally minded courses in the International Baccalaureate course catalog.

<u>According to International Baccalaureate literature:</u> The IB Diploma Programme global politics is an exciting addition to group three. The course explores fundamental political concepts such as power, liberty and equality, in a range of contexts and at a variety of levels. It allows students to develop an understanding of the local, national, international and global dimensions of political activity, as well as allowing them the opportunity to explore political issues affecting their own lives.

Global politics is a dynamic and stimulating subject which draws on a variety of disciplines in the social sciences and humanities. The global politics course helps students to understand abstract political concepts by grounding them in real world examples and case studies. The course also invites comparison between such examples and case studies to ensure a transnational perspective. Developing international mindedness and an awareness of multiple perspectives is at the heart of this course. It encourages dialogue and debate, nurturing the capacity to interpret competing and contestable claims.

Additionally as Dexter Community Schools seeks to be a school focusing on mentoring students to become "Change Agents," in their broader world, what better way than for them to enroll in a course that encourages examination of how issues such as power, liberty, and equality are understood, measured, and evaluated across the global political spectrum.

Connection to specific goals within the strategic framework/What are the "big ideas" or "core concepts" that will be covered in the course/resources?

I.B. Program Course Overview, The big theme for the course is simply, "People, Power, and Politics." The "Big Idea" is for students to see the world as it works, both at the macro level politically, but then to see how at a micro level, students can become agents of change, that in their communities, their ideas have consequences. After the common core study of People, Power and Politics, students study in-depth the following themes:

• Power, sovereignty and international relations	• Development
• Human rights	• Peace and conflict

If the course were offered at the HL level, students would explore in far greater depth *TWO* of the following concepts in a more expansive approach:

• environment	• identity
• poverty	• borders
• health	• security

Our District Vision at Dexter Community Skills is to: Develop, Educate and Inspire. In the Opening Day Presentation from Superintendent Dr. Timmis on August 28, 2019, he focused upon the key question we have been asking ourselves as a community as a part of our Strategic Plan, "What are the most important skills, knowledge, and character traits Dexter Community Schools graduates need to be successful in their futures?" In attempting to unpack the profile of a DCS Learner, we have sought to emphasize not only life-long learning, but a type of learning that we hope will foster resilience, grit and an overall ability to have an ability to see the world as it is, and as it could be. Exploring the topic of IB Global Politics will allow students to study not just political issues as "we" may view them from a Dexter perspective, but to view them with a "global lens" and with empathy and understanding to make sense of how *differently* **and** *effectively* peoples' in other parts of the world may successfully conduct business from a vastly different cultural vantage point.

Connection to District Improvement Plan or School Improvement Plan(s):

The IB Global Politics course offers students enrolled in the IB Programme or taking the course as a student, the option to complete a one year elective social studies course. This course will give students an opportunity to study World History from a sociopolitical point of view, and meet their state of Michigan World History requirement.

How will technology be integrated into the course? According to the MTECS?

Technology will be utilized as a tool in the same way social scientists use it. This could be for data collection, research utilizing databases, or current event investigations. The integration of technology into this course will be developed based on the applications utilized by professionals in the field. Compilations of information and communication of information and what to do with the information when it is gathered, will be the emphasis of this class.

How do the resources support various learning styles, multiple intelligences of the students, and differentiated instruction?

The class will be administered through collaborative work where each student becomes an integral part of the collaborative team. By keeping class discussions and assignments open ended each student is able to create their own path to our learning goals. By clearly defining each topic of study students learn to develop their own modes of learning to reach each goal. The diversity in our learning styles and personalities are utilized to emphasize the myriad of methods used to obtain information and apply in different unique ways. This concept represents a responsive classroom where students' thoughts, ideas, and social emotional well being help to guide the entire class as students are the experts and share ideas with each other.

By the end of the course, students will be able to:

1. understand key political concepts and contemporary political issues in a range of contexts

2. develop an understanding of the local, national, international and global dimensions of political activity
3. understand, appreciate and critically engage with a variety of perspectives and approaches in global politics
4. appreciate the complex and interconnected nature of many political issues, and develop the capacity to interpret competing and contestable claims regarding those issues.

How does the material support cultural diversity and gender equity?

