SPECIAL DARIEN BOARD OF EDUCATION

CURRICULUM COMMITTEE MEETING

MONDAY, NOVEMBER 4, 2024

VIRTUAL MEETING
8:00 A.M.

AGENDA

1. K-3 Literacy Update
2. Darien High School New Course Proposals
3. Public Comment
4. Adjournment

AA:cp

*** The Board of Education meeting will be available to the public via Zoom:** https://darienps.zoom.us/j/91319235751

Those members of the community wishing to view only, should do so through the Darien Youtube link: https://www.youtube.com/channel/UCUnnvyKBFbFrTWQRuoB6OZA

In order to reduce audio interference, members of the community are requested not to simultaneously view by Youtube while participating on Zoom.

New Course Proposal
Darien High School, Curriculum Council

Date: 10/28/24 **Department:** Science

Proposer: Shana McNamee

Course Title: Astronomy

Indicate Impacted Grade Levels (9,10,11,12): 11 and 12

Course Credit (.5, 1, other/explain): 0.5

Course Level (300, 400, 400 (AP), 750 –repeat for credit): 300

Graduation Requirement (Required/Elective): Elective

Graduation Category – may be multiple (Fine Arts, STEM, Humanities): STEM

Introduction: *Describe the course content and the enduring understandings desired as outcomes for students taking the course. Include what will be taught and what essential questions will be pursued by the students.*

The goal of the Astronomy course is to provide students with a comprehensive understanding of the universe and our place within it. The course will cover a variety of topics including the history of astronomy, the structure and composition of the solar system and stars, the nature of galaxies and the expanding universe, and emerging research and developments.

Throughout the course, students will be encouraged to ask questions and explore their own curiosity about the universe. The following are some essential questions that students may pursue:

1. How has our understanding of the universe changed over time?
2. What is the nature of light and how do we use it to study the universe?
3. How did the solar system form and how do the planets interact with one another?
4. What are the different types of stars and how do they evolve?
5. What is the origin and nature of galaxies?
6. What is the evidence for the Big Bang and what does it tell us about the early universe?
7. What is currently being done in the name of space exploration and research?

To achieve these learning outcomes, the course will include a variety of instructional strategies, such as lectures, discussions, demonstrations, and hands-on activities. Students may have the

opportunity to use telescopes and other astronomical equipment to observe celestial objects and phenomena. The course will also emphasize critical thinking and problem-solving skills, encouraging students to evaluate scientific evidence and formulate their own conclusions based on that evidence.

In addition to specific content knowledge, the course will also seek to develop enduring understandings about the nature of science, such as the importance of empirical evidence, the role of scientific theories in explaining natural phenomena, and the dynamic nature of scientific knowledge. Students will also gain an appreciation for the beauty and complexity of the universe and the importance of scientific literacy in our modern world.

Prerequisites: *Please list all prerequisites for the course, including courses, grade requirements, and co-course enrollment requirements (if any). Where does this course fall within your department's sequence? How does this course enhance/relate to the offerings within your discipline? Will this course replace an existing course?*

In order to take this course, students would need to successfully complete two (2) years of science previously at DHS. Additionally, if students wish to take half year science courses every semester of their 11th and 12th grade year, Astronomy would provide an opportunity to further explore both Earth and Space Science and Physical Science Standards.

Rationale/Enrollment: *What population of students would this course serve/why is there a need for this course/how does it relate to current offerings? Is this course offered at other high schools in our DRG? Be specific about how this course meets the needs and interests of DHS students. Identify projected enrollment – and how that figure is arrived at.*

This course would be open to all 11th and 12th grade students who wish to further their study of the sciences. It is typical that at the 11th and 12th grade level, students will have successfully completed two (2) years of science during their 9th and 10th grade years at DHS. After achieving this status, students have the opportunity to enroll in both full year and half year elective courses as they see fit. Students wishing to take the Astronomy class could enroll during any of their four remaining semesters while attending Darien High School.

Darien High School currently offers four half year elective courses open to 11th and 12th grade students, all of which are *life science* focused. With the addition of Astronomy to the course offerings, students will have an option to continue their studies of the *physical sciences*. Astronomy is a common High School Science elective course offered among DRG A high schools. Ridgefield High School, Joel Barlow High School in Redding, and New Canaan High School all offer elective Astronomy courses that are open to 11th and 12th grade students. Staples High School in Westport also offers a course called Stars, Galaxies and the Universe.

Curriculum Development 2025-26

There are several ways an astronomy class can be designed to meet the needs and interests of Darien High School students:

1. Hands-on Activities: Students enjoy learning by doing. Hands-on activities, such as using a telescope to observe stars or planets, building models of the solar system, or creating their own constellations, can help students develop a deeper understanding and appreciation of astronomy.

2. Interactive Multimedia: Darien High School students are technologically capable and respond well to interactive multimedia. Interactive simulations, videos, and animations can help students visualize astronomical concepts that are difficult to understand through textbooks and lectures.

3. Current Events: Astronomy is a dynamic field, with new discoveries and advancements happening all the time. Incorporating current events, such as recent astronomical discoveries, news stories, and debates in the field, can help students stay engaged and excited about the subject.

4. Real-world Applications: Demonstrating how astronomy is relevant to everyday life can help students appreciate its importance. For example, discussing how the study of astronomy has led to advancements in satellite technology, weather forecasting, and global positioning systems can help students see how astronomy has real-world applications.

