

**NEW MILFORD BOARD OF EDUCATION**  
**New Milford Public Schools**  
**50 East Street**  
**New Milford, Connecticut 06776**

**COMMITTEE ON LEARNING**  
**SPECIAL MEETING NOTICE**

<b>DATE:</b>	<b>November 15, 2011</b>
<b>TIME:</b>	<b>6:30 P.M.</b>
<b>PLACE:</b>	<b>Lillis Administration Building – Room 2</b>

GEORGE C. BUCKBEE  
TOWN CLERK



2011 NOV 10 A 10:15

NEW MILFORD, CT

**AGENDA**

**New Milford Public Schools Mission Statement**

The mission of the New Milford Public Schools, a collaborative partnership of students, educators, family, and community is to prepare each and every student to compete and excel in an ever-changing world, embrace challenges with vigor, respect and appreciate the worth of every human being, and contribute to society by providing effective instruction and dynamic curriculum, offering a wide range of valuable experiences, and inspiring students to pursue their dreams and aspirations.

**1. CALL TO ORDER**

**2. PUBLIC COMMENT**

The Board welcomes public participation and asks that speakers please limit their comments to 3 minutes. Speakers may offer objective comments of school operations and programs that concern them. The Board will not permit any expression of personal complaints or defamatory comments about Board of Educations personnel and students, nor against any person connected with the New Milford Public School System.

**3. DISCUSSION AND POSSIBLE ACTION**

**A. Review and approval of curriculum:**

1. AP Language & Composition
2. Civics
3. Personal Finance

Justin Ongley  
Dr. McLaughlin  
Daryl Daniels  
Jason Schemm/Eileen Reed

**B. Request for New Course – Project Lead the Way**

**4. ITEMS FOR DISCUSSION**

- A. Summer School
- B. Online Learning
- C. Curriculum Update

Dr. McLaughlin  
Dr. McLaughlin  
Dr. McLaughlin

**5. ADJOURN**

**Sub-Committee Members:** Mrs. Wendy Faulenbach, Chair  
Mr. David A. Lawson  
Mrs. Lynette Celli Rigdon  
Mrs. Nancy C. Tarascio-Latour

**Alternates:** Mr. Thomas McSherry  
Mr. Rodney Weinberg

**NEW MILFORD PUBLIC SCHOOLS**  
**Office of the Assistant Superintendent**  
**50 East Street**  
**New Milford, Connecticut 06776**  
**(860) 354-3235 FAX (860) 210-2643**



**Maureen E. McLaughlin Ph. D.**  
**Assistant Superintendent of Schools**

TO: Committee on Learning  
FROM: Maureen E. McLaughlin, Ph.D.  
DATE: October 31, 2011  
RE: Online Learning

We currently use online learning in the following places:

**Adult Education**

Adult Education (5:00-9:00 PM) uses Odysseyware for General Education Diploma (GED) courses and credit courses. In addition, some students meet with a teacher from 4:00-5:00 for guidance/direction and then work online mostly on their own. There are currently six students taking online courses.

Odysseyware needs to be monitored as students have questions, essays that need to be graded, and lessons modified. Some high school teachers are the go-to people for courses earning credit:

John Boothby – science  
Jeff Bronn – English  
Denise Duggan – health  
Christina McCullough – social studies  
Janice Perrone – business finance

**Summer School**

Odysseyware was used for credit recovery in the summer of 2011. Students will be notified sooner this year of the online summer school option, so we anticipate the number of participants will increase from the seven who participated this past summer.

Teachers are needed to review the courses to determine if a course is too long or too short. As with adult education, some courses need to be “created” as the expectations are not realistic in a home setting. For example, some of the science equipment needed for some lessons, is unavailable at home

### **A+ Software**

This software offers courses in math, social studies, language arts, and science. It is offered in three locations in the district: the high school special education department, Schaghticoke Middle School for those students who have issues in regular education classrooms, and at Lillis in the Computer Based Instruction (CBI) program predominantly for students who have been expelled or have been identified as special education or as 504.

The number of students who participate in these programs varies throughout the year. Currently there are eight students using A+ at SMS with three more expected to join the group and twenty-one students at NMHS. The CBI program currently has nine students enrolled with two more expected.