The very nature of the I.B. philosophy is the concept of international-mindedness and inclusivity. The I.B. Global Politics guide states, "Developing students' awareness of multiple partial perspectives and approaches--including their own-- is at the heart of the global politics course. Nurturing students' capacity to listen to themselves and to others in order to understand divergent opinions is important not only for interpreting competing and contestable claims, but also for appreciating that political beliefs and positions are contextual and deeply held by individuals (p. 9)."

How will career or "real world" experiences be integrated into the course and resources?

Students are required at both the SL and HL level to complete a culminating Engagement Activity. According to the IB Global Politics guide, " . . . .provides students with an opportunity to explore the central unifying theme of the course- people, power, and politics-- in practice inside and outside the classroom (p. 31). Students will be charged with learning about how a global issue can have local impacts and vice versa. An example for Dexter might be how if Clark-MXR a laser company that creates machines that need rare earth metals, "How have trade tariffs with China impacted their ability to acquire rare earth metals needed in their productions?" In this scenario a student may research the tariffs with China, as well as discuss with engineers/owners at Clark-MXR about how this is having a macro effect on their company and ability to remain sustainable during the current trading climate.. The final project is the completion of a 2000 word written report, which reflects their understanding of what they have learned in the engagement activity.

In an HL or (High Level IB) students explore two of six different global political challenges which include: Environment, Poverty, Health, Identity, Borders, or Security.

How does the material encourage critical thinking and problem solving?

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world. IB learners strive to be:

Inquirers--They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning.They actively enjoy learning and this love of learning will be sustained throughout their lives.

Knowledgeable--They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.

Thinkers--They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.

What summative and formative assessments will be used to measure student achievement?

The course will be externally moderated by trained IB evaluators. Additionally, there will be in class formative and summative assessments.

External assessment (3 hours)	**75%**
Paper 1 (1 h 15 min) Stimulus-based paper based on a topic from one of the four core units Four compulsory short-answer/structured questions (25 marks)	**30%**
Paper 2 (1 h 45 min) Students must write two essays from a choice of eight, each selected from a different core unit (50 marks)	**45%**
Internal assessment (20 hours) This component is internally assessed by the teacher and externally moderated by the IB at the end of the course. **Engagement activity** A written report (2,000-word maximum) on a political issue explored through engagement and research. (20 marks)	**25%**

What teacher aids are provided?

Staff will be a member of the IB trained staff that meet six times during the school year. Additionally, the IB SOM (International Baccalaureate Schools of Michigan) community is also a support. Teacher materials will be provided *before* the course is created to support curriculum development in addition to formal I.B. Training that has taken place October 5-7, 2019 in Category 2 for Global Politics. There also

exists the I.B. Resource center where materials on the topic and there is a sharing aspect, "take a penny, leave a penny" approach.

Describe what other alternatives were considered and why were they are not being proposed:

This course sounded like the "best fit" replacement for International Affairs and as the IB Coordinator (Deb Marsh) and IB Course instructor (Jaime Dudash) are proposing the course as an "accessible" Standard Level I.B. course. Our goal is to grow the IB footprint beyond just full diploma candidates, allowing all 11-12 grade students to consider taking an I.B. course.

Projected costs (explain each as needed, some items may not be applicable):

Additional personnel:	$0
Textbooks, materials, technology:	$2500
Professional Development:	$2500 every 5 years (this has been paid for the ability for the teacher to teach the class beginning in 2020-21)
Release time:	$0
Teacher stipends:	$0
Speaker/Consultant stipends:	$0
Registration fees:	$0
Travel expenses:	$0
Summer work:	$500
Other expenses (please explain below)	$0

GRAND TOTAL: **$3000.00 to start in 2020**

Instructional Resource Review Process

Date of department/committee review/discussion: 9/10/19

Location of meeting: DHS Media Center

Number of attendees: 9 (social studies department) 5, Jaime Dudash, Ryan Baese, Angela Chea, Erin Palmer, Tracy Stahl.

Record of the meeting including comments & recommendations:

Social Studies department likes the idea, was slightly worried about numbers in IB World History 20th Century, but a solution would be to rework the IA earlier in the first year so that students who want to take it as an SL can do so more easily. It would give us 3 Group 3 SL courses for students in non IB Business years and still have the 2 HL courses. The remainder of the Social Studies Department had after school coaching commitments, but I did receive email support from EVERY staff member in support of the course going forward.