5. Personalization: Allowing students to pursue their own interests within the field of astronomy can help keep them engaged. Giving students the opportunity to choose topics for research projects, or to explore specific areas of interest within astronomy, can help students take ownership of their learning and become more invested in the subject.

By incorporating these strategies, an astronomy class can be designed to meet the needs and interests of Darien High School students, while also providing a solid foundation for further study in the field.

This proposed course is designed for students who are looking for an additional opportunity for a possible elective STEM offering. We would expect there to be potentially 2 sections of this class per year, 1 section to run during Semester 1 and 1 section to run in Semester 2. In addition, it would serve as a course that would provide opportunities for students to work towards meeting some of the Next Generation Science Standards (NGSS) in Physical Science and Earth and Space Science that will be assessed on the NGSS State Assessment at the end of a student's junior year.

Course Outline: *Please provide a bulleted overview of content topics to be explored during each quarter.*

Quarter One

- Our Place in Space
  - o The observations that can and have been made from Earth
  - o The Formation and Orbital Motions of our Solar System
  - o The Moon
  - o Measuring Astronomical Distance

- Radiation and Spectroscopy – Information from the Cosmos
  - o The Electromagnetic Spectrum
  - o Thermal Radiation
  - o The Doppler Effect
  - o Spectral Lines and their Formation
  - o Spectral-Line Analysis

- Stellar Observations and Data
  - o Our Star, the Sun
  - o Luminosity and Apparent Magnitude
  - o Stellar Temperatures
  - o Stellar Sizes
  - o The Hertzsprung-Russell Diagram
  - o Stellar Properties

Quarter Two

- Star Formation and Evolution
  - o Star-forming Regions
  - o The formation of all Stars, with a focus on the Sun
  - o Evolution of Stars, with a focus on a Sun-like Star
  - o Life after Death of a Star
  - o The Formation of Elements

- Galaxies
  - o Types of galaxies
  - o Formation and evolution of galaxies.
  - o Dark matter and Supermassive black holes
  - o Galactic collisions
  - o Cosmic voids

- Astronomy Research Project

Students will be given the opportunity to demonstrate their learning of the course content by participating in a final research project. The astronomy research project is designed to encourage

students to explore a topic of their choice. The research project should demonstrate an in-depth understanding of the chosen topic, showcase the student's ability to analyze and synthesize complex scientific information and highlight the student's skill in a variety of modes of presentation.

Some potential topics for the final project include:

- The formation and evolution of galaxies
- The search for extraterrestrial life
- The physics of black holes
- The properties and behavior of dark matter
- The study of exoplanets and their potential habitability
- The history and future of space exploration
- The impact of space weather on Earth's environment
- The development and application of new telescopes and instruments for astronomical observation.

Overall, the Astronomy research project provides students with an opportunity to delve more deeply into a topic of interest within the field of astronomy and develop critical thinking and communication skills essential for future scientific research and careers.

Assessment: *Please list the ways in which students will demonstrate their understanding. (National standardized tests, teacher tests, formative and/or summative mastery. performance based tasks, portfolios, journals, oral defenses, modeling, etc.) What role will the student play in the evaluation process? How will the student learn from this evaluation?*

Students will complete the following types of assignments to demonstrate their understanding.

- Observational assignments: Students will use telescopes or binoculars to observe celestial objects such as planets, stars, and galaxies. They will record their observations in a journal, sketch the objects they see, and describe their observations in detail.

- Writing assignments: Students will demonstrate their understanding of astronomy by writing essays, research papers, and lab reports. They will use scientific terminology and explain concepts such as the electromagnetic spectrum, the Big Bang theory, and the properties of planets.

- Quizzes and tests: Teachers will assess students' understanding of astronomy through traditional quizzes and tests. These assessments may include multiple-choice questions, short-answer questions, and longer essay questions.

- Interactive activities: Students will participate in interactive activities that allow them to explore astronomy concepts in a hands-on way. This will involve simulations, virtual labs, and online activities that help students visualize complex concepts.

- Group projects: Students will work in groups to complete a project that involves collaboration and problem-solving. For example, they may design a mission to explore a planet or a moon, or develop a plan to address a specific challenge related to space exploration.

- An astronomy research project: Students will conduct independent research on a particular topic in astronomy, such as the formation of the solar system, the life cycle of stars, or the search for extraterrestrial life.

Vision of the Graduate: *How does this course specifically reflect the DPS Vision of the Graduate competencies?*

This Astronomy class will reflect the competencies of the Vision of the Graduate in the following ways:

- Independence: Astronomy involves the study of complex phenomena and requires students to think critically about observations, data, and theories. By taking an astronomy class, students can develop critical thinking skills that will serve them well in a variety of fields.

- Curiosity: Astronomy is a branch of science that requires wonder beyond the limits of our own planet. Students will be asked to expand their thinking and imagination and will have a better understanding of how science works and how scientific discoveries are made. This knowledge is useful for making informed decisions and engaging in scientific discourse.

- Empathy: Astronomy is a global endeavor, with scientists and telescopes located all over the world. Studying astronomy can help students develop an appreciation for different cultures and ways of thinking and can help foster a sense of global citizenship.

