

**WESTPORT BOARD OF EDUCATION**

**AGENDA\***

(Agenda Subject to Modification in Accordance with Law)

**PUBLIC CALL TO ORDER/PLEDGE OF ALLEGIANCE**

7:30 p.m., Staples High School, Cafeteria

**ANNOUNCEMENTS FROM BOARD AND ADMINISTRATION**

**PUBLIC QUESTIONS/COMMENTS ON NON-AGENDA ITEMS (15 MINUTES)**

**MINUTES:** December 3 and 17, 2018, *pages 1-9*

**DISCUSSION/ACTION**

- |   |                |   |
|---|----------------|---|
| <ol style="list-style-type: none"> <li>1. Proposed Course Additions, Deletions, Modifications, 6-12           <ul style="list-style-type: none"> <li>• Applied Algorithmic Design, <i>pages 11-16</i></li> <li>• Mobile App Development, <i>pages 17-22</i></li> </ul> </li> <li>2. CMS Task Force</li> <li>3. Portable Classrooms for Bedford Middle School</li> <li>4. Education and Physical Plant Strategy / NextGenEd</li> </ol> | <p>(Encl.)</p> | <p>Dr. Anthony Buono<br/>Dr. AJ Scheetz</p> <p>Mr. Mark Mathias</p> <p>Mr. Mark Mathias</p> <p>Mr. Mark Mathias</p> |
|---|----------------|---|

**DISCUSSION**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. 2019-20 Transition Planning Update</li> </ol> | <p>Dr. Colleen Palmer<br/>Dr. Anthony Buono</p> |
|---|---|

**UPDATES**

- |  |                |  |
|--|----------------|--|
| <ol style="list-style-type: none"> <li>1. November Health and Medical Report, <i>page 23</i></li> <li>2. Finance and Facilities Committee</li> <li>3. Teaching and Learning Committee</li> </ol> | <p>(Encl.)</p> | <p>Mr. Elio Longo</p> <p>Ms. Elaine Whitney<br/>Mr. Neil Phillips</p> <p>Ms. Candice Savin</p> |
|--|----------------|--|

**ADJOURNMENT**

\*A 2/3 vote is required to go to executive session, to add a topic to the agenda of a regular meeting, or to start a new topic after 10:30 p.m. The meeting can also be viewed on Cablevision on channel 78; Frontier channel 6021 and by video stream @www.westportps.org

**PUBLIC PARTICIPATION WELCOME USING THE FOLLOWING GUIDELINES:**

- Comment on non-agenda topics will occur during the first 15 minutes *except* when staff or guest presentations are scheduled.
- Board will not engage in dialogue on non-agenda items.
- Public may speak as agenda topics come up for discussion or information.
- Speakers on non-agenda items are limited to 2 minutes each, except by prior arrangement with chair.
- Speakers on agenda items are limited to 3 minutes each, except by prior arrangement with chair.
- Speakers must give name and use microphone.
- Responses to questions may be deferred if answers not immediately available.
- Public comment is normally not invited for topics listed for action after having been publicly discussed at one or more meetings.



**WESTPORT BOARD OF EDUCATION MINUTES**

**Board Members Present:**

Mark Mathias	Chair
Jeannie Smith	Vice Chair
Elaine Whitney	Secretary
Karen Kleine	
Vik Muktavaram	
Candice Savin	
Neil Phillips	

**Administrators Present:**

Colleen Palmer	Superintendent of Schools
Anthony Buono	Asst. Superintendent of Teaching and Learning
Tina Mannarino	Asst..Superintendent Pupil Personnel Services
Elio Longo	Chief Financial Officer
John Bayers	Director of Human Resources

**PUBLIC CALL TO ORDER/PLEDGE OF ALLEGIANCE:** 7:37 p.m., Staples High School Cafeteria B (Room 301)

**ANNOUNCEMENTS FROM BOARD AND ADMINISTRATION**

**PUBLIC QUESTIONS/COMMENTS ON NON-AGENDA ITEMS**

**MINUTES:** November 19, 26 and 27, 2018

Elaine Whitney moved to approve the minutes of November 19, 26 and 27, 2018 seconded by Mark Mathias and passed unanimously.

**ELECTION OF OFFICERS OF THE BOARD OF EDUCATION**

**Be it resolved, that the Board of Education elects Mark Mathias to serve as Chair of the Westport Board of Education, said election effective until the next annual Board of Education election of officers.**

**MOTION:** Jeannie Smith  
**SECOND:** Neil Phillips  
**RESULT:** Passed Unanimously  
**VOTE:** 7-0

**Be it resolved, that the Board of Education elects Jeannie Smith to serve as Vice Chair of the Westport Board of Education, said election effective until the next annual Board of Education election of officers.**

**MOTION:** Mark Mathias  
**SECOND:** Karen Kleine  
**RESULT:** Passed Unanimously  
**VOTE:** 7-0

**Be it resolved, that the Board of Education elects Elaine Whitney to serve as Secretary of the Westport Board of Education, said election effective until the next annual Board of Education election of officers.**

**MOTION:** Vik Muktavaram  
**SECOND:** Candice Savin  
**RESULT:** Passed Unanimously  
**VOTE:** 6-0-1 (Elaine Whitney abstaining)

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Mark Mathias moved to change the Middle Schools Update agenda item to a discussion/action item and to defer the Approval of FY 2020 Budget Preparation Calendar agenda item to a future meeting; seconded by Jeannie Smith and passed unanimously.

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## **DISCUSSION**

Report from the Community Advisory Committee for 2019-20 Academic Year

Discussion of Superintendent Review of Facility Utilization Options 2019-20 Academic Year

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Mark Mathias moved to continue with the Middle Schools Update agenda item as it was after 10:30 p.m.; seconded by Vik Muktavaram and passed unanimously.

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## **DISCUSSION/ACTION:**

Middle Schools Update

- Portables
- Rental Opportunities
- Parent Feedback Sessions

**Be it resolved, that the Board of Education will not close any elementary school as part of its facilities usage plan for the FY 2019 - FY 2020 school year, whether to use said elementary school building to house either Coleytown Middle School students or the 6th grade, or otherwise.**

**MOTION:** Candice Savin  
**SECOND:** Jeannie Smith  
**RESULT:** Passed  
**VOTE:** 4-3 (Jeannie Smith, Elaine Whitney, Candice Savin and Neil Phillips in favor;  
Mark Mathias, Karen Kleine and Vik Muktavaram opposed)

**Be it resolved, that upon the recommendation of the Community Advisory Committee, the Board of Education removes Option VI from further consideration, said option to have all 6th, 7th and 8th grade students attend Bedford Middle School with a nine-period schedule from 8:00 a.m. to 2:45 p.m.**

**MOTION:** Vik Muktavaram  
**SECOND:** Candice Savin  
**RESULT:** Failed  
**VOTE:** 1-6 (Vik Muktavaram in favor)

No action was taken on portables or rental opportunities, pending additional information.

Approval of FY 2020 Budget Preparation Calendar  
Deferred to a future meeting

Master Facilities Plan RFP  
Deferred to a future meeting

Elementary Staffing Grid  
Deferred to a future meeting

## **UPDATES**

October Health and Medical Report  
Deferred to a future meeting

Finance and Facilities Committee  
Deferred to a future meeting

Policy Committee  
Deferred to a future meeting

Teaching and Learning Committee  
Deferred to a future meeting

**ADJOURNMENT:** Mark Mathias moved to adjourn at 11:36 p.m.; seconded by Neil Phillips and passed unanimously.

Respectfully submitted,  
Elaine Whitney, Secretary  
(Minutes written by Lisa Marriott)

**WESTPORT BOARD OF EDUCATION MINUTES  
MEETING**

**Board Members Present:**

Mark Mathias           Chair  
Jeannie Smith        Vice Chair  
Elaine Whitney       Secretary  
Karen Kleine  
Vik Muktavaram  
Candice Savin  
Neil Phillips

**Administrators Present:**

Colleen Palmer        Superintendent of Schools  
Anthony Buono        Asst. Superintendent of Teaching and Learning  
Tina Mannarino       Asst..Superintendent Pupil Personnel Services  
Elio Longo            Chief Financial Officer  
John Bayers           Director of Human Resources

**PUBLIC CALL TO ORDER/PLEDGE OF ALLEGIANCE:** 7:32 p.m., Staples High School, Cafeteria B

**ANNOUNCEMENTS FROM BOARD AND ADMINISTRATION**

**PUBLIC QUESTIONS/COMMENTS ON NON-AGENDA ITEMS (15 MINUTES)**

**MINUTES:** December 3 and 10, 2018

Elaine Whitney moved to approve the minutes of December 3 and December 10, 2018; seconded by Karen Kleine. The Board unanimously approved the minutes of December 10, 2018. The Board also deferred by consensus approval of the minutes of December 3, 2018 in order to incorporate a requested edit.

**DISCUSSION/ACTION:**

Update on Board Requests for Additional Information Concerning the Plan for District Facility Utilization PreK-12 Commencing with the 2019-20 Academic Year

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Mark Mathias moved to continue with the next agenda item as it was after 10:30 p.m.; seconded by Jeannie Smith and passed unanimously.

\*\*\*

Possible Vote on the Plan for District Facilities Utilization PreK-12 Commencing with the FY 2019 - FY 2020 Academic Year

**Be it resolved, that upon the recommendation of the Superintendent of Schools, the Board of Education adopts a short-term plan for K-6 elementary school programming whereby 6th grade students will be housed in the elementary schools, with a team model, beginning with the FY 2019 - FY 2020 school year, subject to the development of an academic schedule with an emphasis on maintaining the current academic program to the extent practicable, and consistent with academic best practices.**

**MOTION:** Elaine Whitney

**SECOND:** Neil Phillips

Motion to amend the motion to approve the 6-8 at BMS option:

Vik Muktavram moved to replace the words “K-6 elementary school programming whereby 6th grade students will be housed in the elementary schools, with a team model, beginning with” with “middle school programming to have grades 6 through 8 at Bedford Middle School for”, and to remove the phrase “upon the recommendation of the Superintendent of Schools” and all language after “the FY 2019 - FY 2020 school year”, resulting in the following proposed amended motion:

**Be it resolved, that the Board of Education adopts a short-term plan for middle school programming to have grades 6 through 8 at Bedford Middle School for the FY 2019 - FY 2020 school year.**

**MOTION:** Vik Muktavaram

**SECOND:** Karen Kleine

**RESULT:** Failed

**VOTE:** 2-5 (Karen Kleine and Vik Muktavaram in favor; Mark Mathias, Jeannie Smith, Elaine Whitney, Candice Savin and Neil Phillips opposed)

Return to vote on original motion to approve the K-6 option with conditions:

**RESULT:** Passed

**VOTE:** 5-2 (Mark Mathias, Jeannie Smith, Elaine Whitney, Candice Savin and Neil Phillips in favor; Karen Kleine and Vik Muktavaram opposed)

\*\*\*

At 12:01 a.m., Mark Mathias moved to move up and continue with the Proposed Course Additions, Deletions, Modifications discussion agenda item before concluding the Possible Vote on the Plan for District Facilities Utilization PreK-12 Commencing with the FY 2019 - FY 2020 Academic Year discussion/action item, as it was after 10:30 p.m., and to accommodate a staff member scheduled to present to the Board; seconded by Jeannie Smith and passed unanimously.

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## DISCUSSION

Proposed Course Additions, Deletions, Modifications

- Algorithmic Design
- Mobile App Development

\*\*\*

Continuation of the Possible Vote on the Plan for District Facilities Utilization PreK-12 Commencing with the FY 2019 - FY 2020 Academic Year discussion/action item

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## DISCUSSION/ACTION:

**Continuation:** Possible Vote on the Plan for District Facilities Utilization PreK-12 Commencing with the FY 2019 - FY 2020 Academic Year

**Be it Resolved, that the Board of Education will develop a long-term vision and plan for future educational programming and facilities in the Westport Public Schools, said plan to be completed by September 2019.**

**MOTION:** Elaine Whitney  
**SECOND:** Candice Savin  
**RESULT:** Passed  
**VOTE:** 6-1 (Vik Muktavaram opposed)

**Be it Resolved, that the Board of Education establishes the CMS Building Task Force, an ad hoc committee of the Board of Education for the FY 2018 - FY 2019 school year, to explore options for bringing the Coleytown Middle School building back on line for use for educational programming, and to make recommendations to the Board of Education about such options.**

**MOTION:** Elaine Whitney  
**SECOND:** Vik Muktavaram  
**RESULT:** Passed Unanimously  
**VOTE:** 7-0

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At 12:27 a.m., Mark Mathias moved to continue with the discussion/action agenda items Master Facilities Plan RFP and Approval of FY 2020 Budget Preparation Calendar, as it was after 10:30 p.m.; seconded by Karen Kleine and passed unanimously.

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Master Facilities Plan RFP

**Be it Resolved, that upon the recommendation of the Superintendent of Schools, the Board of Education authorizes the Superintendent or her designee to publish RFP 19-006: Master Facilities Plan Consultant, as presented to the Board of Education and as modified at its meeting of December 17, 2018.**

**MOTION:** Candice Savin  
**SECOND:** Karen Kleine  
**RESULT:** Passed Unanimously  
**VOTE:** 7-0

Approval of FY 2020 Budget Preparation Calendar

**Be it resolved, that upon the recommendation of the Superintendent of Schools, the Board of Education approves the 2019-2020 Budget Preparation Calendar presented at the meeting of December 17, 2018.**

**MOTION:** Mark Mathias  
**SECOND:** Jeannie Smith  
**RESULT:** Passed Unanimously  
**VOTE:** 7-0

Possible Vote on Portables

Deferred to a future meeting

## **DISCUSSION**

Westport NextGenEd Vision

Deferred to a future meeting

## UPDATES

November Health and Medical Report

Deferred to a future meeting

Finance and Facilities Committee

Deferred to a future meeting

Teaching and Learning Committee

Deferred to a future meeting

**ADJOURNMENT:** Mark Mathias moved to adjourn at 12:44 a..m. on December 18, 2018; seconded by Jeannie Smith and passed unanimously.

Respectfully submitted,  
Elaine Whitney, Secretary  
(Minutes written by Lisa Marriott)

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**STAPLES HIGH SCHOOL**  
**NEW COURSE PROPOSAL FORM**

**Course Title: Applied Algorithmic Design**

**Credit: 0.5**

**Credit Area(s): Science**

**Course Proposed by:**     Administration     Board of Education  
    Student(s)                     K-12 Curriculum Review  
    Department                     Other (specify)

**Course Catalog Description:**

**Applied Algorithmic Design**  
Students will learn about complex algorithms to build sophisticated programs, leveraging their knowledge from Introduction to Programming (which focused mostly on syntax and simple algorithms). Examples of some of the algorithms that will be investigated include path-finding algorithms, collision detection algorithms and tree/fractal algorithms. Feedback loops, simple AI, state machines, sprite mechanics and randomization techniques will also be covered as components necessary for developing more sophisticated programs. Deeper knowledge of algorithms and strategies will allow students to develop more realistic and complex programs.

**Prerequisite(s):**

Introduction to Programming

**COURSE/DEPARTMENT INFORMATION:**

How many electives does your department currently offer?

Twenty nine

How does this course fit into the course offerings?

(Is it a stand alone, is it part of a sequence or is it replacing another course?)

This course is designed to follow Introduction to Programming but it may be taken at any time after that. It will allow students to develop a deeper understanding of and become more fluent in complex programming constructs not covered in our AP-level class.

