TRUMBULL PUBLIC SCHOOLS
TRUMBULL, CONNECTICUT
Regular Meeting – October 10, 2017
Long Hill Administration Building
Lorraine R. Smith Assembly Room

The Trumbull Board of Education convened in the Long Hill Administration Building for a Regular Meeting.

Members present:
L. Chory, Chairman
L. Timpanelli, Secretary
J. Donofrio, Board Member
M. Petitti, Board Member
M. Ward, Board Member

Members absent:
S. Testani, Vice Chairman
P. Lavoie, Board Member

Agenda Item I—Call to Order
The meeting was called to order at 7:00 p.m.

Agenda Item II—Preliminary Business

A. Salute to the Flag - The Public Session began with a salute to the Flag.

B. Recognition – First Selectman's Golf Classic
First Selectman Timothy Herbst presented checks totaling $54,000 to the following organizations from the proceeds of this year's First Selectman's Golf Classic:
- Academic Challenge for Excellence (ACE) Foundation
- Trumbull High School Golden Eagle Marching Band
- PowerPlay Club – Hockey
- Laxmen's Club – Boys & Girls Lacrosse
- Touchdown Club - Football
- Diamond Club – Baseball & Softball

The Board thanked and recognized the First Selectman and the Golf Classic Board of Directors for their effort that provides financial assistance to these worthwhile organizations.

C. Correspondence – There was no correspondence this evening.

D. Public Comments – There were no public comments this evening.

E. Board Chairman Report – Mrs. Chory attended the CABE nominating committee meeting on September 27, 2017. New CABE officers will be approved at the CABE Convention on November 17, 2017.

F. Superintendent Report – Dr. Cialfi reported on the events at Trumbull Schools:

- SAT prep courses will be sponsored by Continuing Education at THS immediately after dismissal starting in November.
- The Tri-State Consortium Visit begins on October 11, 2017; this program includes teacher interviews and classroom visits from other districts to enhance Trumbull student learning.
- The Trumbull school district is showing a year to year savings in purchased electricity of almost $62,000 which puts us on track to save approximately $225K for the year and cover the cost of the lease payment of the performance contracting projects.
- The Annual Band Classic is on Saturday, November 4 at Trumbull High School's McDougall Stadium.

G. Student BOE Representatives Reports – Matt Kuroghlian reported on events at THS:
The THSGEMB placed third at the University of Delaware competition. The Mock Trial Team placed fifth at the Empire Competition in San Francisco. Freshmen, Sophomores and Juniors are taking the PSAT on October 11, 2017; Spirit Week is next week ending with the Pep Rally on Friday; the Open House for 8th graders is October 18 and the Tri State visit to Trumbull High School is October 12-13.

Agenda Item III—Reports/Action Items

A. Personnel
Dr. Cialfi presented the following two certified resignations:
Lauren Craw, language arts teacher (.6) at Hillcrest Middle School, since August 2016, resigning effective October 12, 2017
Karen Jacob, district special education teacher/SRP Department Chair (.45) since November 2016, resigning effective October 25, 2017

It was moved (Donofrio) and seconded (Timpanelli) to accept these two resignations as presented. Vote: Unanimous in favor.

Dr. Cialfi presented one non-certified resignation:
Barbara Jarosko, secretary at Tashua Elementary School since April 1993, retiring effective October 20, 2017

It was moved Donofrio) and seconded (Timpanelli) to accept this resignation as presented. Vote: Unanimous in favor.

B. Minutes – Regular Meeting, 9/26/2017
It was moved (Donofrio) and seconded (Petitti) to approve the minutes of the September 26, 2017 Board of Education meeting as presented. Vote: Unanimous in favor.

C. District Enrollment Report - Dr. Cialfi reviewed the official October 1, 2017 enrollment figures which are forwarded to the State Department of Education. It was noted that the overall enrollment is 50 students above the October 1, 2016 count.

D. Advanced Placement Courses at Trumbull High School (please see attached report)

Dr. Budd gave a presentation on data related to the Advanced Placement course offerings at Trumbull High School. The AP program has grown significantly in the past ten years with all courses approved by the College Board for equivalency to first year college offerings. Teachers Kate Durand and Thomas Edwards spoke to the Board about the expansion of AP courses at THS and the benefits and performance of enrolled students.

Adjournment

Board Members gave unanimous consent to adjourn the Public Session at 8:05 p.m.