- Integrity: Astronomy relies heavily on technology, including telescopes, cameras,and computer simulations, incorporating the data as it is collected. By studying astronomy, students can develop technological literacy and data integrity and learn about the latest tools and techniques used in scientific research.

- Creativity: Astronomy is a field that requires creativity, as scientists must come up with new ideas and approaches to study the universe. By taking an astronomy class, students can develop their creative thinking skills and learn to think outside the box.

- Communication: Students frequently work in groups for lab investigations or data analysis, where they must share observations, debate hypotheses, and collaborate on findings. This fosters active listening and the ability to constructively critique others' ideas, as well as defending one's own ideas with evidence.

Department Discussion: *Before submitting this proposal to the Curriculum Council, all teachers and the Department Chair/Department Coordinator in your department must review this proposal. Departmental approval is required before submitting this proposal to the Curriculum Council. Please provide a* ***detailed summary of the department discussion*** *about this course, including the pros, cons, and concerns brought up by department members. Indicate the number of teachers interested in teaching this course.*

As a department, we identified a need for additional physical/earth and space science electives for our students. Currently, our 11th and 12th grade elective offerings are primarily focused on

life science. Astronomy was one of the electives that had broad support from the department, met the needs of students in terms of interest and access, and had a teacher who was excited about leading the proposal.

We have had a number of follow up meetings as a department in which feedback from the department was gathered and integrated into the proposal. In addition, conversations at the department level have already started to shape the development of curriculum for this course, should it be approved.

Course Catalog Information: *Please review Descriptions, Objectives, and Expectations of other courses in your department to ensure a clear and unique description of the course. Responses will be listed in the course catalog.*

Description: *In 2-5 sentences describe the course. How will the curriculum units tie together (thematic, topical, sequential, inquiry, emerging)? How will the course build upon prior knowledge, interests, and provide meaning to the students?*

Students enrolled in the Astronomy course will leave with a comprehensive understanding of the universe and our place within it. Students will experience a variety of topics including the history of astronomy, the structure and composition of the solar system and stars, the nature of galaxies and the expanding universe, and emerging research and developments.

Objectives: *In 3 to 5 bullets answer the following: What are the learning objectives for this course? How will these goals support and / or reflect the rationale?*

Students will be able to answer the following guiding questions at the conclusion of the course

1. How has our understanding of the universe changed over time?
2. What is the nature of light and how do we use it to study the universe?
3. How did the solar system form and how do the planets interact with one another?
4. What are the different types of stars and how do they evolve?
5. What is the origin and nature of galaxies?
6. What is the evidence for the Big Bang and what does it tell us about the early universe?
7. What is currently being done in the name of space exploration and research?

Expectations: *What will students be expected to do in order to successfully complete this course (read, write, create, visualize, synthesize, sing, perform)?*

Students will be required to complete homework assignments and participate in laboratory sessions. They will be expected to cooperate as group members, use equipment properly, and submit lab reports. Students will also be responsible for submitting a research project.

Curriculum Development 2025-26

Budgetary Implications: To be completed by Department Chair /Department Coordinator

Item	Description	Quantity Cost	Total
Student Textbooks	Digital Access to Selected Text	25 Text: Hardcopy and 6yr License bundle: $180 per bundle	$4500
Student Workbooks			
Teacher Edition			
Materials	Initial Supplies: Includes star charts and planispheres, globes, moon phase, solar system and celestial sphere models. Also require astrolabes, sextants, prisms, light filters and kits that demonstrate gravitational forces, motion and other astronomical phenomena.		$1500
Curriculum Work	Curriculum Development on 25/26 Fiscal year budget	30 hours at $51/hr.	$1530
Furniture			
Professional Development (training)			
Staffing: FTE			
Other			
Total			$7530

Curriculum Development 2025-26

New Course Proposal
Darien High School, Curriculum Council

Date: 9/12/24 **Department:** World Languages

Proposer: Scott Webster

Course Title: American Sign Language 3

Indicate Impacted Grade Levels (9,10,11,12): 11, 12

Course Credit (.5, 1, other/explain): 1 credit

Course Level (300, 400, 400 (AP), 750 –repeat for credit): 300

Graduation Requirement (Required/Elective): Required

Graduation Category – may be multiple (Fine Arts, STEM, Humanities): Humanities

Introduction: Describe the course content and the enduring understandings desired as outcomes for students taking the course. Include what will be taught and what essential questions will be pursued by the students.

This proposal aims to introduce American Sign Language (ASL) 3 to the World Languages curriculum at Darien High School for the 2025-2026 academic year. ASL offers students a unique learning experience, distinct from more traditional world language courses, while fostering a deeper connection to the culture and language of an underrepresented community in both Connecticut and the broader United States. By offering a level 3 course, students will have the opportunity to further advance their skills and continue their ASL studies beyond the initial two years.

Prerequisites: Please list all prerequisites for the course, including courses, grade requirements, and co-course enrollment requirements (if any). Where does this course fall within your department's sequence? How does this course enhance/relate to the offerings within your discipline? Will this course replace an existing course?

The prerequisite is American Sign Language 2.

Rationale/Enrollment: What population of students would this course serve/why is there a need for this course/how does it relate to current offerings? Is this course offered at other high schools in our DRG? Be specific about how this course meets the needs and interests of DHS students. Identify projected enrollment – and how that figure is arrived at.