### **High School Online Courses**

Students have been taking courses online since the 2008-2009 school year. Most of these courses are offered through Brigham Young University. Kaplan, Whitmore, and Compu High are the other three institutions offering online services.

We had three students take courses online in 2008-2009, twenty-one in 2009-2010, twenty-eight in 2010-2011, and so far in 2011-2012, there are two students signed up for online courses. Many of these students take more than one course.



## Request for a New Program or Course

Signature of Principal \_\_\_\_\_  
Signature of Department Chair \_\_\_\_\_ (if applicable)

Date: **June 17, 2011**

Title of Proposal: **Project Lead the Way (PLTW)  
Pathway to Engineering**

Person(s) Submitting Proposal: **Eileen Reed and Jason Schemm** \_\_\_\_\_

Curriculum Area: **Science, Technology, Engineering and Math (STEM)** \_\_\_\_\_

Number of Credits/Level (if applicable):

**PLTW Pathway to Engineering is designed as a four-year high school sequence, taught in conjunction with traditional math and science courses. It includes two 1-credit foundation courses (Introduction to Engineering Design and Principles of Engineering) and several 1-credit specialty courses to choose from. Participating high schools must offer a minimum of four courses. Our proposed course sequence would be as follows:**

**Introduction to Engineering Design – 9<sup>th</sup> grade**

**Principles of Engineering – 10<sup>th</sup> grade**

**Digital Electronics – 11<sup>th</sup>/12<sup>th</sup> grade**

**Biotechnical Engineering – 11<sup>th</sup>/12<sup>th</sup> grade**

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Prerequisite Courses (if applicable):

**Students must maintain at least a 75 average in their traditional academic or honors level science and math classes. Successful completion of Introduction to Engineering Design is required for Principles of Engineering.** \_\_\_\_\_

Grade(s): **See above** \_\_\_\_\_

1. Description of Program/Course: (What is it this course/program addresses? How does it relate to the Common Core? What other pertinent information about the proposal do you wish to share? (Use attachment if more space is needed.)

**PLTW is a national nonprofit organization whose education programs prepare students for potential careers in science, technology, engineering and mathematics (STEM) related fields. The Pathway to Engineering program is a pre-engineering program that allows students to explore the broad field of engineering to help them make career decisions.**

**The National Resource Council (NRC), currently overseeing the development of the new National Science Education Standards, has recognized the importance of STEM education. It now includes 'Engineering and Technology' as one of the four core domains of science. The PLTW curriculum is written to the National Education Standards for science, mathematics, English language arts, and International Technology and Engineering Educators Association (ITEEA) technology literacy standards.**

**There is ample opportunity throughout each course in the Pathway to Engineering for students to practice and demonstrate mastery of the reading and writing Common Core State Standards for Literacy in Science and Technical Subjects. Research, analysis and**

communication are key parts of each foundation and specialty course.

The PLTW curriculum is hands-on, project and reality-based and rigorous. Its target population includes students who are interested in a STEM field, have an aptitude for art and design concepts, enjoy working with computers and learn best in hands-on classes.

Our proposal is to begin by offering the Introduction to Engineering Design course for 9<sup>th</sup> graders in the 2012/2013 school year, and then to roll in the other three courses over the following three years, developing an initial cohort of students going through the sequence of courses. A description of each of the four proposed courses is attached as Appendix I.

2. Describe the Current Situation and why the new proposal seems needed. Please also describe what alternatives were considered and what you believe are the advantages and disadvantages of the proposal (use attachment if more space is needed).

The PLTW Pathway to Engineering program specifically addresses the need in today's job market for engineers and technical workers, as well as the overall need for the United States to stay competitive in today's high-tech, high-skill economy. On June 13<sup>th</sup>, 2011, President Obama called the country to train 10,000 new engineers per year. The following day on CBS News, the CEO of DOW Chemical explained that he cannot find enough qualified workers to fill positions in his company. There are currently one million STEM jobs available in the United States and only 200,000 graduates qualified to fill them. The story went on to report that scientists and engineers lead innovation, and innovation creates jobs. The report quoted the CEO and others who say that American high schools are obsolete and that we need to find a way to better promote STEM careers and make them more glamorous to young people.