Date of admin review/discussion: 9/17/19

Location of meeting: Main Office Conference Room

Number of attendees: Department Chairs and DHS Administrators

Record of the meeting including comments & recommendations:

Date of adjacent building review/discussion: Not applicable because it is a junior/senior course
Location of meeting: Admin Mtg @Mill Creek - October 8, 2019
Number of attendees: 10
Record of the meeting including comments & recommendations: Admin supportive. No revisions recommended.

Date of community review/discussion: Oct. 24
Location of meeting: DHS Media Center
Number of attendees: 56 parents attended
Record of the meeting including comments & recommendations: The parents liked the idea of the class and that it would be a yearlong international social studies class instead of just a one semester one like the one it is replacing. One parent asked about whether a student would be able to take the class as a two year course at the HL level. The answer is that we are going to start with the SL, one year course to begin and then see how the numbers look before offering it as a two year course. The parent was satisfied that at least the student could take it for one year. General nodding and approval, but no other questions or comments.

Date of Board of Education review/discussion: October 14, 2019
Record of the meeting including comments & recommendations: Jaime Dudash presented to the BOE who were supportive of the option to increase the elective offering in the area of social studies.

Date of Board of Education action: November 11, 2019
Action taken:

Dexter Community Schools
Board of Education
Executive Summary and Recommendation

Purpose: Establish a one-semester elective Multimedia Journalism course at Dexter High School.

Explanation: The title of the course is Multimedia Journalism. There is no denying that journalism is an integral part of society, and we currently off no course that allows students to dig deep into the world of journalism, specifically in the digital age. Multimedia Journalism is fundamental to students who are interested in pursuing various careers in the journalism field and will provide students with the tools needed in the 21st century. Even if students do not pursue a career in the journalism field, they will develop lifelong skills that include learning to interact with 21st century communicative media. Our current Newspaper Writing class would be replaced by this more dynamic and real-world alternative.

In the past five years, students in various English classes, Intro to Journalism, and Newspaper Writing classes were asked about their interest in taking a Multimedia Journalism course. A majority of student said they would possibly, likely, or most definitely be interested in the course.

The curriculum will be devised by the instructor as he collaborates with various teachers throughout the state who teach similar courses. The cost for the course would be approximately $500 for training and travel expenses.

Recommendation: The English and Instructional departments would like to recommend the addition of Multimedia Journalism course at Dexter High School for the 2020/21 school year.

DEXTER COMMUNITY SCHOOLS
Application to request the adoption of a new course and/or resources

Date of application: September 25, 2019
Course Title: Multimedia Journalism
Department: English
Duration: Semester
Prerequisite(s): Intro to Journalism, Photojournalism, or IB Film
Applicant(s): Chris Mackinder
Building Involved: Dexter High School
Targeted population: students interested in all kinds of ELA possible careers, students looking for an ELA elective
Targeted year for implementation: 2020-2021

Describe your course request: *Multimedia Journalism is designed for students who have taken either Intro to Journalism, Photojournalism or IB Film and would like to extend their knowledge of journalism concepts by further exploring different mediums like design, broadcasting, podcasting, photography, videography, and social media. It will also dive deeper into previously-introduced concepts such as investigative reporting and in-depth feature writing. Students will also explore other aspects of journalism such as opinion and editorial writing, sports reporting, photostories, and alternative story forms.*

Rationale: Why is/are a new course or new resources necessary?
Our current Newspaper Writing class would be replaced by this more dynamic and real-world alternative. Our students are bombarded by information on a daily basis, and learning to interact with 21st century communicative media is a necessary skill for everyone.

Connection to specific goals within the strategic framework/What are the "big ideas" or "core concepts" that will be covered in the course/resources?
Building on the themes and concepts from Introduction to Journalism, Photojournalism and/or IB Film, students will focus on these main ideas in the course:

Elements of Design
Effective Opinion/Editorial Writing
Advanced Broadcast/Podcast Journalism
Advanced Videography
Advanced Investigative Journalism
Advanced Feature Writing
Advanced Sports Writing
Alternative Story Forms
Social Media in the 21st Century

Connection to District Improvement Plan or School Improvement Plan(s): Given our district's emphasis on transfer skills and competencies, this class would give students the life-long skills necessary in writing, broadcasting, and filming for an audience. This class will encourage each student's individual strengths and allow students to work as a cohesive unit with a shared sense of purpose.