This course would serve students who are currently studying American Sign Language 2 and will not replace another course we currently offer. This language is offered at other high schools in our DRG such as Wilton, Westport and Fairfield. The objective of ASL 3 is to guide students toward achieving an intermediate level of communicative competence. The more traditional language classes offered at DHS, Spanish, Mandarin, Latin, and French may not meet the needs of those students who have not historically taken world language classes. Since the state now requires at least one year of language study, ASL offers a unique alternative and opportunity for our students.

Course Outline: Please provide a bulleted overview of content topics to be explored during each quarter.

ASL 3 will use the *Signing Naturally* Units 11-14 program from DawnSignPress as follows:

Unit/Topics	Students will:	Students will be able to:
Unit 11: Discussing Plans and Goals **Plan an accessible trip in the US** **Create a checklist** **Fingerspelling patterns** **Create and share bucket list** **Comprehend and retell stories** **ASL students in the Community** **Martha's Vineyard**	• **Learn vocabulary related to: travel, transportation, directions, physical environment, weather, geography, climate, places around time and activities** • **Create vacation a checklist** • **Create a travel brochure/video** • **Learn about accessibility related to travel** • **Learn grammar: FS patterns, conditional clauses, relative clauses** • **Do partner and group work** • **Learn the pledge** • **Create a bucket list** • **Practice comprehension of stories and Deaf News** • **Retell a story** • **Learn Deaf Culture: ASL student in the community, Martha's Vineyard**	• **Plan and present a trip to a place in the US** • **Produce correct form and movement for all 50 states** • **Increase fluency in producing numbers 0-100** • **Follow a sequence to describe personal goals in a bucket list** • **Use appropriate signs to translate English sentences with multiple meanings of "out"** • **Correctly translate English sentences with spatial verbs to show agreement with established places** • **Sign information about MV** • **Re-tell a story "Brother on the Roof" and "Busted"**

Unit/Topics	Students will:	Students will be able to:
Unit 12: Health and Wellness Emergency Signs Describing the Human Body Explain a body process in ASL Symptoms/Diagnosis/Remedy Mental Health Awareness Deaf Culture: ADA Law Deaf Profile: Claudia Gordon	• Describe body parts using noun-shape, behavior, function • Sign phrases for emergency situations • Describe body types using classifiers • Explain a process in the body • Determine a diagnosis and treatment based off of symptoms • Write a letter to a school/business explaining ADA Law and provide helpful resources and suggestions • Practice comprehension: One Fine Day • Retell a story and change the details of a story • Learn about ADA Laws • Analyze the accessibility of DHS	• Describe the structure and function of a body part using appropriate classifiers and NMM • Sign at least 10 phrases that can be used in an emergency situation • Integrate head nod and raised eyebrows when stating a condition • Produce correct form and movements for fingerspelling • Explain causes, types, complications, symptoms • diagnosis and treatment for a common disease • Use correct word order when translating from English to ASL • Identify situations where ADA Law applies • Summarize the details of a story

Unit/Topics	Students will:	Students will be able to:
Unit 13: Technology and Media Social Media Slang terms Deaf Organizations Deaf-Blind Deaf Profile:	• Learn vocabulary related to technology and social media • Analyze and discuss a Ted Talk on how technology has influenced ASL • Learn about the history of ADA law and closed captioning • Research and describe major Deaf/HH	• Analyze current technology for pros/cons for Deaf/HH • Create a technology that would be useful to the Deaf Community • Create a video “pen pal” with s Deaf student from another school

	organizations currently in existence • **Learn about the causes of deaf-blindness and support services available**	

Unit/Topics	Students will:	Students will be able to:
Unit 14: ASL Literature **ASL Poetry** **Book Discussion: The Silence Between Us** **ABC Stories** **Jokes and Humorous Stories** **Deaf Profile: Famous Deaf Poets**	• **Learn elements of ASL poetry** • **Analyze and compare two ASL poems** • **Retell a poem in ASL** • **Create an original ABC story** • **Learn more Wh-word questions (happen)** • **Show comprehension of an ASL joke and short story**	• **Using the target language, lead a small group discussion of chapters in a book** • **Using the target language, participate in small group discussion** • **Independently research and choose appropriate translations of English to ASL** • **Perform an ABC story** • **Perform an original story or poem in ASL using all important elements** • **Incorporate multiple types of classifiers and at least 5 NMM into an original story or poem** • **Show use of storytelling techniques such as role shift and ways to engage an audience**

Assessment: Please list the ways in which students will demonstrate their understanding. (National standardized tests, teacher tests, formative and/or summative mastery. performance based tasks, portfolios, journals, oral defenses, modeling, etc.) What role will the student play in the evaluation process? How will the student learn from this evaluation?

Similar to the other language courses offered at Darien High School, ASL is taught using a variety of resources to expand students' communication skills in the target language. Students will also use the digital language labs to enhance language study through multimedia tools. These learning environments will be helpful in advancing students' understanding and

competency in the language. In addition to a textbook, students also benefit from other 21st century supplemental materials such as videos and blog discussions. It incorporates authentic written and visual texts from a variety of sources, including current events that affect the Deaf community, and the presence of Deaf and Hard of Hearing initiatives in the Hearing world.