The advantages of the PLTW program are many. PLTW Pathway to Engineering provides an opportunity for students to explore basic engineering principles and investigate various engineering careers while learning to use current engineering software and other equipment to solve real-world problems. It focuses on applying classroom math and science skills in various engineering settings using an activity, project, and problem-based instructional model to engage students. In addition, students may earn transferable credit from the University of New Haven, which is the PLTW-affiliated university in Connecticut.

According to PLTW's website, "PLTW alumni are studying engineering and technology ... at rates five to ten times the average of all U.S. students." A 2008 study on college readiness for STEM by Phelps, Camburn & Durham at the University of Wisconsin found that PLTW high school students scored significantly higher on the ACT composite measure, as well as the math and science sub-scores, than non-PLTW students. The same study found that PLTW students showed a higher level of college intellectual readiness as well. Another study sponsored by the Southern Regional Education Board in 2008 showed that significantly more PLTW students met NAEP-aligned readiness goals in reading, mathematics, and science than non-PLTW students.

The same study showed PLTW students were also significantly more likely to complete at least four years of mathematics and three years of science courses. Several other studies show PLTW has a positive effect on student attitude and interest in STEM courses, on narrowing the achievement gap, on attendance, and on GPA in freshman year of college.

Currently there is no pathway at New Milford High School that focuses solely on engineering. Half-credit Basic and Advanced Auto CAD courses are offered by the Technology Education department. There is some overlap between these courses and Introduction to Engineering (IED) as both use similar design software. The IED course however focuses on problem-based design solutions and teamwork, as well as global and human impacts.

As of the 2010/2011 school year, there are a total of 31 PLTW high schools in 25 school districts in Connecticut. Thirty of the high schools offer the Pathway to Engineering program. Three offer both the Pathway to Engineering program and the Biomedical Sciences program (another PLTW pathway). One offers only the Biomedical Sciences program. Five of the high schools are magnet schools. The high schools represent all DRGs except F (See Appendix II).

3. Forecasted impact of change: (again, use an additional sheet if needed)

A. Please describe the likely impact of change on the students intended to be directly served by the program/ course.

Students may take one or all four of the Pathway to Engineering courses (note pre-requisites outlined above). These courses would be taken concurrently with the science and math courses that college-bound students traditionally take. The program would not require compromise to any of the students' traditional core course load. Rather, it would provide more choice in electives for students with an interest in STEM-related careers.

B. Will it have impact on other students, if so how,

Some of the materials purchased for PLTW courses will be available for use in other science courses or for Science Horizons science projects.

C. How will it affect students currently being served and are caught in a transition process? (If applicable) ,

Our initial course offering (Introduction to Engineering Design) would be the foundation course of the pathway, and the expectation is that its target population will be 9<sup>th</sup> and 10<sup>th</sup> graders. However, any 11<sup>th</sup> or 12<sup>th</sup> grader meeting the prerequisites may take the course.

D. What is the impact of this proposal on staffing?

**In the first year of implementation of PLTW, depending upon overall science enrollment, IED should be able to be scheduled with current staffing. Enrollment projections will determine staffing needs as additional courses are rolled in. Ultimately it is expected that one additional FTE will be needed for full implementation of the program in the next four years.**

E. Are there scheduling implications associated with this proposal? If yes, detail those implications.

**Starting in the second year of implementation, PLTW courses cannot be scheduled simultaneously, because the same room, and much of the same equipment would be required for all four courses.**

F. Are there space implications associated with the program/ course?

**The courses must be taught in a classroom that can be outfitted with 20 student computers (anticipating an enrollment of 20 students). Our proposal is to convert the photography darkroom to PLTW classroom space. The room is no longer used as a darkroom since the photography course was discontinued. Currently it is being used for the Robotics and Makers club students. There are already 16 enlarger stations that can be used as computer stations instead. The required outlets already exist for 16 computers. There is counter space for an additional 2 computers. The room is connected to room 3108, a physics classroom. This classroom and the adjacent darkroom would be designated the PLTW space.**

G. How might this impact other programs? (Example: Is a new elective likely to affect enrollment in other departments?)

**There is some overlap between the PLTW foundation course, Introduction to Engineering Design (IED), and Basic and Advanced AutoCad, offered by Tech Ed, in that students work with computer aided design modeling systems. The IED course however is problem based and the student works from the holistic perspective of an engineer. Of the approximately 30 PLTW high schools in Connecticut, over half retained their traditional AutoCad courses after PLTW was initiated. Others decided to take on an engineering focus, and offer only IED. There is opportunity for collaboration between the science department and the Tech Ed department in the implementation of PLTW.**