Unit	Essential Questions	Standards	Content
Collision Detection Algorithms, Noise/Fractal Algorithms, Path-Finding Algorithms	How do algorithms provide consistent output? How do we use algorithms to create the output that is desired? Why do we use algorithms in programming?	(HS-ETS1-2). Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	Students will investigate the varieties of collision detection algorithms, for varieties of shapes and surfaces on objects. They will investigate using fractal algorithms to develop scenery, for example, and path finding to move sprites through landscapes. Students will use concepts to develop their own versions of these ideas in their own program.
Feedback loops, AI, game mechanics and logic, state machines, randomization	How do feedback and mechanics interact with a program to change the outcome? How does a program progress through allowed states? Why do we use different techniques for introducing randomization and noise into a program?	(HS-ETS1-4) Use mathematical models and/or computer simulations to predict the effects of a design solution on systems and/or the interactions between systems.	Students will investigate different types of interactions with programs to understand how feedback loops might affect user behavior. Students will investigate AI, game mechanics, state machines and randomization to experience the effects on their own programs. Students will select techniques to incorporate into their own projects.
Building a game or simulation	How do the pieces work together to create a complete system?	(HS-ETS1-2). Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	Students will incorporate the components developed throughout the semester into a complex game or simulation.

Who is your target audience?

Any student who has completed Introduction to Programming.

Has your department discussed the pros and cons of this submission?

Yes. We discussed in February.

What percentage of the department voted “yes” to bring this course forward?

88% of department voted yes.

### RATIONALE:

How does this course contribute to the department’s goals and objectives?

The department’s general goal is to produce graduates who are informed consumers of science information and who are well prepared to pursue a career in STEM if they choose to do so. This course allows students to develop stronger programming skills, while also helps students develop an interest in how the programs work from a Computer Science point of view.

What is the need this course addresses?

This course addresses the need to satisfy student's desire for additional programming courses through their high school career.

How does this course support the recommendation of the latest K-12 review?

How does this align to your current department accepted standards?

Please see the table above. This course aligns directly with the new state science standards, the NGSS.

How does this course support the Staples Mission Statement?

*The Staples High School community inspires learning, fosters integrity, and nurtures empathy.*

This course will fulfill all elements of the Staples Mission Statement through real-world and career connections through the study of embedded systems programming. Students will engage in inquiry, explore problems and solutions.

How does this course support the goals of the Westport 2025 initiative?

Creative→ Students will be encouraged and indeed taught to ask questions about the way algorithms operate, to attempt to answer those questions, and to look for unexpected results.

Communication→ During collaborative learning, students will advocate for their ideas but also work together to come to solve problems and build solutions.

Critical Thinking→ Students will be asked to connect their new learning to create a new understanding. They will base decisions on what they need to learn next based on prior knowledge, and they will break down ideas into their most fundamental/mechanistic level.

Global Thinking→ Students will always be working on meaningful problems since they will see the coherence between what they are trying to figure out and what they have already learned. Through collaborative learning, they will gain an understanding of the problem through discussion of different points of view.

Establish a flow chart of courses and indicate where this course will fit in.

The sequences for the semester long courses are as follows. Introduction to Programming is a prerequisite for the other Introductory courses. Web courses and Embedded courses can be taken in any order.

*Advanced courses* are identified in *italics*. The prerequisites for those courses are the appropriate Introductory course.

Students may choose to take the courses as introductory and advanced for each topic or students may choose to take each of the introductory courses before choosing any advanced options. Other combinations are certainly possible.

Java Programming	Web and Mobile	Embedded
Introduction to Programming 1 semester	Introduction to Web Programming 1 semester	Introduction to Embedded Systems 1 semester
<b><i>Applied Algorithmic Design</i></b> <b><i>1 semester</i></b>	<i>Building Web APPs</i> <i>1 semester</i>	
	<i>Building Mobile APPs</i> <i>1 semester (if approved)</i>	

OR:

Java Programming	Embedded	Web and Mobile
Introduction to Programming 1 semester	Introduction to Embedded Systems 1 semester	Introduction to Web Programming 1 semester
<b><i>Applied Algorithmic Design</i></b> <b><i>1 semester</i></b>		<i>Building Web APPs</i> <i>1 semester</i>
		<i>Building Mobile APPs</i> <i>1 semester (if approved)</i>

Year Long Course:

Advanced Placement Computer Science can be taken any time after Introduction to Programming. It can be taken concurrently with additional computer science courses.

Introduction to Programming 1 Semester	Advanced Placement Computer Science Full Year
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## STAPLES EXPECTATIONS FOR STUDENT LEARNING:

### Academic Expectations:

Students will be expected to engage in nonfiction reading and writing in this course.  
Students will be expected to work across disciplines and use prior knowledge to drive conclusions and solutions.  
Students will be expected to collaborate, communicate, and connect ideas.

### *Civic Expectations:*

Perseverance in spite of difficulties; supporting each other when stuck.  
Communicating and Critiquing Conclusions  
Taking Informed Action/Advocacy

### *Social Expectations:*

Collaborating to research and solve problems  
Work with real-world issues, explore careers in the field

### Student Learning Outcomes:

#### *Skills (what students will be able to do):*

Analyze and interpret data, particularly when debugging programs and systems.  
Use mathematics and computational thinking to design algorithms and models for their systems.  
Constructing explanations and designing solutions

#### *Assessment(s):*

- Problem Sets - Stand-alone Programs, Simulations, and Games
- Performance-based assessments

## BUDGET AND FACILITY CONSIDERATIONS:

### Staffing Requirements:

Will this create an additional staffing need within the department?

We do not anticipate any impact on staffing..

**Budget Requirements:**

Equipment, materials, textbooks? Please distinguish between a one time only and a yearly expense.

Students will bring their own devices for programming..

**Facility Requirements:**

*Minimum Number of Students Needed to Run this Class:*

15

Is there classroom availability within the department for this class? If not, how will this class be accommodated within the school?

We will be drawing from the same student population, so there should be minimal impact on science instructional space.

Are there physical needs or limitations for this course? (water, power, room size, etc.)

**STAPLES HIGH SCHOOL**  
**NEW COURSE PROPOSAL FORM**

**Course Title: Mobile APP Development**

**Credit: 0.5**

**Credit Area(s): Science**

**Course Proposed by:**     Administration     Board of Education  
    Student(s)                     K-12 Curriculum Review  
    Department                     Other (specify)

**Course Catalog Description:**

**Mobile APP Development**

In this course students will learn how to build Mobile APPs, standalone programs that operate in mobile devices such as a phone or tablet. Students will use front-end development tools for UI design and integration with the platform SDK to access device features. Students will integrate their APP with back-end services for user authentication, data services, security and metrics. By the end of the course students will create and deploy their own Mobile APP.

**Prerequisite(s):**

Introduction to Web Programming and AP CSP or Building Web Apps or per recommendation of Instructor

**COURSE/DEPARTMENT INFORMATION:**

How many electives does your department currently offer?

Twenty nine

How does this course fit into the course offerings?

(Is it a stand alone, is it part of a sequence or is it replacing another course?)

This course is designed to be a capstone course in the CS sequence. Students will have completed Intro Programming, Algorithms, Intro Web, Building Web Apps and AP CSP.

Unit	Essential Questions	Standards	Content
Unit 1 - Building User Interface for Mobile Apps using a supported Integrated Development Environment	How is Mobile APP design different from Web and Desktop Apps.	(HS-ETS1-2). Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	Students will investigate and use an IDE to develop their first APP project. Students will learn to instantiate and connect to core graphics objects provided by the platforms SDK.
Unit 2 - Event based Programming. Connecting asynchronous events to User Interface Elements	How do asynchronous events interact with programs? Why do programs need mechanisms to handle asynchronous events?	(HS-ETS1-4) Use mathematical models and/or computer simulations to predict the effects of a design solution on systems and/or the interactions between systems.	Students will build functional APPs which respond to user interaction. Students will debug their APPS within the simulators supplied in the IDE.
Unit 3 - Building APPs using the Model View Control Structure	How do the pieces work together to create a complete system?	(HS-ETS1-2). Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	Students will incorporate the components developed throughout the semester into a deployable, live APP.
Unit 4 - Additional Extension to the APP development environment	What are additional capabilities available to use in the APP development ecosystem? Why are there libraries for these additional capabilities?	(HS-ETS1-2). Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	Students will extend the capabilities of their projects by including aspects such as networking, database storage, geolocation and metrics.

Who is your target audience?

Any student who has completed Introduction to Web APPs and desires to take further computer science courses.

Has your department discussed the pros and cons of this submission?

Yes - we discussed during February.

What percentage of the department voted “yes” to bring this course forward?

88% of department approved.

### RATIONALE:

How does this course contribute to the department’s goals and objectives?

The department's general goal is to produce graduates who are informed consumers of science information and who are well prepared to pursue a career in STEM if they choose to do so. This course allows students to develop stronger programming skills, while also helps students develop an interest in how the programs work from a Computer Science point of view.

What is the need this course addresses?

This course addresses the need to satisfy student's desire for additional programming courses through their high school career.

How does this course support the recommendation of the latest K-12 review?

How does this align to your current department accepted standards?

Please see the table above. This course aligns directly with the new state science standards, the NGSS.

How does this course support the Staples Mission Statement?

*The Staples High School community inspires learning, fosters integrity, and nurtures empathy.*

This course will fulfill all elements of the Staples Mission Statement through real-world and career connections through the study of embedded systems programming. Students will engage in inquiry, explore problems and solutions.

How does this course support the goals of the Westport 2025 initiative?

Creative→ Students will be encouraged and indeed taught to ask questions about the way algorithms operate, to attempt to answer those questions, and to look for unexpected results.

Communication→ During collaborative learning, students will advocate for their ideas but also work together to come to solve problems and build solutions.

Critical Thinking→ Students will be asked to connect their new learning to create a new understanding. They will base decisions on what they need to learn next based on prior knowledge, and they will break down ideas into their most fundamental/mechanistic level.

Global Thinking→ Students will always be working on meaningful problems since they will see the coherence between what they are trying to figure out and what they have already learned. Through collaborative learning, they will gain an understanding of the problem through discussion of different points of view.

Establish a flow chart of courses and indicate where this course will fit in.

The sequences for the semester long courses are as follows. Introduction to Programming is a prerequisite for the other Introductory courses. Web courses and Embedded courses can be taken in any order.

*Advanced courses* are identified in *italics*. The prerequisites for those courses are the appropriate Introductory course.

Students may choose to take the courses as introductory and advanced for each topic. Students may also choose to take each of the introductory courses before choosing advanced options.

Java Programming	Web and Mobile	Embedded
Introduction to Programming 1 semester	Introduction to Web Programming 1 semester	Introduction to Embedded Systems 1 semester
<i>Applied Algorithmic Design</i> <i>1 semester (if approved)</i>	<i>Building Web APPs</i> <i>1 semester</i>	
	<b><i>Building Mobile APPs</i></b> <b><i>1 semester</i></b>	

OR:

Java Programming	Embedded	Web and Mobile
Introduction to Programming 1 semester	Introduction to Embedded Systems 1 semester	Introduction to Web Programming 1 semester
<i>Applied Algorithmic Design</i> <i>1 semester (if approved)</i>		<i>Building Web APPs</i> <i>1 semester</i>
		<b><i>Building Mobile APPs</i></b> <b><i>1 semester</i></b>

Year Long Course:

Advanced Placement Computer Science can be taken any time after Introduction to Programming. It can be taken concurrently with additional computer science courses.

Introduction to Programming 1 Semester	Advanced Placement Computer Science Full Year
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## STAPLES EXPECTATIONS FOR STUDENT LEARNING:

### Academic Expectations:

Students will be expected to engage in nonfiction reading and writing in this course.  
Students will be expected to work across disciplines and use prior knowledge to drive conclusions and solutions.  
Students will be expected to collaborate, communicate, and connect ideas.