Students will also show their learning through a series of Integrated Performance Assessments (IPAs) to assess the four skills (speaking, reading, writing, and listening) in the four modes (interpersonal, presentational, and interpretive), as well as formative and summative mastery assessments. Students will participate in their own evaluation throughout the course by evaluating their work against models, by participating in in-class activities where they evaluate the work of others using a set of criteria, by self-evaluation on rubrics, and by watching playbacks of their signing as compared to models. This feedback will build upon students' novice language skills as they work towards more advanced proficiency in later years.

As the program grows, students in subsequent levels of this course will take the American Sign Language Proficiency Interview (ASLPI), a proficiency assessment sponsored by Gallaudet University and recognized by the Seal of Biliteracy Committee at the State of Connecticut Department of Education. This assessment will qualify students for the Seal of Biliteracy.

Vision of the Graduate: How does this course specifically reflect the DPS Vision of the Graduate competencies?

ASL 3 embodies most, if not all, of the DPS VOG Competencies. It is a new form of communication for students that are beginning their journey with the language that will ultimately allow them to communicate with a new group of people in a new way. Students will grow in their ability to be empathetic towards members of the Deaf community while being immersed in Deaf culture and traditions, with the ultimate goal of being able to communicate in ASL. There is also a growing need for professional ASL interpreters, teachers, and other careers that serve or are a part of the Deaf and Hard of Hearing Community such as SLPs, social workers, and audiologists, among others. As with all world languages, students that become proficient in ASL will be equipped with a life skill that they can take with them beyond their time at DHS.

Department Discussion: Before submitting this proposal to the Curriculum Council, all teachers and the Department Chair/Department Coordinator in your department must review this proposal. Departmental approval is required before submitting this proposal to the Curriculum Council. Please provide a **detailed summary of the department discussion** about this course, including the pros, cons, and concerns brought up by department members. Indicate the number of teachers interested in teaching this course.

The proposal of the ASL course of study was discussed with the department at our department meeting on Monday, October 17, 2022. To show support for this initiative at the District level, Ms. Shirley Klein, Assistant Superintendent for Special Education, was also in attendance. The proposal received the support of members of the department.

Course Catalog Information: *Please review Descriptions, Objectives, and Expectations of other courses in your department to ensure a clear and unique description of the course. Responses will be listed in the course catalog.*

Description: In 2-5 sentences describe the course. How will the curriculum units tie together (thematic, topical, sequential, inquiry, emerging)? How will the course build upon prior knowledge, interests, and provide meaning to the students?

The American Sign Language 3 course is a year-long program that utilizes *Signing Naturally Level 2* from DawnSignPress, a leading resource in ASL culture, history, and literature. This course builds upon the receptive and expressive skills developed in ASL Levels 1 and 2, introducing more advanced vocabulary and conversational dialogues. Students will also explore literature related to the Deaf community and learn about careers that use ASL. To achieve these objectives, students engage in various activities designed to enhance their signing abilities while deepening their understanding of ASL history and culture. The curriculum interweaves language, content, and culture through a series of lessons and activities that promote ASL usage in diverse, real-life contexts. The course is conducted entirely in ASL, and students are expected to communicate with the teacher and each other in the target language as much as possible, simulating a total immersion experience.

Objectives: In 3 to 5 bullets answer the following: What are the learning objectives for this course? How will these goals support and / or reflect the rationale?

- The objective of ASL is to guide ASL students toward an intermediate level of communicative competence.
- These expectations are in accordance with the five goal areas (the “Five C’s”) of the Standards for Foreign Language Learning for the 21st Century: Communication, Cultures, Connections, Comparisons, and Communities.
- There will be a focus on current events within the context of the ASL community.

Expectations: What will students be expected to do in order to successfully complete this course (read, write, create, visualize, synthesize, sing, perform)?

Students who successfully complete this course will be more proficient in the five ‘C’s of language competency. For Communication, students will focus on interpersonal communication (the active negotiation of meaning among individuals). For Cultures, Connections, Comparisons, and Communities, students gain knowledge and understand the relationships between products, practices, and perspectives of the cultures studied in literary texts and through other media.

Budgetary Implications: To be completed by Department Chair /Department Coordinator

Item	Description	Quantity	Cost	Total
Student Textbooks	*Signing Naturally Level 2 student set*, Cheri Smith, Ella Mae Lentz, Ken Mikos, DawnSignPress, 1993	15	$69.95	1,049.25
Student Workbooks	n/a			
Teacher Edition	*Signing Naturally Level 2 student set*, Cheri Smith, Ella Mae Lentz, Ken Mikos, DawnSignPress, 1993 (Teacher Edition)	1	$89.95	$89.95
Materials	n/a			
Curriculum Work	60 hours		$51/hr	$3,060
Furniture	n/a			
Professional Development (training)	n/a			
Staffing: FTE				
Other				
Total				$4199.20

New Course Proposal
Darien High School, Curriculum Council

Date: 4/10/24 **Department:** Tech Ed/Computer Science

Proposer: Ashley O'Connor, Greg Darin, Lorraine Westervelt

Course Title: Cybersecurity

Indicate Impacted Grade Levels (9,10,11,12): 10, 11, 12

Course Credit (.5, 1, other/explain): .5 credit

Course Level (300, 400, 400 (AP), 750 –repeat for credit): 300

Graduation Requirement (Required/Elective): Elective

Graduation Category – may be multiple (Fine Arts, STEM, Humanities): STEM

Introduction: Describe the course content and the enduring understandings desired as outcomes for students taking the course. Include what will be taught and what essential questions will be pursued by the students.