4. What resources are required for the program?

A. Is there a need for new technology? If so, explain.

**Core requirements for the PLTW program include 20 student desktop computers, one teacher laptop computer, a printer, and a scanner. In addition, each PLTW course has specific software and materials requirements. Appendix III lists resource requirements for our proposed courses in the Pathway to Engineering.**

B. What current materials will need replacement?

**None**

C. Are there staffing needs required because of the resources?

**None**

D. Would there be specific needs for materials for SPED or for ELL?

**None beyond regular accommodations.**

E. Is specialized training required for staff?

**Teachers of PLTW courses must attend a specialized 2-week core training session for each PLTW course they teach. In addition, at least one guidance counselor must attend a PLTW counselor conference.**

5. Who will be involved in curriculum writing and when does one envision it will occur?

**Districts that elect to implement the program are required to use the PLTW-developed curriculum. Eileen Reed and Jason Schemm will be involved in adapting the PLTW curriculum to the New Milford Schools curriculum format.**



6. Develop a projected budget of impact costs for three years:  
**See Appendix III**

Description	Year 1	Year 2	Year 3	Total
Costs of Text				
Supplies				
Professional Development				
Curriculum Writing				
Staffing				
Other (Identify)				
Total				

## APPENDIX I

### PLTW Proposed Core Courses

- **Introduction to Engineering Design (IED)**
  - Designed for 9th- or 10th-grade students, the major focus of the IED course is to expose students to the design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards and technical documentation. Students use 3D solid modeling design software to help them design solutions to solve proposed problems and learn how to document their work and communicate solutions to peers and members of the professional community.
- **Principles of Engineering (POE)**
  - Designed for 10th- or 11th-grade students, this survey course of engineering exposes students to major concepts they'll encounter in a postsecondary engineering course of study. Students employ engineering and scientific concepts in the solution of engineering design problems. They develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, documenting their work and communicating solutions to peers and members of the professional community.

### PLTW Proposed Specialization Courses

- **Biotechnical Engineering (BE)**
  - The major focus of this course is to expose students to the diverse fields of biotechnology including biomedical engineering, molecular genetics, bioprocess engineering, and agricultural and environmental engineering. Lessons engage students in engineering design problems related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, forensics and bioethics. Students, usually at the 11th- and 12th-grade level, apply biological and engineering concepts to design materials and processes that directly measure, repair, improve and extend living systems.
- **Digital Electronics (DE)**
  - Digital electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras and high-definition televisions. The major focus of the DE course is to expose students to the process of combinational and sequential logic design, teamwork, communication methods, engineering standards and technical documentation. This course is designed for 10th- or 11th-grade students.

## APPENDIX II

### **PLTW High Schools in Connecticut**

Bridgeport: Bassick, Bridgeport Central  
Bristol: Central High , Eastern High  
East Hartford High  
East Haven High  
Farmington High  
Haddam-Killingworth (Reg. 17)  
Ledyard High  
New Britain High  
New Canaan High  
New Haven: Hillhouse High  
Old Saybrook High  
Portland High  
RHAM High  
Ridgefield High  
Rocky Hill High  
Simsbury  
South Windsor High  
Southington High  
Stratford High  
Tolland High  
Waterbury: Crosby High, Kennedy High, Wilby High  
Weston High

### **Magnet Schools**

Southeastern CT Science and Technology Magnet - New London  
Sport and Medical Sciences Academy Magnet - Hartford  
Engineering and Green Technology - Hartford Public High  
University High School of science and Engineering - Hartford  
Academy of Information Technology and Engineering Magnet -  
Stamford

APPENDIX III  
PROJECT LEAD THE WAY  
PATHWAY TO ENGINEERING  
**COST ESTIMATES (Excluding staffing)**

**Year 1 – Introduction to Engineering Design (IED) and Core Lab Materials**

Hardware	\$3,633.00
Laser Printer	
Teacher Lap Top	
Multiple page scanner	
Digital camera	
Hardware	*\$20,000.00 (one-time purchase)
Student desk-top computers (20)	
Software	**\$2,320.00
Autodesk Inventor Professional	
Equipment	\$1,088.00(all one-time purchases)
Cordless drill	
Clamps	
Miter box	
Steel Tape measures	
Screw driver set	
Pliers	
DVDs	
Consumables	\$ 506.00
Notebooks	
Glue	
Utility knives	
Dowels	
Syringes	
Wooden blocks	
Teacher Training	\$2,100.00
Counselor conference (\$60.00 plus air fare/lodging)	\$ 600.00
Curriculum writing	\$1,210.00