### *Civic Expectations:*

Perseverance in spite of difficulties; supporting each other when stuck.  
Communicating and Critiquing Conclusions  
Taking Informed Action/Advocacy

### *Social Expectations:*

Collaborating to research and solve problems  
Work with real-world issues, explore careers in the field

### Student Learning Outcomes:

#### *Skills (what students will be able to do):*

Analyze and interpret data, particularly when debugging programs and systems.  
Use mathematics and computational thinking to design algorithms and models for their systems.  
Constructing explanations and designing solutions

#### *Assessment(s):*

- Problem Sets - Stand-alone Programs, Simulations, and Games
- Performance-based assessments

## BUDGET AND FACILITY CONSIDERATIONS:

### Staffing Requirements:

Will this create an additional staffing need within the department?

We do not anticipate any impact on staffing..

**Budget Requirements:**

Equipment, materials, textbooks? Please distinguish between a one time only and a yearly expense.

Students will bring their own devices for programming.

**Facility Requirements:**

*Minimum Number of Students Needed to Run this Class:*

15

Is there classroom availability within the department for this class? If not, how will this class be accommodated within the school?

We will be drawing from the same student population, so there should be minimal impact on science instructional space.

Are there physical needs or limitations for this course? (water, power, room size, etc.)

**Medical Health Insurance  
FY 18-19 Projections  
(as of 11/30/18)**

FY 19 Projection

**Cash receipts**

General Fund Budget from line 210	15,203,452
Other Fund Contributions	100,000
Employee Contributions (Active)	3,045,340
Flex Spending Accounts	-
Cobra Participants	-
Retirees - Under 65	375,000
State Teachers Retirement (TRB)	115,000
Life Insurance Premiums	25,000
Retirees Medicare Surround	598,619
Other Contributions (FMLA, Retiree Life, etc.)	64,500
Prescription Guarantee Adjustment	-
Pharmacy Rebate	-
<b>Total cash receipts</b>	<b>19,526,911</b>

**Cash disbursements**

State Partnership Plan 2.0 (10 months)	13,222,576
Medical & Prescription (2 Months Self insured)	2,800,000
IBNR	1,300,000
Dental	1,147,718
Flex Spending Accounts	-
Contribution to HSA	-
Medical Administrative	66,322
Network Access Fee	25,546
Individual Stop-Loss	171,662
Dental Administrative	55,931
FSA Administrative	2,000
Consulting Fee	52,500
PCORI Fee	4,525
Retirees Medicare Surround	913,706
<b>Total cash disbursements</b>	<b>19,762,486</b>

**Change in cash balance** **(235,575)**

<b>Beginning cash balance</b>	<b>1,695,998</b>
FY 19 Pre funded by Town	<b>(1,500,000)</b>
Change in Cash	<b>(235,575)</b>
<b>Net Position(Deficit) end of year-projection</b>	<b>(39,576)</b>

	<u>Medical/Rx (HDHP)</u>	<u>Medical/Rx (SPP)</u>	<u>IBNR</u>	<u>Dental</u>	<u>Flex/Other</u>
<b>HDHP</b>					
Jul 2018	\$ 1,514,635	-	-	\$ 99,980	\$ 775
Aug 2018	\$ 1,611,274	-	-	\$ 90,743	\$ 190
Sep 2018		\$ 1,318,542	979,962	\$ 90,285	\$ 7,367
Oct 2018		\$ 1,338,285	200,148	\$ 111,642	\$ 8,791
Nov 2018		\$ 1,349,207	\$ 116,084	\$ 72,889	\$ 7,760
Actual	\$ 3,125,910	\$ 4,006,034	\$ 1,296,194	\$ 465,539	\$ 24,883
Budget	\$ 2,800,000	\$ 13,222,576	1,300,000	\$ 1,147,718	
Actual vs. Budget	\$ <b>(325,910)</b>	-	-	-	
Actual YTD Spend Rate	111.6%	30.3%	99.7%	40.6%	
Theoretical YTD Spend Rate	100.0%	30.0%	100.0%	41.7%	
YTD variance %	11.6%	0.3%		-1.1%	
YTD variance \$		\$ <b>(39,261)</b>		\$ <b>12,677</b>	
Projected Trend full year		\$ (130,871)		\$ 30,424	