*The **Course Content** will include:*

- *Securing Accounts*
- *Securing Data*
- *Securing Systems*
- *Securing Software*
- *Preserving Privacy*

***Enduring Understanding:** Cybersecurity is an ongoing practice of protecting computer systems, networks, and sensitive information from unauthorized access that can compromise confidentiality, integrity, and availability.*

***Desired Outcomes:** Students will be able to conduct a cybersecurity risk assessment, measure the performance of cybersecurity systems and troubleshoot problems with cybersecurity systems. Students will be able to use cybersecurity, information assurance, and cyber/computer forensics software/tools.*

Essential Questions:

1. *What is cybersecurity, and why is it important in today's digital world?*
2. *What are the risks of sharing personal information online?*
3. *How can I protect my computer from malware and viruses?*
4. *How can I identify vulnerabilities in software code?*
5. *What are the ethical implications of data collection and use?*
6. *How do we create ways to protect ourselves and others from cyber attacks?*

Prerequisites: Please list all prerequisites for the course, including courses, grade requirements, and co-course enrollment requirements (if any). Where does this course fall within your department's sequence? How does this course enhance/relate to the offerings within your discipline? Will this course replace an existing course?

Prerequisite:
Completion of Algebra I

Where does this course fall within your department's sequence?
This course would fall under the computer science pathway in the department and it is recommended to be taken during the sophomore year for students concentrating their studies in computer science.

How does this course enhance/relate to the offerings within your discipline?
This course ties in nicely with our current offerings and complements units and topics in our AP Computer Science Principles course. Since it is a half year course, it can easily be taken during the same year as Computer Science or Web and App Development.

Will this course replace an existing course?
Over the past few years, numbers in our Computer Animation course have dropped. It is suggested that we remove this course from our offerings and replace it with Cybersecurity.

Rationale/Enrollment: What population of students would this course serve/why is there a need for this course/how does it relate to current offerings? Is this course offered at other high schools in our DRG? Be specific about how this course meets the needs and interests of DHS students. Identify projected enrollment.

Cybersecurity is in high demand worldwide as cyber attacks are increasing in all venues from government, private business, and even on personal levels. This course will teach basic concepts to aid in student awareness as well as prepare students who plan on continuing in the computer science pathway or choose Cybersecurity as a post secondary option for study. In addition, enrollment in our Computer Science courses have shown continuous growth (+127 students in the past 5 years) with students continually seeking additional opportunities once they've exhausted the available options. This course would help to complement our computer science pathway.

This Cybersecurity course would be offered by the Tech Ed and Business Department. Based on a recent survey of over 200 students, nearly 40 students said that they would sign up for a semester course called Cybersecurity. The first year's projected enrollment is 1 course at 24 total students.

This is a cutting edge course rapidly being added to school offerings. Some of the schools in CT that currently offer a Cybersecurity course include; Griswold High School, Wilton High School, Norwalk High School, and Danbury High School. There are leading edge programs such as CS50 rolling out curriculum.

Our course is based off of Harvard's CS50 Cybersecurity course, but incorporates hands-on activities and projects for each unit.
https://cs50.harvard.edu/cybersecurity/2023/

Course Outline: Please provide a bulleted overview of content topics to be explored.

Unit 1: Securing Accounts

- *Week 1: Account Security Fundamentals*
  - *Discuss the importance of strong passwords and multi-factor authentication*
  - *Explain the risks of phishing and social engineering attacks*
- *Week 2: Password Management*
  - *Introduce password managers and their benefits*
  - ***Activity**: Creating and managing secure passwords using a password generator. Coding a password generator using python.*

Unit 2: Securing Data

- *Week 3: Data Privacy Concepts*
  - *Define data privacy and its importance*
  - *Discuss data breaches and their consequences*
- *Week 4: Data Encryption*
  - *Explain encryption algorithms and their applications*
  - ***Activity**: Implement a simple Caesar Cipher using Python*

Unit 3: Securing Systems

- *Week 5: Network Security*
  - *Review network security concepts (e.g., firewalls, intrusion detection systems)*
  - *Activity: Configure a basic firewall using a virtual machine*
- *Week 6: System Hardening*
  - *Discuss system hardening techniques (e.g., patching, configuration management)*
  - ***Activity**: Implement a basic network scanner using Python*

Unit 4: Securing Software

- *Week 7: Software Vulnerabilities*
    - *Identify common software vulnerabilities (e.g., buffer overflows, SQL injection)*
    - *Activity: Analyze code for vulnerabilities and implement fixes*
- *Week 8: Secure Coding Practices*
    - *Introduce secure coding principles (e.g., input validation, output encoding)*
    - ***Activity**: Develop a secure web application and identify potential security risks*

Unit 5: Preserving Privacy

- *Week 9: Privacy Laws and Regulations*
    - *Discuss data protection laws (e.g., GDPR, CCPA)*
    - *Activity: Research and analyze a data privacy law*
- *Week 10: Privacy Best Practices*
    - *Explain privacy-preserving technologies (e.g., anonymization, differential privacy)*
    - ***Activity**: Privacy Footprint Analysis*

Assessment: Please list the ways in which students will demonstrate their understanding. (National standardized tests, teacher tests, formative and/or summative mastery. performance based tasks, portfolios, journals, oral defenses, modeling, etc.) What role will the student play in the evaluation process? How will the student learn from this evaluation?