**TOTAL** **\$31,457.00**

**\*( \$20,000.00 Technology Capital expense)**

**\*\* (2320.00 – may share license with Tech Ed)**



**Year 2 – Process of Engineering (POE) and IED**

Hardware	\$0.00
Software	\$3,195.00
Autodesk Inventor Professional	
Equipment	\$7,986.00 (all one-time purchases)
VEX POE kits (2 new, 3 upgrades)	
Dual range force sensors	
Drill press vice	
Digital multimeters	
Drill press bench	
Wire strippers, hammers, squares	
Webcams	
Thermodynamic heat boxes	
LEDs	
Consumables	\$ 312.00
Notebooks	
Glue	
Utility knives	
IED Consumables	\$ 203.00
Teacher Training	\$2,100.00
Curriculum writing	\$1,210.00
<b>TOTAL</b>	<b>\$15,005.00</b>

**Year 3 – Digital Electronics (DE), IED, POE**

Hardware	\$0.00
Software	\$3,865.00
Autodesk Inventor Professional Multisim	
Equipment	\$6,009.00 (all one-time purchases)
VEX DE kits (10)	
Digital Logic Boards (10)	
Microcontroller Robotic Kit (10)	
Integrated circuits	
Capacitors and Resistors kits	
LEDs	
Consumables	\$ 681.00
Random Number Generator kits	
Wire	
Solder practice kits	
Batteries	
Glue	
Utility knives	
IED/POE Consumables	\$ 485.00
Teacher Training	\$2,100.00
Curriculum writing	\$1,210.00
<b>TOTAL</b>	<b>\$14,350.00</b>

**Year 4 – Biomedical Engineering (BE), IED, POE, DE**

Hardware	\$0.00
Software	\$3,865.00
Autodesk Inventor Professional	
Multisim	
Equipment	\$ 317.00 (all one-time purchases)
Microcentrifuge	
Glass/rubber tubing	
Consumables	\$ 515.00
organisms	
Pipettes	
IED/POE /DE Consumables	\$1,055.00
Teacher Training	\$2,100.00
Curriculum writing	\$1,210.00
<b>TOTAL</b>	<b>\$9,062.00</b>

The Committee on Learning curriculum  
can be previewed in the  
Office of the Assistant Superintendent  
Lillis Administration Building – Room #6

Office Hours: 8:00 a.m. – 4:00 p.m.



**New Milford Board of Education  
Committee on Learning Special Meeting Minutes  
November 15, 2011  
Lillis Administration Building**

GEORGE C. BUCKBEE  
TOWN CLERK  
2011 NOV 18 P 1:55  
JB

NEW MILFORD, CT

Present:	Mrs. Wendy Faulenbach, Board Chair Mr. David Lawson Mrs. Lynette Rigdon Mr. Tom McSherry, Alternate
Absent:	Mrs. Alex Thomas Mrs. Nancy Tarascio-Latour

Also Present:	Dr. JeanAnn C. Paddyfote, Superintendent of Schools Dr. Maureen McLaughlin, Assistant Superintendent Mr. Greg Shugrue, Principal, New Milford High School Mrs. Susan Greene, Asst. Principal, New Milford High School Mr. Daryl Daniels, Teacher Mr. Justin Ongley, Teacher Mrs. Eileen Reed, Teacher Mr. Jason Schemm, Teacher
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1.	<b>Call to Order</b> The special meeting of the New Milford Board of Education Committee on Learning was called to order at 6:30 p.m.	<b>Call to Order</b>
2.	<b>Public Comment</b> Bill Wellman, a member of the Board of Education, noted that he was on the Board of Education in 1980 when the discussion about computers replacing textbooks came up. He said there has been an explosion of online opportunities for education for teachers and students. He suggested the schools have not done a good job of including online education as a critical part of mainstream education. He noted college students often have opportunities to take online courses, but they are not all prepared for that. He submitted some articles on online learning that he wanted to have as part of the official minutes.  Mrs. Faulenbach said that the articles will be passed out to the board members as board correspondence.  Lynda Wellman said she has been attending school board meetings for years, as a teacher and as a reporter. She noted that when she visited North Carolina this past summer a newspaper reported that students were required to take a computer course for credit to graduate from high school. She said all	<b>Public Comment</b>

	professions now are using computers. Mrs. Wellman also encouraged the continued funding of professional development for staff on technology.	
3. A. 1.	<p><b>Discussion and Possible Action</b></p> <p><b>Review and approval of curriculum:</b></p> <p><b>AP Language &amp; Composition</b></p> <p>Justin Ongley, who co-authored the curricula with Melissa Stancheck, was present to present the course. He said it was a new course with a non-fiction focus. In this course, students will learn the way language functions and how it is used to create meaning. They will look at classical models and updated models. In the course, a wide range of topics will be covered including rhetorical, argumentative, and synthesis essays.</p> <p>In the first marking period, the focus will be on rhetorical essays. The second marking period will focus on argumentative and the third will be on synthesis. The AP test will be conducted in May. There will be eight, full length papers, two per quarter.</p> <ul style="list-style-type: none"> <li>• Dr. McLaughlin said there are three sections of this course currently.</li> <li>• Mr. Shugrue said this course was a by-product of the PSATs. He said this syllabus has to be presented to colleges for approval for AP testing.</li> <li>• Dr. McLaughlin noted that even though AP gives guidelines, the curriculum still has to be written, and she is impressed with what students will have to do in this course.</li> <li>• Mr. Ongley noted that the students taking this course will be prepared for next year should they take AP Literature.</li> <li>• Mr. Lawson asked if this course was being offered only to 11<sup>th</sup> graders, and Mr. Shugrue said 12<sup>th</sup> graders can take it as well.</li> <li>• Mr. Lawson said this course would be good for English requirements at the university level.</li> </ul>	<p><b>Discussion and Possible Action</b></p> <p><b>Review and Approval of Curriculum:</b></p> <p><b>AP Language &amp; Composition</b></p>
2.	<p><b>Civics</b></p> <p>Dr. McLaughlin noted the two authors, Chuck Lynch and Cristina McCullough, could not be present this evening, so she introduced the course. She said it is a required course since 2004 for juniors and seniors.</p>	<p><b>Civics</b></p>

	<p>The course speaks to the different parts of government, our rights, etc. Dr. McLaughlin noted in relation to the earlier discussion on online learning that in the Suggested Resources section of each unit, curricula now offers links to websites for further information.</p> <p><b>B. Request for New Course – Project Lead the Way</b></p> <p>Eileen Reed and Jason Schemm presented the proposal for this new course. Ms. Reed said Project Lead the Way (PLTW) is a non-profit organization which promotes the STEM related curriculum. The organization was founded in the 1990s and has spread across all fifty states. There are currently 4,500 schools who are involved with PLTW including thirty-one in Connecticut. There are three curriculum pathways from which to choose – Gateway to Technology which is a middle school track, Biomedical Services for high school, and Pathway to Engineering for high school. The proposal is for the Pathway to Engineering to introduce students to basic engineering principles and careers. The curriculum is activity, project, and problem-solving based. There is engineering software but no textbook for this class. Ms. Reed noted there is a huge need in the job market for STEM related workers.</p> <ul style="list-style-type: none"> <li>• Mr. Schemm said the reason this program should be offered now includes the fact that the students said they would love such a class and most high schoolers do not know what is expected for engineering. The high school is currently well staffed with four physics certified teachers and two trained engineers. Also, the block schedule lends itself to adding this program with the 79 minute classes.</li> <li>• Mr. Schemm also noted that PLTW connects locally with the University of New Haven and freshmen can avail themselves of college credit.</li> <li>• Ms. Reed said the Pathway to Engineering Program includes eight courses, two are foundational and must be offered, and six are special courses; two would have to be chosen. The two specialty courses would be digital electronics and biotechnical engineering. The courses would be rolled in over four years with</li> </ul>	<p><b>Request for New Course – Project Lead the Way</b></p>
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the first foundational course being offered next year.

- There would be a maximum of twenty students with one computer for each student. This would require a designated space.
- Students do not need to take all four courses if they find they do not want to continue in the track.
- The space that would be used is the photo darkroom in the physics wing because it is no longer used as a darkroom.
- This program is costly to implement; however, the annual maintenance after the initial start up would only be \$5,000 per year.
- Mrs. Rigdon asked if there was anything the PLTW organization does to help the schools, and Mr. Shemm said they offer their curriculum; they offer training, and they offer a way to purchase the materials through a collaborative which makes them less expensive.
- Mrs. Rigdon asked why we need the agreement with the organization if we could do the work independently. Mr. Shemm said this curriculum is the current best practice. Ms. Reed said there would be no college credit available if we did not work through this organization.
- Mr. McSherry said the concern is the budgetary impact – he said the purchase of computers is never one time. He asked if there would really be twenty freshmen interested in taking the course.
- Mr. Shemm said he felt there would be twenty freshmen as there are approximately 400 students per grade.
- Mr. Lawson asked who the target students would be, and Ms. Reed said the students should have earned 75 for a grade in science or math courses, have an interest in hands-on learning, creativity, an artistic bent. It is not intended for the highest academic students.
- Mr. Lawson asked if the college credits would be transferable and if there would be a cost, and Ms. Reed said she would have to check on



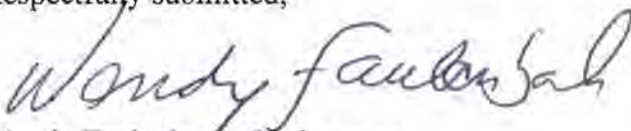
	<p>the cost. Mr. Shemm said he thought the credits should transfer.</p> <ul style="list-style-type: none"> <li>• Mr. Lawson asked how many new course proposals might be coming before the committee, and Dr. McLaughlin said there was one more on deck. Mr. Shugrue said he thought there would be one in history and one in business – Personal Finance II.</li> <li>• Mr. Lawson noted that the whole picture needed to be looked at and not just this course.</li> <li>• Mrs. Rigdon asked if the PLTW organization offered grants or incentives. Mr. Shemm said not through PLTW.</li> <li>• Dr. McLaughlin said that the five-year curriculum schedule can be revised to cover some of the implementation costs.</li> <li>• Mr. McSherry noted he was concerned with financing a new program, and Mr. Shemm said Mr. DeVito had been brought in to the discussion regarding the new computers.</li> <li>• Mrs. Faulenbach explained to the committee that the protocol for a new program request has to go the board before the budget season begins. Therefore, Mrs. Faulenbach requested that the committee vote to bring this proposal to the December board meeting</li> </ul> <p><b>Mrs. Rigdon moved to bring the new course, Project Lead the Way, to the full board for discussion and possible action, seconded by Mr. McSherry and passed unanimously.</b></p>	
<p><b>A. 3.</b></p>	<p><b>Personal Finance</b></p> <p>Dr. McLaughlin noted that Janice Perrone and Daryl Daniels are the authors of the personal finance course. He said they received a \$25,000 grant to write this curriculum and another \$25,000 for Personal Finance II.</p> <ul style="list-style-type: none"> <li>• Mr. Daniels said there is a push towards financial literacy on the state level so that is why the grants are available.</li> <li>• Ms. Perrone said there may be a requirement from the state in the future to have personal finance for all schools.</li> </ul>	<p><b>Motion made and passed to bring the new course, Project Lead the Way, to the full board for discussion and possible action.</b></p> <p><b>Personal Finance</b></p>

	<p><b>Mr. McSherry moved to bring the following curricula to the full board for approval: AP Language &amp; Composition, Civics, and Personal Finance, seconded by Mr. Lawson and passed unanimously.</b></p>	<p><b>Motion made and passed to bring the following curricula to the full board for approval: AP Language &amp; Composition, Civics, and Personal Finance</b></p>
<p><b>4.</b> <b>A.</b></p>	<p><b>Items for Discussion</b>  <b>Summer School</b>          Dr. McLaughlin said regular summer school education was offered this past summer for fifteen days in July. Of the 200 students who were recommended to take the program, only seventy-eight actually participated. Dr. McLaughlin said perhaps it was not advertised enough because the selection process was done after the spring DRP tests. Of the seventy-eight who participated, 63% saw an increase in DRP scores from spring to fall, 29% decreased, and 6% remained the same. Dr. McLaughlin noted that attendance did have an impact on performance. She said students who attended fewer than ten days saw less growth. Dr. McLaughlin said she plans to look at the data from students who did not go to summer school but were recommended to go and how they did on the fall DRP tests.</p> <ul style="list-style-type: none"> <li>• Mrs. Faulenbach asked if this information might be available for the budget season and Dr. McLaughlin said it would.</li> <li>• Mrs. Rigdon asked how many of the children used the bus transportation, and Dr. McLaughlin stated that she was at SNIS on several mornings to see students disembarking from the buses and that she will follow-up with the bus company to see if there was a way they can tell how many students took advantage of the transportation offer.</li> <li>• Mr. Lawson said that the cost of remediation was far more expensive than a bus ride.</li> <li>• Mr. McSherry asked when the decision as to who needed to come to summer school was made and when the notice was given. Dr. McLaughlin said the decision was made after the spring DRPs which was continually being pushed farther back because of the winter weather closures.</li> </ul>	<p><b>Items for Discussion</b>  <b>Summer School</b></p>

<p><b>B.</b></p>	<p><b>Online Learning</b></p> <p>Dr. McLaughlin noted there are several areas where online learning is prevalent including adult education and summer school. She said the district currently owns ten Odysseyware licenses, which serve more than ten people as they are not purchased per person. Adult Ed uses this for GED and credit courses. Odysseyware still requires a certified teacher to oversee the program, so teachers have been assigned for core subjects. Summer school was offered online using Odysseyware for the first time, since most students have gone to Brookfield in the past.</p> <p>Another software program used is A+ which is similar to Odysseyware but does not have the extent and rigor of course choices. It is used at SMS for students who struggle in the classroom. It is also used at the high school in the special education department and at Central Office in the Computer Based Instruction (CBI) program for students who are expelled, special education, or 504.</p> <p>The high school has offered courses online; some students take multiple online courses. Many take courses offered through BYU. The curricula also include links to online resources. The professional development has included a fair amount of technology this year including the Smartboard training – both for new and current users.</p> <ul style="list-style-type: none"> <li>• Mr. McSherry noted that high school number of online users was down this year, and Mr. Shugrue said it was early and that students would begin to go online for credit recovery after the first semester.</li> <li>• Mr. McSherry said the online learning will be key for electives and to getting to 25 credits.</li> <li>• Mr. Shugrue noted that online learning is a paradigm shift for most teachers and some are afraid. He also noted the cost of online learning is placed on the learner, due to Board policy, versus the school system.</li> <li>• Mr. Lawson said that children need a foundation of technology before they are forced to use it. He said it is not good to assume that all students have computers at</li> </ul>	<p><b>Online Learning</b></p>
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	<p>home and that all students know how to use them. He said the Board needs to mandate a computer literacy course.</p> <ul style="list-style-type: none"> <li>• Mr. Shugrue said before they allow students to take an online course, they sit down with the students to learn how comfortable they are with the use of computers.</li> <li>• Mrs. Faulenbach noted that the technology discussions have been ongoing and will be ongoing. She said there are so many pieces to the technology discussion such as equipment, curriculum, and training.</li> <li>• Mr. Lawson said the technology scope and sequence is not implemented, evaluated, or assessed and needs to be a foundation.</li> <li>• Mrs. Rigdon said she felt if the schools did not start getting technology into the schools, it could be too little, too late.</li> <li>• Mr. McSherry noted that we are using technology in the schools and the committee may be underestimating how much of it is being used.</li> </ul>	
<b>C.</b>	<p><b>Curriculum Update</b></p> <p>Dr. McLaughlin said she has looked at the five-year plan and there are already many curricula that have been completed, there are approximately a dozen others coming up in either December or March. There are still a few courses where no one has yet stepped up to author them. She noted the teachers have told her that they often learn a lot in the process of writing curricula.</p>	<b>Curriculum Update</b>
<b>4.</b>	<p><b>Adjournment</b></p> <p>Mr. McSherry moved to adjourn the meeting at 8:22 p.m. seconded by Mrs. Rigdon and passed unanimously.</p>	<p><b>Adjournment</b></p> <p><b>Motion made and passed to adjourn the meeting at 8:22 p.m.</b></p>

Respectfully submitted,



Wendy Faulenbach, Chairperson  
 New Milford Board of Education