Trumbull High School Advanced Placement Student Enrollment, 5-Year Lookback

** Years 2013-14 through 2016-17 report enrollment as of the last day of the school year. Year 2017-18 is actual enrollment as of 9/27/17.*

	Course	2013-14	2014-15	2015-16	2016-17	2017-18
Arts	Music Theory				11	10
	Studio Art				6	14
English	English Language & Composition	38	50	37	55	57
	English Literature & Composition	43	28	43	37	36
History & Social Sciences	Comparative Government & Politics				17	9[1]
	European History		7		16	14
	Human Geography					25
	Macroeconomics	23	29	25	25	49
	Microeconomics	23	29	25	25	49
	Psychology	84	81	82	110	155
	U.S. Government & Politics				33	65
	U.S. History	32	41	44	40	7[2]
STEM	Biology	26	15	26	26	29
	Calculus AB	29	35	27	45	46
	Calculus BC	20	22	22	52	49
	Chemistry	40	48	45	62	44
	Computer Science A	26	18	29	30	41
	Computer Science Principles			37	55	39
	Environmental Science	14	28	22	17	24
	Physics 1	20	21	25	102	106
	Physics C	23	19	24	25	27
	Statistics	15	8	12	15	3[3]
World Languages & Cultures	French Language & Culture	12	14	8	8	20
	Italian Language & Culture					18
	Latin					6
	Spanish Language & Culture	34	28	33	35	30
	TOTAL	**502**	**521**	**566**	**847**	**972**
in addition	Multivariable Calculus (above Calc. BC)			9	5	17

[1] Course is scheduled for Spring 2017-18; enrollment anticipated to increase by then.
[2] Lower enrollment for 2017-18 relates to the move of U.S. History from a grade 10 to a grade 11 course; enrollment anticipated to rebound for 2018-19.
[3] Course being taught online through Virtual High School for 2017-18.

Trumbull Public Schools
Board of Education
October 10, 2017

Advanced Placement Courses at Trumbull High School

Jonathan S. Budd, Ph.D.
Assistant Superintendent of Curriculum, Instruction, & Assessments

Kate Durand
Art Teacher, Trumbull High School

Thomas Edwards
Science Department Chair, Trumbull High School

Benefits of Advanced Placement Courses

- College-equivalent classes while in high school – both content, skills, and habits of mind
- Stronger transcript-building for college admissions
- Opportunity for advanced placement in college or direct college credit
- Opportunity to study in rich depth a subject of one's choice, passion, and interest

Expansion of AP Over Time

"The Advanced Placement Program . . . has grown significantly in the past 10 years. . . . There is one clear, undeniable benefit awarded to every single student who enrolls in AP: opportunity. When coupled with a student's hard work, that opportunity can have myriad outcomes whether it is learning to craft effective arguments, discovering a lifelong passion, building confidence, earning credit for college, or persisting to graduate from college on time."

Strong AP Achievement Data

- Outstanding performance (~90% in each of the past seven years) by TPS AP students on College Board exams linked to college success and graduation
- Details on next slide

TPS AP Data, 5-Year Lookback

Year	Total AP Students	Total # of AP Exams	Total # of AP Students with Scores 3+
2011	212	416	195 (92%)
2012	231	412	213 (92%)
2013	223	409	208 (93%)
2014	221	420	211 (95%)
2015	237	421	221 (93%)
2016	252	434	393 (91%)
2017	359	691	615 (89%)

89% of TPS AP students in 2017 achieved a score of 3+, defined as "the score point that research finds predictive of college success and college graduation."

Expanding AP Access: A Four-Part Approach

2015-16

1. To further expand AP course offerings to meet diverse student interests
2. To further expand student enrollment in AP courses

2016-17 & beyond

3. To support teachers of AP courses in ongoing professional development
4. To support students in AP courses through targeted support and strong K-12 curricula

1. Further Expanding AP Course Offerings

- Twenty-three AP courses offered in 2016-17
- Three additional AP courses added for 2017-18
- All courses approved by College Board for equivalency to first-year college offerings
- Details on next slide

Advanced Placement Courses at Trumbull High School

- AP English Language & Composition
- AP English Literature & Composition
- AP European History
- AP Microeconomics
- AP Macroeconomics
- AP Psychology
- AP United States History
- AP Biology
- AP Calculus AB
- AP Calculus BC
- AP Chemistry
- AP Computer Science A
- AP Computer Science Principles
- AP Environmental Science
- AP Physics 1
- AP Physics C
- AP Statistics
- AP French Language & Culture
- AP Spanish Language & Culture
- AP Music Theory
- AP Studio Art
- AP Comparative Government & Politics
- AP United States Government & Politics
- AP Human Geography*
- AP Italian Language & Culture*
- AP Latin*

** New course for 2017-18*

2. Further Expanding Student Enrollment in AP Courses

- Thirty percent of THS seniors in 2016 graduated having taken at least one AP course at THS.
- But we knew we could do even better.
- Details on next slides

AP Enrollment, Class of 2016

	# of students	# of Students as % of Graduating Class	
One AP course in THS career	52	10%	
Two AP courses in THS career	34	6%	
Three AP courses in THS career	22	4%	30%
Four AP courses in THS career	11	2%	
Five+ AP courses in THS career	44	8%	
Zero AP courses in THS career	378	70%	

AP Enrollment, Class of 2017

	# of students	# of Students as % of Graduating Class	
One AP course in THS career	79	15%	
Two AP courses in THS career	45	9%	
Three AP courses in THS career	25	5%	45%
Four AP courses in THS career	16	3%	
Five+ AP courses in THS career	64	13%	
Zero AP courses in THS career	275	55%	

AP Enrollment, Class of 2018

	# of students	# of Students as % of Graduating Class	
One AP course in THS career	95	17%	
Two AP courses in THS career	41	7%	
Three AP courses in THS career	31	5%	48%
Four AP courses in THS career	32	6%	
Five+ AP courses in THS career	76	13%	
Zero AP courses in THS career	293	55%	

** All data based on current scheduling for the Class.*

Increase from Class of 2016 to Class of 2018

	# of Students as % of Graduating Class, Class of 2016	# of Students as % of Graduating Class, Class of 2017	# of Students as % of Graduating Class, Class of 2018
One AP course in THS career	10%	15%	17%
Two AP courses in THS career	6%	9%	7%
Three AP courses in THS career	4%	5%	5%
Four AP courses in THS career	2%	3%	6%
Five+ AP courses in THS career	8%	13%	13%
Zero AP courses in THS career	70%	55%	52%

30%

45%

48%

A marked sustained increase in the number of students who will graduate having taken at least one AP course at THS.

Subject-Specific* Enrollment

	2013-14	2014-15	2015-16	2016-17	2017-18	5-Year Increase
Arts	0	0	0	17	24	(n/a)
English	81	78	80	92	93	15%
History & Social Sciences	162	187	176	266	373	130%
STEM	213	214	269	429	408	92%
World Languages & Cultures	46	42	41	43	74	61%
TOTAL	**502**	**521**	**566**	**847**	**972**	**94%**

* Subject-specific groupings are those used by the College Board.

AP Studio Art:

Outstanding Achievement &

Growth over Time

AP Physics 1:

Outstanding Achievement &

Growth over Time

AP Physics B vs. AP Physics 1

AP Physics B (last exam: Spring 2014)

- many topics (some argued too many)
- content-heavy
- very fast pace
- heavy emphasis on recall and "plug & chug"

AP Physics 1 (first exam: Spring 2015)

- fewer topics
- organized by big ideas
- emphasis on concepts & reasoning
- emphasis on inquiry through the use of "practices"

AP Physics 1 Topics

- Kinematics
- Dynamics
- Circular Motion and Gravitation
- Energy
- Momentum
- Simple Harmonic Motion
- Torque and Rotational Motion
- Electric Charge and Electric Force
- DC Circuits
- Mechanical Waves and Sounds

The Big Ideas

1) Objects and systems have properties such as mass and charge. Systems may have internal structure.
2) Fields existing in space can be used to explain interactions.
3) The interactions of an object with other objects can be described by forces.
4) Interactions between systems can result in changes in those systems.
5) Changes that occur as a result of interactions are constrained by conservation laws.
6) Waves can transfer energy and momentum from one location to another without the permanent transfer of mass and serve as a mathematical model for the description of other phenomenon.

The Practices

P1) The student can use representations and models to communicate scientific phenomena and solve scientific problems.
P2) The student can use mathematics appropriately
P3) The student can engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course
P4) The student can plan and implement data collection strategies in relation to a particular scientific question.
P5) The student can perform data analysis and evaluation of evidence.
P6) The student can work with scientific explanations and theories
P7) The student is able to connect and relate knowledge across various scales, concepts, and representations in and across domains.

AP Physics 1 / Honors Physics

Final Thought

Assessment Fidelity

Released Free-Response Question

(12 points, suggested time 25 minutes)

A new kind of toy ball is advertised to "bounce perfectly elastically" off hard surfaces. A student suspects, however, that no collision can be perfectly elastic. The student hypothesizes that the collisions are very close to being perfectly elastic for low-speed collisions but that they deviate more and more from being perfectly elastic as the collision speed increases.

(a) Design an experiment to test the student's hypothesis about collisions of the ball with a hard surface. The student has equipment that would usually be found in a school physics laboratory.

i. What quantities would be measured?

ii. What equipment would be used for the measurements, and how would that equipment be used?

iii. Describe the procedure to be used to test the student's hypothesis. Give enough detail so that another student could replicate the experiment.

(b) Describe how you would represent the data in a graph or table. Explain how that representation would be used to determine whether the data are consistent with the student's hypothesis.

(c) A student carries out the experiment and analysis described in parts (a) and (b). The student immediately concludes that something went wrong in the experiment because the graph or table shows behavior that is elastic for low-speed collisions but appears to violate a basic physics principle for high-speed collisions.

i. Give an example of a graph or table that indicates nearly elastic behavior for low-speed collisions but appears to violate a basic physics principle for high-speed collisions.

ii. State one physics principle that appears to be violated in the graph or table given in part (c)i. Several physics principles might appear to be violated, but you only need to identify one.

Briefly explain what aspect of the graph or table indicates that the physics principle is violated, and why.

Next Steps

<u>2016-17 & beyond</u>

3. To support teachers of AP courses in ongoing professional development
4. To support students in AP courses through targeted support and strong K-12 curricula