- *Completion of hands-on exercises*
- *Interactive presentation and discussions*
- *Problem solving tasks/activities: i.e. Caesar Cipher*
- *Analysis of secure online environments*

Vision of the Graduate: How does this course specifically reflect the DPS Vision of the Graduate competencies?

Communication

- *Presentations demonstrating their learning, understanding and application of concepts*
- *Effectively communicating the design of their secure systems to all*

Creativity

- *Creating systems in unique ways that protect user privacy and confidentiality.*

Empathy

- *Exploring social engineering: how it works and what to do to protect themselves and others*

Independence

- *Problem solving and completing tasks individually and collaboratively thorough explorative learning*

Integrity

- *Privacy and ethics will be a focus of this course. Access to one's data can pose ethical dilemmas*

Interdisciplinary Opportunities: When applicable, please provide specific examples of how this course might be integrated with other courses. Please make sure that you contact the departments/course teachers(s) listed to confirm co-curricular connections. If possible, specify the co-curricular connections.

The students will use and apply skills learned in math, science, social studies and computer science throughout this course.

- *Science: investigation, data collection, data analysis, hypothesis creation.*
- *Math: logical and formula based algebraic skills.*
- *Humanities: social engineering and ethics.*

Department Discussion: Before submitting this proposal to the Curriculum Council, all teachers and the Department Chair/Department Coordinator in your department must review this proposal. Departmental approval is required before submitting this proposal to the Curriculum Council. Please provide a **detailed summary of the department discussion** about this course, including the pros, cons, and concerns brought up by department members. Indicate the number of teachers interested in teaching this course.

Our department discussed the growing need for students to have an understanding of cybersecurity citing the district's implementation of cybersecurity education for all teachers. All are in agreement and believe this should be something provided for students in this ever changing digital world.

Course Catalog Information: *Please review Descriptions, Objectives, and Expectations of other courses in your department to ensure a clear and unique description of the course. Responses will be listed in the course catalog.*

Description: In 2-5 sentences describe the course. How will the curriculum units tie together (thematic, topical, sequential, inquiry, emerging)? How will the course build upon prior knowledge, interests, and provide meaning to the students?

Cybersecurity is an introductory course that provides students with a comprehensive understanding of the fundamental concepts, principles, and practices related to cybersecurity. In an increasingly interconnected world, where technology plays a vital role in our daily lives, this course aims to develop student's knowledge and skills to navigate and safeguard against cyber threats effectively. Cybersecurity is a learner-centered, hands-on, course designed for10th-12th grade STEM high school students. The program activities include lectures, games, labs, and design development projects.

Objectives: In 3 to 5 bullets answer the following: What are the learning objectives for this course? How will these goals support and / or reflect the rationale?

1. To introduce students to the field of cyber security.
2. Identify common cyber security threats.
3. Develop skills in password management, encryption, authentication, and data protection to mitigate risks and enhance personal and organizational security.
4. Explore the fundamentals of network security, including firewalls, intrusion detection/prevention systems, and virtual private networks.
5. Gain awareness of legal and ethical considerations in cybersecurity, including privacy, intellectual property, and responsible use of technology.

Expectations: What will students be expected to do in order to successfully complete this course (read, write, create, visualize, synthesize, sing, perform)?

Students will apply knowledge in the form of coding projects, hands-on projects, networking, social engineering, research and data collection. They will complete hands-on exercises, make interactive presentations, complete problem solving tasks/tests and create secure online environments with and without 2 factor authentication.

Budgetary Implications: To be completed by Department Chair /Department Coordinator

Item	Description	Quantity	Cost	Total
Student Textbooks				
Student Workbooks				
Teacher Edition				
Materials				
Curriculum Work	Writing - 2 teachers at 15 hours each	30 hrs	$51	$1,530
Furniture	none			
Professional Development (training)	Summer conference $1000	1	$1000	$1,000
Staffing: FTE				
Other				
Other				
	Total			$2,530

New Course Proposals DHS FY26 (2025-2026)

Darien Public Schools

Astronomy

- .5 Credit, 300 Level Elective for Grades 11 and 12
- STEM/Elective Graduation Credit
- A comprehensive study of our universe and our place within it
- Provides an elective with a focus on physical science and Earth and space science to balance life science electives
- Student interest driven

Budget Implications
FY 2025

Curriculum Development
$1,530

Textbook
$4,500 (Hardcopy+6yr Digital)

Initial Supplies
$1,500

Staffing
No Increase

Darien Public Schools

American Sign Language: 3

- 1.0 credit each, 300 level elective for grades 11 and 12
- World Language/Elective graduation credit
- Follows sequence of ASL program
- Offers a unique learning experience, different from more traditional World Language courses
- Students would have the opportunity to fulfill a complete 4 year language program of study

Darien Public Schools

Budget Implications
FY 2025/2026

Curriculum Development
ASL 3 2025: $3,060

Textbooks
ASL 3 2025: $1,049

Staffing
No increase

DARIEN HIGH SCHOOL
VERITAS VOS LIBERABIT
1927

Cybersecurity

- .5 Credit, 300 Level Elective for Grades 10, 11, 12
- STEM Graduation Credit
- Students will have a better understanding of how their personal information is used and will design ways to best protect it. This course will provide students with a comprehensive understanding of the concepts, principles, and practices related to cybersecurity in order to navigate and safeguard against cyber threats.
- To prepare students for higher education programs focused on protecting computer systems from cyber attacks
- Driven by student interest and complements our computer science pathway.
- This will replace an outdated Computer Animation course