How will technology be integrated into the course?
Students will become familiar with various technologies in all aspects of reporting. For podcasting and videocasting, students will enhance skills using iMovie, Garage Band, Anchor, and other programs. Adobe InDesign, Photoshop, and Spark will be used for designing a publication and publishing for the web.

How do the resources support various learning styles, multiple intelligences of the students, and differentiated instruction?
Multimedia Journalism will have something for everyone. Students who have more of an inclination toward writing will be able to focus on writing for various platforms; students who are more into the digital side of journalism can focus on graphics and design; students who have social media strengths will be able to focus on developing a social media presence through photos and videos.

By the end of the course, students will be able to:

- Explain the roles and responsibilities of being a journalist and participating in a 21st century newsroom
- Analyze the elements of various types of articles and digital work that we will study in the course: news, opinion, feature, broadcast, podcasting, videography, social media, alternative story forms.
- Produce articles and digital work following journalistic elements and principles that we will study in this course: news, opinion, feature, broadcast, podcasting, videography, social media, alternative story forms.
- Create a portfolio that displays the variety of their work

How does the material support cultural diversity and gender equity?
All aspects of multimedia journalism highlight diverse audiences and stress working as a collaborative team, regardless of gender.

How will career or "real world" experiences be integrated into the course and resources?
Students will have deadlines and operate as a multimedia newsroom functions in the 21st century. Two field trips to Lansing to further explore the journalism field and meet professionals will help immerse students into the real world.

How does the material encourage critical thinking and problem solving?
In editorial/opinion writing, students are taught to look at all sides of an issue before developing a persuasive argument. When delving into social media, students are expected to think critically about what information, photographs, and interactions will garner the most likes on all platforms and how to cultivate a following. In creating a newsroom atmosphere, students will be given leadership roles and will learn how to work together and find a compromise in potentially tenuous situations.

What summative and formative assessments will be used to measure student achievement?
Students will create a variety of materials, both as they're learning and then as a "final" assessment. Students will write and edit various types of articles and other writing tasks, take and edit various types of photographs, record and edit various types of videos, and design and re-design various newsmagazine pages.

What teacher aids are provided?
Everything the students will create has already been created by the teacher and will be modeled. The teacher will create skill-based assessments which will be linked to our Learning, Literacy, and Life profile of a learner, our transfer skills, and competencies.

Describe what other alternatives were considered and why were they are not being proposed:
As noted above, the current Newspaper Writing course is limited in its scope and doesn't provide the skills necessary for the 21st century.

A broadcasting or podcasting class would also be nice, but the infrastructure in terms of equipment or an appropriate recording studio doesn't currently exist.

Projected costs (explain each as needed, some items may not be applicable):

Additional personnel:	$0
Textbooks, materials, technology:	$0
Professional Development:	$0
Release time:	$0
Teacher stipends:	$0
Speaker/Consultant stipends:	$0
Registration fees:	$0
Travel expenses:	$0
Summer work:	$500
Other expenses (please explain below)	$0
GRAND TOTAL:	**$500**

Instructional Resource Review Process
Date of department/committee review/discussion: October 15, 2019 (though it's been discussed many times before this official meeting)
Location of meeting: Room 112
Number of attendees: 12
Record of the meeting including comments & recommendations:

Date of admin review/discussion: Oct. 8, Department Chair
Location of meeting: Admin Meeting (Mill Creek), Dept Chair Meeting (DHS)
Number of attendees: 12, 15
Record of the meeting including comments & recommendations: Staff and admin are supportive. No revisions recommended.

Date of adjacent building review/discussion: None necessary as it will be for students who have completed the pre-requisites that are already here at the high school.
Location of meeting:
Number of attendees:
Record of the meeting including comments & recommendations:

Date of community review/discussion: October 24, 7 PM
Location of meeting: DHS Media Center
Number of attendees: 56 parents attended
Record of the meeting including comments & recommendations: The group was excited about this course since it reflects more of the actual journalistic writing and producing that goes on in the world today. One parent asked if we'd still have the Squall, and I assured them we'd still have both the paper and online versions, but that this class would offer a lot more outlets for student writing and reporting. There was a lot of nodding in appreciation and acceptance by the group.

Date of Board of Education review/discussion: October 14, 2019
Record of the meeting including comments & recommendations: Chris MacKinder presented on behalf of the DHS English Department. The Board of Education was supportive of providing another elective opportunity for students with updated standards and resources.

Date of Board of Education action: November 11, 2019
Action taken: