

THE BERLIN BANNER

MAY 2017

BUDGET EDITION

Dear Berlin School District Residents,

Look around and you will see several significant physical changes which have occurred within our schools. Over the previous six years, the Berlin Schools have taken on multiple facilities projects that have added to improved learning environments for our students and increased life expectancy of our buildings. Window replacement, new boilers, roof replacements, additional classroom spaces, upgraded auditorium equipment, increased and faster technology access, and new buses are a few of the visible items you will encounter. Thank you for voting on previous capital projects! Your vote counts!

Some less visible changes are the highly successful (and self-sustaining) food service program and kitchen upgrades, secure school access, internal and external communications upgrades, and improvements to the heating and ventilation systems in both buildings. All of these upgrades were made because of the support of the residents of the Berlin Schools. Your vote counts!

On the academic side, we hired additional staff and support personnel, rearranged and prioritized curriculum and instructional programs, created an elementary science lab, added college and distance learning courses, and have implemented a successful School within a School program. Our recent additions of reading teachers, a school counselor and a library media specialist at Berlin Elementary School, Response to Intervention and Academic Intervention Services positions, behavior/discipline teacher, Director of Curriculum and Instruction, education technology teachers, communications personnel, and technology staff have all contributed to a positive improvement in Berlin schools and students. This would not have happened without your support. Your vote counts!

The 2017-2018 proposed school budget is \$20,127,758. Our estimated State Aid totals \$9,918,121. Due to an increase in NYS revenue to Berlin in the amount of \$502,720, and with careful budget planning over the previous five years, we are well positioned financially for the next school year.

The 2017-2018 proposed budget maintains programs that keep students engaged in the learning process, that keep the focus on raising student achievement and increasing mastery levels in all academic areas, and in graduating all students in a timely manner. Next year's budget calls for a 1.25% tax levy increase (approximately \$112,472) for a total tax levy of \$9,119.099.

The future of all Berlin students relies on your continued support. Please take the time to vote on Tuesday, May 16, 2017. Your vote counts!

Sincerely,

Dr. Stephen Young
Superintendent of Schools



2nd Grade Kicks Off Service Learning Project

The 2nd grade kicked off their service learning project called Pennies for Patients in March. Christine Krenzer from the Leukemia and Lymphoma Society (LLS) spoke with the students about leukemia and lymphoma. Lukas Zuke volunteered to be Captain Chemo to demonstrate how chemo kills cancer cells. Their goal is to raise \$500 to help.

SPECIAL POINTS OF INTEREST:

- ◆ Budget Vote and Board of Education Election to be held May 16, 2017 from noon to 9 PM at Berlin Elementary School
- ◆ Class of 2017 Valedictorian & Salutatorian Announced
- ◆ Dramateers
- ◆ Budget Information
- ◆ Art Department News
- ◆ Board of Education Candidates

Berlin High School Announces Class of 2017 Valedictorian and Salutatorian

Valedictorian – Ioann Popov

Ioann Popov, son of Oleg and Anna Popov of Petersburg, has been named Berlin High School's Class of 2017 Valedictorian.

Ioann has excelled in academics, starting an accelerated track in math and science in eighth grade. In eleventh grade, he earned coveted Department Keys for Academic Excellence in Math, Science and Social Studies. As a senior, Ioann enrolled in a Siena College Physics course as well as Advanced Placement Chemistry and a Calculus course at BHS. While managing challenging course loads and excelling academically, Ioann is still able to volunteer his time as a Link Crew mentor and assist ninth graders at BHS.



Furthermore, Ioann has participated in extracurricular activities such as athletics and music. He is a member of the varsity soccer and track teams. In addition to sports, Ioann plays the trumpet and was the Vice President of the high school band last year. He is also involved with the school drama club, the Berlin Dramateers. Outside of school, Ioann is an ordained church reader at Nativity of the Mother of God Russian Orthodox Church and a member of the church choir.

This combination of strong work ethic, character and commitment to school has earned Ioann a spot in both Berlin High School's National Honor Society (of which he is the President) and the NYS Science Honor Society. He plans to continue his education at Yale University this fall. He is interested in Physics and Applied Mathematics.

Budget Vote/BOE Election

Tuesday, May 16, 2017

Berlin Elementary School

12:00 PM—9:00 PM

District Looks to Add Student Board Member

The Berlin Central School District would like to add an ex-officio student member to the Board of Education. The student Board member will sit with other Board members and participate in all Board meetings but will not be able to vote or attend executive sessions. Like other Board members, the student will receive no compensation of any form for participating at Board meetings. The student must be a senior at Berlin Middle/High School next year and attended the High School for at least two years prior to selection.

Salutarian – Alexander Flowers

Alexander Flowers, son of Scott and Cindy of Petersburg, has been named Salutarian for the Berlin High School Class of 2017.

A well-rounded student, Alex has excelled academically, athletically and musically. He challenged himself with advanced math and science courses beginning in eighth grade. In eleventh grade, faculty awarded Alex with Department Keys for Academic Excellence in English, Social Studies, Math, Science and Spanish. He enjoys giving back to the school by tutoring Berlin Middle School students for one hour each week.

Alex has been a member of the varsity track team since eighth grade. He holds the school record in the pole vault with a height of 13 feet and one inch.

Alex demonstrated his leadership as the Student Council President during eleventh and twelfth grade, as well as the Treasurer for the National Honor Society, the Class of 2017 and the Spanish Club. When he is not busy with school, Alex spends a lot of time with his family, especially his younger cousins. During the summer, he is a lifeguard at Grafton Lakes State Park.



Author and Illustrator Matt McElligott Visits BES

Matt McElligott, author and illustrator of many books for children including the *Mad Scientist Academy* series, *Even Monsters Need Haircuts*, *Backbeard the Pirate*, and the *Benjamin Franklinstein* series, visited Berlin Elementary School to speak to students about his writing and illustrating processes.

Throughout the day, McElligott talked to students about the process of writing and illustrating, allowing them to help him create and name a new character. McElligott demonstrated how he uses computer graphics to create new illustrations and projected them on a screen. The students were able to ask questions about the process. McElligott's visit was part of the March into Reading month at BES. Stu-



New Technology Course Incorporates Math and English

This year, Berlin High School is piloting an Applied Technology Education course that incorporates English and Mathematics in a hands-on environment. Students engage in woodworking projects that allow them to use their hands and apply knowledge from these subject areas.

The class, colloquially nicknamed “Mountaineer Craftsman” by students, was developed by BHS technology teacher Dawn Wetmore with the support of Dr. Cathie Allain, the principal at Berlin Middle/High School.

“We were looking for course options that would provide an alternative avenue for students who are not typically interested in academics, while still maintaining a focus on English and Math,” said Wetmore.

Unlike past woodworking courses, in which students got to keep what they made, the Applied Technology class makes items that are specifically for other people. Therefore, students utilize English concepts to develop and write contractual documents for the community members who submit orders to the class. The students also designed and created promotional flyers and business cards.

In addition to developing promotional materials and contracts, students in the Applied Technology class apply Math concepts to their projects, such as calculating board length by linear foot (or board foot). Math is also required for students to develop project budgets, which is especially important since they are working with clients in the community.

Using equipment in the shop room, the class fulfills requests from the community for wooden objects such as wooden pencil sets, boxes, clocks and Adirondack chairs. When there is not an order in place, students work on items for the end of the year sale in April.



Snowshoeing at BES

This winter, third grade students in Mr. Bourquard's and Mrs. Healy's classes studied animals and people of the Polar Regions. Students learned how people and animals survive during the cold winter. Snow goggles were used by the Alaskan Native hunters, who often encountered snow and ice during their hunting excursions. The snow goggles protected the hunters' eyes from snow and ice glare. The goggles were usually made out of wood, ivory or bowhead whale baleen with carved narrow slits for viewing. Not having any whale baleen readily available, students improvised and made their goggles from card stock and string. The area around the slits was colored black to reduce reflection; the remaining area was colored red. The students concluded their study with a snowshoeing excursion at Berlin Elementary.

Berlin Dramateers Wowed Audiences with “The Little Mermaid”

On March 24 and 25, 2017, the Berlin Dramateers took audiences “under the sea” for their production of Disney’s “The Little Mermaid.”

Under the direction of High School Music Teacher, Leslie Eliashuk, the cast performed some of the most beloved Disney songs, including “Under the Sea.” Many cast members wore shoes with wheels to creatively simulate gliding underwater.

Audience members were entertained by favorite characters Ariel (Sarah Jean French), Prince Eric (Alex Flowers), Flounder (Daniel Rivera and Nora Colin), Sebastian (Seiji Akera), Scuttle (Samantha Moore), King Triton (Ioann Popov), Flotsam (Domnika Popov), Jetsam (Rachel Cahill) and Ursula (Christina Reger). Other cast members included Grimsby (Sam Mikit), Chef Louis (Noah Roy), and Pilot (Nolan Jones).

Ariel’s beautiful mersisters also took to the stage: Aquata (Cayla Hungerford), Andrina (Demi DeGennaro), Arista (Amanda Despart), Atina (Melanie deLaurentis), Adella (Greta Hermann) and Alana (Samantha Hebert).

The ensemble, which consisted of sea birds, sea creatures and maids, included Zoelle Gagnon, Jenna Dennin, Will Prather-Homan, Teresa Gonzales, Josh Zlotnick, Mercedes Holst-Grubbe, Kaley Culbertson, Brianna Cole, Frankie Farano, Angela Bruce, Chloe Demick, Kendra Roberts, Bridget Hermann, Holly Hermann, Nikifor Popov, Sylvia Wilkins, Andrew Joyes and Joey Zwack.



BCSD 2017-2018 Proposed Budget

Expenses		2016-2017	2017-2018
		Adopted	Proposed
		Budget	Budget
Program Budget			
Regular Education		\$5,126,136.00	\$5,259,888.00
Special Education		\$2,170,054.00	\$2,400,446.00
Occupational Education		\$544,332.00	\$535,236.00
Continuing Ed/Driver Ed		\$25,000.00	\$25,000.00
Library/Technology		\$653,592.00	\$625,970.00
Guidance		\$357,619.00	\$362,362.00
Health Services		\$205,823.00	\$211,446.00
Co-Curricular/Sports		\$178,689.00	\$226,213.00
Transportation		\$1,562,361.00	\$1,571,262.00
Employee Benefits		<u>\$4,279,998.00</u>	<u>\$4,475,048.00</u>
		\$15,103,604.00	\$15,692,872.00
Administrative Budget			
Board of Education		\$10,512.00	\$10,690.00
Central Administration		\$224,988.00	\$237,785.00
Finance		\$349,507.00	\$363,063.00
Legal/Personnel/Public Info.		\$92,772.00	\$96,679.00
Insurance/Dues		\$89,392.00	\$94,615.00
School Supervision		\$578,244.00	\$596,903.00
Curriculum & In-service		\$64,953.00	\$75,239.00
BOCES Administration Expenses		\$38,493.00	\$37,388.00
Employee Benefits		<u>\$524,475.00</u>	<u>\$534,236.00</u>
		\$1,973,336.00	\$2,046,598.00
Capital Budget			
Operations & Maintenance		\$1,255,690.00	\$1,306,757.00
Central Data		\$94,564.00	\$91,488.00
Debt Service		\$829,806.00	\$590,810.00
Employee Benefits		<u>\$368,038.00</u>	<u>\$399,233.00</u>
		\$2,548,098.00	\$2,388,289.00
		\$19,625,038.00	\$20,127,758.00
Revenue			
State Aid		\$9,781,331.00	\$9,918,121.00
Real Property Taxes		\$9,006,627.00	\$9,119,099.00
Miscellaneous		\$387,080.00	\$570,080.00
Reserves		-	\$70,458.00
Fund Balance		<u>\$450,000.00</u>	<u>\$450,000.00</u>
		\$19,625,038.00	\$20,127,758.00

Budget Vote

Proposition Vote

Board Election Vote

May 16, 2017

12—9 PM

**Berlin Elementary
School**

53 School Street

VOTER QUALIFICATIONS

To vote, you must be:

- A citizen of the United States
- At least 18 years of age
- A resident of the district for 30 days prior to the vote

ABSENTEE BALLOTS

Qualified district residents who are unable to go to the polling place on May 16 can cast their votes by absentee ballot. For an application, call the District Clerk at 658-2515 Option 8, Extension 1010. If the ballot is to be mailed, the application for the ballot must be received by May 9. If the ballot is to be delivered in person, the application must be received by May 15. All completed ballots must be received by the district clerk no later than 5 PM on May 16.

2017-2018 School Budget and BOE Vote

Voting will take place at the Berlin Elementary School, 53 School Street, Berlin, from 12:00—9:00 PM. Voters will be asked to vote on five items:

THE 2017-2018 BUDGET

RESOLVED, that the Board of Education of the Berlin Central School District is hereby authorized to expend a sum, not to exceed **\$20,127,758** in the 2017-2018 school year, and to levy the necessary tax therefore on taxable property of the district for the tax year beginning July 1, 2017.

PROPOSITION #1:

RESOLVED that, pursuant to Section 1804 (12) of the Education Law, the Board will submit the following question to the voters at the May 16, 2017 annual school district budget vote/board election:

Shall the District allow a Berlin High School student to serve as a non-voting member of the Board of Education?

YES or NO

PROPOSITION #2

Shall the following resolution be adopted, to wit:

RESOLVED: That the Board of Education of the Berlin Central School District, Rensselaer County, New York, is hereby authorized to purchase in fiscal year 2017-2018 one (1) 66-passenger bus and expend a gross sum not to exceed **\$120,000**. Which said total sum of \$120,000, or so much thereof as may be necessary, may be raised by issue of obligations of the district therefore in accordance with the education law and local finance law.

YES or NO

PROPOSITION #3:

Shall the following resolution be adopted, to wit:

RESOLVED: That the Board of Education of the Berlin Central School District, Rensselaer County, New York, is hereby authorized to repair, replace, upgrade, reconstruct, and install and make improvements to the gymnasium area, including the stage, at the Berlin Elementary School building, including all original furnishings, equipment, machinery, apparatus, appurtenances, hardware and software and incidental improvements and expenses in connection therewith, and is further authorized to expend therefore an amount not to exceed **\$100,000**, to be raised by the levy of a tax upon the taxable property of said School District and collected in annual installments as provided by Section 416 of the Education Law; and in anticipation of such tax, obligations of said School District shall be issued.

YES or NO

BOARD OF EDUCATION SEATS

There are three people running for **two** open seats on the Berlin Central School District Board of Education. Both seats are three-year terms. Voters will have the opportunity to vote for **two** candidates. The candidates will appear on the ballot in the following order as determined by a random drawing:

Jim Willis

Frank Zwack

Margaret Gutermuth-Swim

2017 Board of Education Candidates

The Board of Education is comprised of seven members elected by district residents. All members serve without pay for three year terms. Under the Education Law of New York State, the Board is responsible for the education of students who attend the schools in the district; for the preparation of the annual budget, for district adherence to state law and State Education Department regulations concerning the conduct of the public schools. The Superintendent of Schools is charged with the administration of Board policies.

Jim Willis

My name is Jim Willis. I am running for re-election to the Berlin Central School District Board of Education. I have been on the Board for almost six years and am very proud of the accomplishments we as a Board have made.

During my tenure on the Board of Education, we have accomplished the following:

- Brought a major Capital Project to the taxpayers that would address a large amount of the facilities problems with very little impact to the taxpayers. These improvements have made these buildings more efficient and in turn have saved the taxpayers money in both heating and cooling these buildings.
- Negotiated both the teachers contracts as well as the CSEA contracts.
- Instituted the School Within a School program.
- Instituted the Credit Recovery Program.
- Increased the drug sweeps in the school.
- Increased security in both buildings, adding cameras and remote entry.
- Increased amount of Distance Learning classes available to students.
- Rewrote the schools' policy regarding public use of the facilities.
- Brought the school lunch program back in-house.
- Added GPS to all buses that will allow parents to use an app to see where their child's bus is.
- Increased graduation rates.
- Brought new and innovative classes to our district to offer our students.
- Currently in the process of replacing the lighting in the gymnasium.
- Currently working on a new transportation hub for our district buses.

I am proud to be a part of this Board of Education and what we have done for the students of our district. With the support of the voters, I hope to continue for another three years.



Frank Zwack

I am a lifelong resident of Stephentown and a graduate of Berlin Central School, Hudson Valley Community College, and Union College. Besides being a Board member for the Berlin School District (current President & past Vice-President), I am a Board member of Questar III and member of the Stephentown Fire Department. My current occupation is in mechanical engineering and management of our family business, which is located in Stephentown.

Continuing as a Board member allows me to share the lifelong skills and experiences I have gained, including working with the various colleges and businesses that support our District and especially our students. Decision making takes time and you need to be informed. Sometimes it becomes hard—especially when the outcome is favorable to some and not others—but it must always advance the best interests of the District. I look forward to the completion of a current Board project for a District-wide technology upgrade.

I hold degrees in Production Engineering and Mechanical Engineering, New York State Fire Schools, General Electric Continuing Education, business skills used daily in the family business. I have a strong working knowledge of the Berlin Central School District.



Being involved with the Berlin School District and Questar III affords me the opportunity to gain information on where our students need to be in the future. We can't be satisfied with just what's good for today...we need to make sure that when today's 9th graders graduate they are ready for tomorrow's challenges, whether it's going to college or getting a job or joining our armed forces. Technology plays an important part in our students' futures, and it needs to be backed up by a strong foundation in education. If re-elected, I will continue to act with the best interest of the District and our future graduates in mind.

Margaret Gutermuth-Swim

I have been a lifetime resident of the Berlin area, and a graduate of the Berlin School District. I attended HVCC, RPI and received a baccalaureate degree from Johnson and Wales University, where I majored in Criminal Justice and also completed minors in Psychology and Sociology. For the past nine years, I have been employed as a Child Protective Services Caseworker with the Rensselaer County Department of Social Services. The position entails working closely with parents and children to ensure that children are safe and appropriately cared for. I have seen firsthand the devastating impact educational neglect has on children and families, and I am strongly motivated to ensure that all children receive the best education possible.

My grandmother was an educator and school board member. She imparted to me a great love of learning and taught me to value education highly. She also embodied the ideal of community service, a tradition to which I feel called to continue. I have a collaborative, relational model of communication and look forward to working collaboratively with the board members to continue to ensure that the children of the district receive a quality, cost-effective education. I have two young children who will be enrolled in the district in the near future, thus I feel that it is the appropriate time to offer my service to the community.



2nd Annual BES Science Night

Fun was had by all at the 2nd Annual BES Science Night on Thursday, March 16. Liz Wagner, the naturalist from Grafton Lakes State Park & Lisa Hoyt, the naturalist from Dyken Pond, gave a short presentation about how to be everyday scientists. Students proudly displayed their projects and answered questions about what they learned when parents and other science experts stopped by.



National School Breakfast Week Challenge

To encourage more families to take advantage of the healthy choices available with school breakfast, Berlin Central School District recognized National School Breakfast Week during March 6-10, 2017.

The National School Breakfast Week (NSBW) campaign theme, “School Breakfast Challenge,” reminded the entire school community that school breakfast provides a healthy, energizing start to the day for students. Students were encouraged to “Take the Challenge” and eat breakfast at school from March 6-10. Nutritious, inviting, delicious breakfast items such as fruit and oatmeal were served each day.

All students in the district were invited to enjoy breakfast for free on Wednesday, March 8. Teachers and staff helped with the challenge by serving breakfast to the students. Over the course of the week, Food Services staff, teachers and administrators served a total of 1432 breakfasts!

Any student who ate breakfast every morning during the challenge was entered into a drawing for a \$25 gift card. Winners of the gift cards were BES student Clair Schaaphok and BMSHS student Gabriel Colin.

“A healthy breakfast at the start of the day is one way to ensure students are getting the best education they can,” said Tammy Whitman, Food Service Director at Berlin CSD. “National School Breakfast Week helps us educate parents and students about all the healthy and appealing choices we offer.”

Berlin CSD serves between 150–200 breakfast meals daily through the federally funded School Breakfast Program. School nutrition professionals prepare breakfast and lunches every day that meet federal nutrition standards – limiting fat, calories and sodium – and encourage students to choose from the fruits, vegetables and whole grains offered with school meals.

National School Breakfast Week was launched in 1989 to raise awareness of the availability of the School Breakfast Program to all children and to promote the links between eating a good breakfast, academic achievement and healthy lifestyles. The “Take the School Breakfast Challenge” is made possible by the nonprofit School Nutrition Association, Kellogg’s and Potatoes USA.



Dear Berlin Central School District Residents,

On behalf of the Berlin Central School District Board of Education, I am pleased to share with you this recap of the District's achievements and also highlight our budget plan for the upcoming school year.

This year Berlin saw an increase in student participation in the music, arts, drama, and science programs. The new LINK program, a 9th grade transition activity for students, was highly successful. The District also added a Director of Curriculum & Instruction, two Education Technology Specialists, and a behavior support position, increasing the opportunities for our students to grow, learn and succeed.

The proposed budget submitted for your approval requires an estimated 1.25% tax levy increase, which is below the district's tax cap. Over the last five years, we have maintained a 1.22% average tax levy increase. This is in an effort to be responsible to our taxpayers while maintaining a quality academic program for our students.

The 2017-2018 budget builds on our successes in a wide range of areas including a move to the Wasaren Sports League, which will reduce transportation costs and increase student athletic opportunities. A new college elective offered in the high school will be the SUNY ESF course in Environmental Science.

As a Board, we're committed to working together to continue to move our District forward. Providing each of our students with a top quality education takes the combined hard work of everyone, including our dedicated teachers, non-instructional staff, administrators, board members, students, and parents.

Your continued support is especially appreciated. Again, on behalf of each Board Member, thank you. We look forward to working with you in the year to come.

Sincerely,

Frank J. Zwack, President
Berlin Central School District Board of Education

"Berlin Mountaineer Pride"

Character Education is Making a Positive Impact Throughout BES

Berlin Elementary proudly promotes character education during the school year. The program teaches, encourages and models the development of positive behaviors in students. There are nine character traits in the program: Responsibility, Respect, Compassion, Tolerance, Honesty, Perseverance, Cooperation, Self-Control and Appreciation.

Each month a new character trait is introduced through announcements, classroom lessons, modeling and recognizing students who act as positive role models for that month's character trait. Each grade level is responsible for one of the Character Assemblies and decorates a bulletin board in the hallway promoting good character. At the assembly, both staff and students lead the school in songs and discuss what that character trait looks like, feels like and sounds like.

Principal Tracy Kent said the Character Education Committee is led by the teachers who have worked hard to embed character education into curriculum.

“Our students are enthusiastic about the program,” said Kent. “It has had a positive impact on academics, student behavior and school culture.”



A representative from the Mohawk & Hudson Humane Society, furry friend and students at the Character Education Assembly. – In support of the theme “Compassion” for December, BES families joined the first grade classes in a service learning project and collected supplies for the Mohawk and Hudson River Humane Society.

Berlin Middle/High School Library Introduces a Makerspace

Makerspaces are taking the library world by storm, popping up in community and school libraries all over the country. This year, school librarian Ann Hayes piloted a makerspace in the Berlin Middle/High School library.

A makerspace, which is a relatively new concept, offers DIY (or “do-it-yourself”) spaces where people can use a variety of tools and materials to create, invent and learn. Each makerspace is different and can include tools such as 3D printers, software, hardware, craft supplies and electronics.

Mrs. Hayes did some research, including attending a workshop on makerspaces, in order to see how other libraries were implementing the concept. Based on her research, Mrs. Hayes selected activities that she thought would work well in the BMSHS library.



In selecting the first activities for the makerspace, Mrs. Hayes wanted some to fit within the important STEM framework—science, technology, engineering and mathematics—while also branching into the STEAM movement, which includes a focus on art, design and innovation.

Currently, the makerspace in the BMSHS library offers students opportunities to construct things with makerspace kits that include duct tape, Gizmos and Gadgets and K’NEX. They can also learn about circuitry and electricity with the Snap Circuits® kit.

“The BMSHS library makerspace has been a big hit with our sixth grade students,” said Mrs. Hayes. “Students come to the library makerspace daily to learn through play, using the makerspace kits and other materials to reinforce science concepts and cooperative learning. Mr. Scannell also integrates some makerspace activities into his science classes, sometimes giving students credit for completing various K’NEX vehicles.”

“You can have a break between advisory or have two study halls in a row, where you might sit there or maybe do homework if you have any, so the makerspaces in the library can provide a better use of time in some cases,” said Hannah Mace, a sixth grade student at BMSHS.

Next year, Mrs. Hayes hopes to expand the makerspace opportunities for students by including more tools and materials that promote STEM and STEAM concepts such as problem-solving, creativity and innovative design. She plans to add Keva Planks and a Piper Computer Kit.

“The Piper Computer Kit allows students to use a real engineering blueprint to build a working computer,” said Mrs. Hayes. “Keva Planks are simple, stackable uniform planks that allow students to design and build structures, which is great for students with a knack for architecture and design.”

There will also be an initiative to get more eighth grade students using the makerspace to reinforce the electricity component of their science curriculum using the Snap Circuits Kit and Piper Kit.

BES After School Enrichment Program

The After School Enrichment Program at Berlin Elementary was a huge success with 90 elementary students registering for one of 12 programs offered. The program ran for five weeks from February to March. Students learned a variety of skills including: arts and crafts, robotics, cooking, logo design, nature explorers, Spanish and more.

“On behalf of the student participants and their families, we would like to thank the efforts of the parents, teachers, instructors and volunteers,” said Principal Tracy Kent.



Budget Vote/BOE Election

Tuesday, May 17, 2016

Berlin Elementary School

12:00 PM—9:00 PM

School Within a School

School Within a School (SWS), an alternative high school program at Berlin CSD that serves students in Grades 10-12, anticipates the graduation of all 16 seniors in the program.

Before entering the program, these students had unsuccessful experiences in a traditional classroom environment due to emotional, motivational and/or academic difficulties. Many of them encountered frustration from their repeated unsuccessful attempts to pass Regents exams. Their hard work and perseverance in SWS allowed for them to finally get passing grades on those difficult exams and in their courses. The SWS students are now looking forward to walking across the Berlin stage in June to receive their well-earned diplomas!

Middle School Homework Club

Since the beginning of the school year, the Middle School students have been coming to Mrs. Kelly's room to get help with homework or to just have a place to start their homework before heading for the 3 p.m. bus. At times, some High School students come to lend a helping hand. The students have shown a wonderful work ethic as they've worked by themselves, in pairs, and small groups. The Homework Club is every Tuesday, Wednesday, and Thursday.



STEM Activities with RPI Engineering Ambassadors

Ten Engineering Ambassadors from Rensselaer Polytechnic Institute (RPI) spent Tuesday, March 21, with Science and Technology students at Berlin Middle/High School (BMSHS). The RPI Engineering Ambassadors travel to local high schools to help students learn more about what it is like to study various engineering disciplines and to engage students with hands-on learning activities involving science, technology, engineering and math (STEM).

Thirty classes at BMSHS were able to participate in hands-on activities that included:

Structures: This presentation explored architecture through an engineering perspective including a history of structures, fundamental engineering concepts and a structural analysis of modern buildings.

Design of An Athlete: Students learned about the physics and engineering behind the sports that we love and hear about every day, such as why the bodies and skill sets of athletes benefit them in their respective sports but may not be optimal in other sports. They also learned about the engineering that goes into designing protective equipment as well as creating and using biometric technology. Hands-on activities included using force plates to measure jump force, photogates to measure speed, EMGs to measure muscle activity as well as the opportunity for students to use the equipment.

Engineering Life – Water Filtration: Students learned about Earth's natural filtering process, the water cycle and how a similar process has been engineered to filter our water. In teams, students created and tested their own gravity filters.

Thermoelectric Devices: In this presentation, students learned about how heat is converted into electricity. This presentation covered the basics of efficiency, energy usage, energy conversion and power, and walked students through the materials science behind thermoelectric devices. Students then experimented with their own thermoelectric devices and produced electricity to power propellers.

Evolution of Prosthetics: This presentation covered the evolution of prosthetics, or artificial devices used to replace missing body parts, and the engineering design process that drives the innovation. Topics included biomechanics, action potentials and the connection of the nervous system, as well as future bionic and thought-controlled prostheses. This presentation was a favorite among BMSHS students, who could not wait to show off the items they made to their teachers and principal, Dr. Allain.

The RPI Engineering Ambassadors' fields of study include Civil Engineering, Chemical Engineering, Biomedical Engineering, Industrial and Management Engineering and Design, Mechanical Engineering, Computer Science and Environmental Engineering.

The RPI Engineering Ambassadors are devoted to inspiring younger students with what they are doing in their chosen major, the newest technological breakthroughs in their fields and the obstacles yet to be overcome in the future of STEM. We are already looking forward to their next visit!



Achievements in Athletics

Berlin CSD's athletic programs have had several noteworthy accomplishments so far this year, including championships and new school records.

Two sports teams--boys' varsity soccer and boys' cross country--ended the 2016-17 season as the league champions.

Roark Slattery, a senior, was recognized for scoring a total of 1056 career points in basketball, an impressive benchmark for a high school athlete.

The school record for girls' soccer goals was broken this year by senior Jewel Pietrak. Jewel smashed the previous record of 100 goals with 146 goals of her own!

Spring sports began recently so we might have more proud athletic moments in the weeks to come. Go Mountaineers!



Go Mountaineers!



Curriculum Spotlight: Marine Biology

Did you know the Berlin Middle/High School library is infested with sharks?

Each year, students in the Marine Biology course at BMSHS hatch catsharks from egg cases in the aquariums at the school library. The only course of its kind in the surrounding area, Marine Biology at BMSHS affords a unique educational opportunity for students to engage in advanced science, design and collaborative problem solving.

Matt Christian, the science teacher at BMSHS who initially developed the Marine Biology course, said the district has been supportive of the endeavor since he first mentioned the idea during his interview more than 10 years ago. It is a full-year high school elective that incorporates modeling and inquiry-based learning.

In addition to concepts from biology and chemistry, the course is built to include biotechnology components because of the Capital Region's growing biotech industry. There has also been a recent push from local colleges such as Hudson Valley Community College to improve biotech education in schools.

Students in the course examine how marine biology is connected to the biotech and biomedical industries through hands-on education. They study marine life to learn about concepts such as DNA extraction and fluorescent protein development, as well as solutions, PH stability and how to test water for various minerals and trace elements.

The students also manage the aquariums in the school library, which requires advanced knowledge of scientific and technological concepts. Each year they research various sea creatures to add to the tanks. The library aquariums are home to species that are native to Florida and the Caribbean as well as the North Atlantic. In addition to young catsharks, the residents of the library aquariums include corals, crabs, shrimps, jellyfish, horseshoe crabs, hermit crabs, flounder, mangrove trees and sea grasses.

Mr. Christian ensures that all of the species in the library tanks are selected responsibly.

"That's part of the research the kids do," he said. "We can't take an animal out of the environment that doesn't have a sustainable population. We also send the sharks back to the Woods Hole Oceanographic Institute in Cape Cod periodically."

Since Rensselaer County is so far from the ocean, Mr. Christian plans virtual field trips to aquariums and other marine biology institutions. He hopes to partner with Via Aquarium—a local aquarium that opened in Schenectady, NY in November 2016—to advise on topics such as bringing up sharks in captivity for more than a few years.

"Keeping things like this alive in captivity can be a challenge," said Mr. Christian. "The kids learn that. They research sustainable species to add to the tank, introduce them to the community, and not all are successful. That's part of learning. They have to problem-solve and evaluate the situation, asking what did not work, why it did not work and how it can be improved."

A recent challenge faced by the class is how to get jellyfish to grow big enough to reproduce. Some solutions suggested include feeding the jellyfish more, changing the type of food and altering the water temperature. Mr. Christian hopes to collaborate with the technology class and build a system specifically for jellyfish.

"Working with a local aquarium would be a great way to provide more opportunities to enrich the marine biology course for our students," said Mr. Christian.

Thank you to the Maritime Aquarium, Woods Hole Oceanographic Institute in Cape Cod, KP Aquatics, Coral Restoration Foundation, and Touch Tanks for Kids for their expertise, assistance and donations of equipment and marine animals, as well as the Berlin High School Class of 2016 for donating a new protein skimmer and water filtration system.



Thinking Past “The Starving Artist”

Visit the MS/HS Art Department’s Website:
<http://berlinarthappens.wixsite.com/berlinarthappens>

At the Middle/High School, Art Educators Ms. Samantha Noles and Mrs. Christina Wallace are committed to preparing students for the future, regardless of what that future might be. “Skills learned in an Arts Education don’t just benefit those who want to be a fine artist, such as a painter or sculptor. **The creative process of brainstorming, designing and constructing the artwork is what’s beneficial to all students.** Art develops the brain, increasing problem solving skills and creativity,” say the two art teachers, who were named New York State Art Teachers Association (NYSATA) Region 6 *Art Educators of the Year* in 2015.

They explain, “Employers and college programs aren’t just looking for STEM skills, but skills in STEAM (Science, Technology, Engineering, *Art* and Mathematics). They want their **students or employees to be able to think creatively to bring forth that innovation in technology and engineering.**” The Engineering Design Process (See Figure 1) is very similar to The Artistic & Creative Process that Berlin students explicitly follow in their Art coursework (See Figure 2).

Figure 1:

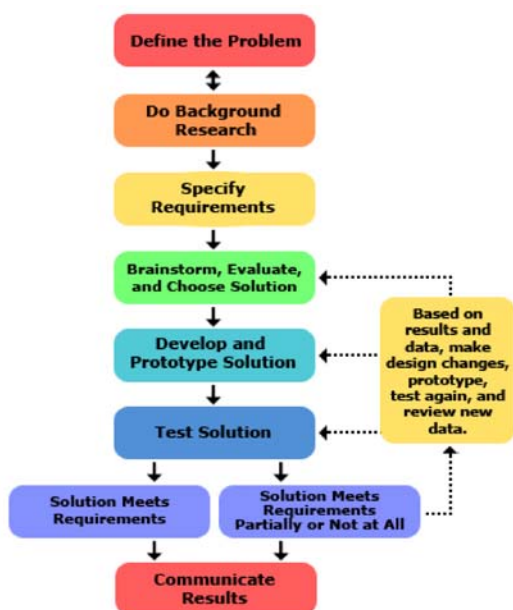
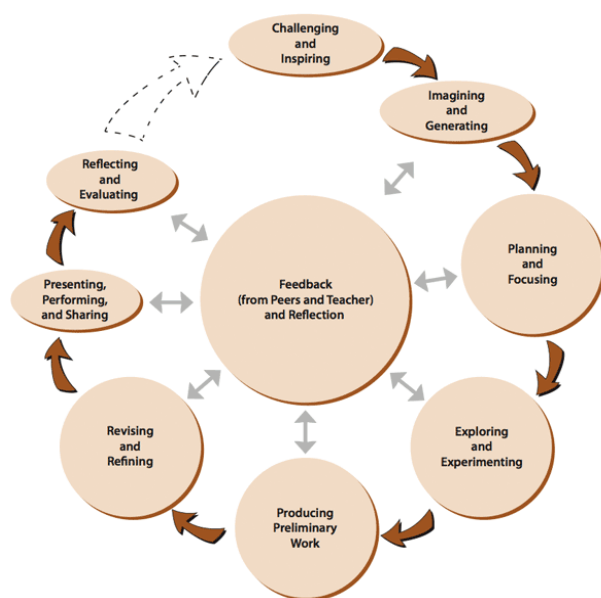


Figure 2:



“There is a push for creative careers in today’s world. Design careers are in high demand, such as graphic designers and creative directors. **We are not looking to cultivate the next generation of starving artists. We are helping students develop real skills that make them a good candidate for college or the workplace,**” states Ms. Noles.



In addition to encouraging these skills in all MS/HS Art Courses, the Berlin Art Department offers now *three* college-credit courses for students. 2017-2018 will be the 3rd year offering HVCC-credit *Survey of Art History I* and *Survey of Art History II*, which could yield students 6 arts & humanities credits. In 2017-2018, they will also be adding an *Advanced Placement (AP) 2-Dimensional Design* course with a focus on Photography. “Many college students need to take an Art or Art History course as part of their general requirements for many different degrees so these courses can give students a head start,” says Mrs. Wallace.



Mrs. Wallace and Ms. Noles conclude, “**We aren’t necessarily preparing students for the rather difficult life of being a fine artist (i.e. exhibiting and selling their work). We are instilling an appreciation for art and its place in our culture; we are preparing them with various life skills that will aid them in whatever path they chose.**”

*“The Arts teach children that problems can have more than one solution
and that questions can have more than one answer.”*

-Elliot W. Eisner

ART DEPARTMENT NEWS

Visit the MS/HS Art Department's Website:
<http://berlinarthappens.wixsite.com/berlinarthappens>

Join us for the 1st Annual "Night of the Arts" Evening!

Thursday, May 18th

- ★ Student Art Exhibit Grades 6-12
- ★ "Best in Show" Competition (Juried by Community Members)
- ★ Student Photography Raffles
- ★ NAHS Induction Ceremony for New Inductees
- ★ Guest Speaker



Finalist in National Photo Contest!

NAHS member, Hailey Madsen (*Grade 11, above right*) is having one of her photographs **published** in Photographer's Forum's book, Best of College & High School Photography 2017. Over 13,000 photography submissions from students in the U.S., Canada, and around the world were entered. The book will be published in full color. Hailey is currently in Advanced Photography with Mrs. Wallace.

What has National Art Honor Society (NAHS) been up to this year?

- NAHS took a **field trip** to explore the Bennington art scene! Students created drawings and took photographs *en plein air* style at the Bennington Monument and on a nature trail, as well as visited the Bennington Art Museum and Bennington College! (*middle photo*)
- For their fall **community service project**, students made Cookie Kits to donate to the families living at the Capital City Rescue Mission in Albany! (*left photo*)
- NAHS created a beautiful calendar for 2017 filled with student photography as a fundraiser.
- NAHS also hosted the first **Paint N' Pizza Night** as a fundraiser for Art Club! Patrons were taught to paint a picture by Ms. Noles with assistance from senior NAHS members. *It was a great success so more of these events are planned for the 2017-2018 school year! Stay tuned!* (*right photo*)



Rebirth of the Ceramics Program!

MS and HS students now have the opportunity to create ceramic pieces, fire them in the newly-refurbished kiln and add glazes! Ms. Noles and Mrs. Wallace are excited to dream up new lessons that incorporate more ceramics in the Art Curriculum for Grades 6-12.



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POSTAL PATRON

Varsity MasterMinds Team Invited to National Competition

Due to their exceptional performance in MasterMinds and the National History Bowl this season, the Varsity MasterMinds team earned a wildcard invitation to the National Academic Quiz Tournament's Small Schools National Championship in Chicago.

The NAQT Small Schools National Championship is invitation-only and consists of the 96 best Quiz Bowl teams in the nation from small public high schools with fewer than 500 students.

In order to help offset the cost of hotel accommodations for the team, administrators and staff participated in a fundraising academic tournament called "MasterMinds: Teacher Edition" on March 31, 2017. The NAQT's Small Schools National Championship is April 28-30, 2017 in Chicago, Illinois.

The Berlin High School Varsity MasterMinds team consists of students Ryan Mears, Alex Flowers, Vincent Scott, Andrew Shoemaker and Ioann Popov and two advisers, Matt Christian and Jen Overocker.