Darien Public Schools

Budget Implications
FY 2025

Curriculum Development
$1,530

Professional Learning
$1,000

Staffing
No Increase

Discussion

K-3 Literacy / Into Reading Pilot Update

Board of Education
Curriculum Committee
November 4, 2024

Agenda

- Update-CSDE meeting
- Teacher feedback
- Next steps

CSDE Meeting

10-24-24

- Reconvene in a month for a check-in on the pilot progress. Share writing samples from Into Reading and Units of Study.
- Seek legal counsel to understand the ramifications of not adopting a state-recommended program.
- Schedule a follow-up meeting to discuss the evaluation results once they are available.

Teacher Feedback

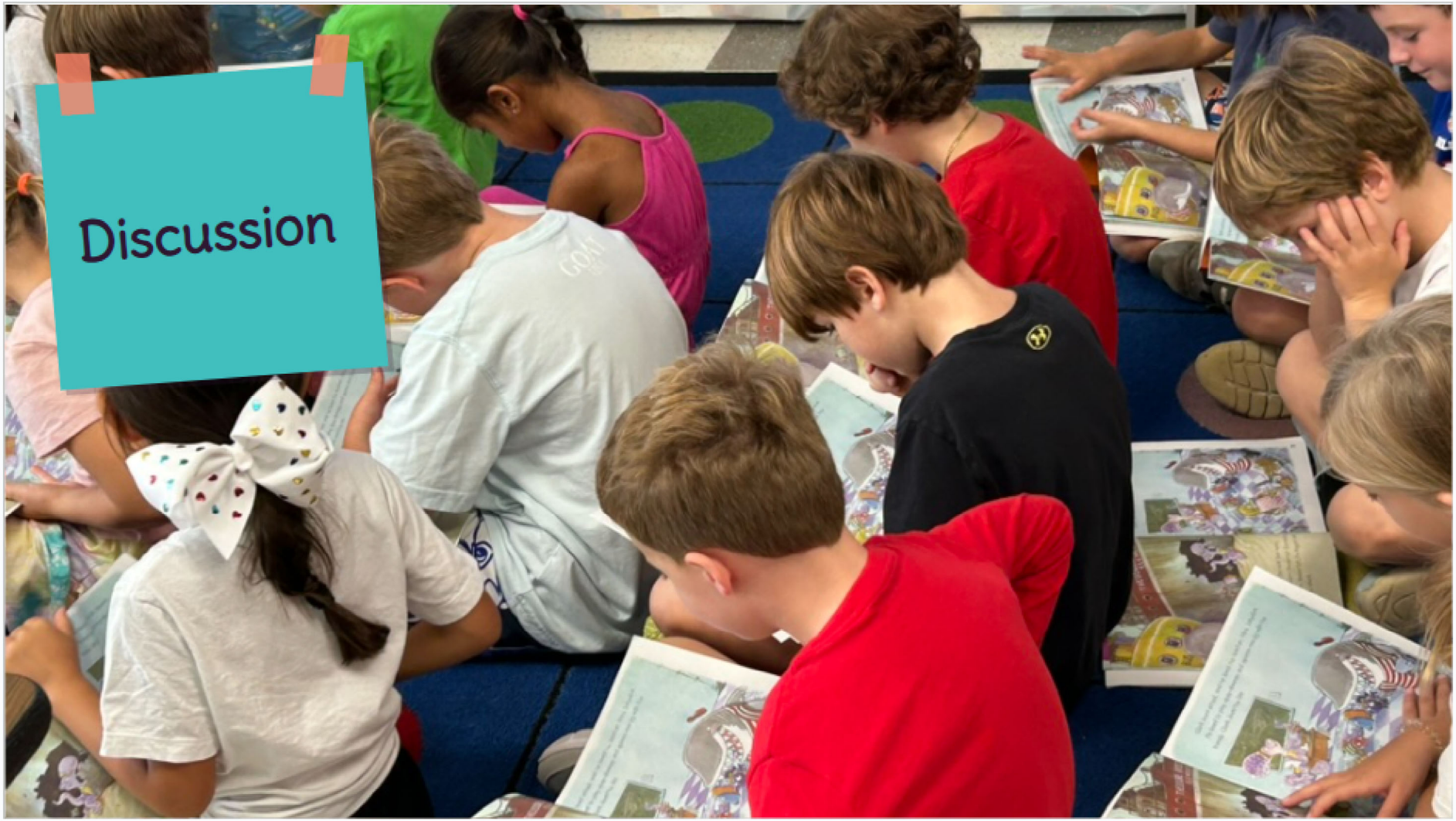
Pilot Teacher Representatives:

Bess McNamee, Royle 1st Grade
Arley Carr-Harris, Tokeneke 1st Grade

Sharon Shea, Holmes 2nd Grade
Stacy Johnson, Ox Ridge 2nd Grade

Allison Weissert, Holmes 1st Grade
Linda Dragotta, Royle 1st Grade

Nicole Pentore, Hindley Literacy Specialist


Discussion