

COMMUNIQUE

the Bangor

Schools Working for Academic Excellence

Bangor School Department • 73 Haslow Street, Bangor, Maine 04401 • 207-992-8152 • www.bangorschools.net

Winter 2016

Curtains - The Musical Comedy Whodunit



Dr. Betsy Webb
 Superintendent



Dear Parents, Students, and Community Members:

We are pleased to share this newest edition of the online Communique. Inside you will find numerous examples of students, alumni, and faculty upholding Bangor’s long-standing tradition and culture of excellence. The formula for this ongoing success is: the consistent and visionary leadership of the School Committee and administration, the dedication and expertise of talented faculty and staff, the support and trust of parents and community, and most importantly, the hard work and ambition of our students.

When people ask, “why Bangor?” I am constantly reminded that the achievement and success accomplished within the Bangor School Department is not by accident. The formula, although it may sound simplistic, is one that is truly unique. When Peter Senge in his book, *The Fifth Discipline*, talks about organizations needing all arrows [efforts] pointing at the mission, this is what separates

Bangor from many.

Academic Excellence for All, Bangor’s ten year strategic plan, outlines these four overarching goals [arrows] pointing at our mission: academic excellence, professional excellence, quality instructional program, and environment for success. All goals are essential to progression towards the mission. Without professional excellence, quality programs, and environment for success, we could not achieve academic excellence.

The Bangor School Department faculty, staff, and administration consider it a privilege and an honor to work with Bangor families and students. We are committed to working one student at a time, day in and day out, to find his or her individual path to excellence.

Sincerely,

Betsy Webb, Ed.D.

Pre-K and Kindergarten Registration

The Bangor School Department Pre-Kindergarten program is a half-day 4-year-old program. Children eligible for this program must be Bangor residents and four years old on or before October 15, 2016. Every effort will be made to accommodate all children wishing to participate in this program. The Pre-K program will be strongly oriented toward building literacy skills and promoting positive social interaction in a classroom setting.

The full-day Kindergarten is for children who will be 5 years old on or before October 15. Please bring the child’s original birth certificate and immunization record with you to the school the child will attend, which is determined by the physical address. The Bangor School Department K-8 Attendance Area Directory is available online at www.bangorschools.net or contact any school for assistance.

Pre-K - Grade 3 Schools

Abraham Lincoln School.....	45 Forest Avenue.....	941-6280
Vine Street School.....	66 Vine Street.....	941-6300
Downeast School.....	100 Moosehead Blvd.....	941-6240
Fourteenth Street School.....	224 Fourteenth Street.....	941-6350
Fruit Street School.....	175 Fruit Street.....	941-6270

Bangor School Committee

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Dr. Betsy Webb

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School Committee Meetings 2015-2016

Meetings are scheduled on the 2nd and 4th Wednesdays of each month except during school vacations and special meetings may be called as needed. All meetings will be held at Bangor City Hall, Council Chambers at 7:00 p.m. A complete list of school committee meeting dates is available at www.bangorschools.net.

net.

Forest Bioproducts Research Institute Selects JFDS Teacher and 2 BHS Alumni for Summer Research

Tracy Vassiliev, JFDS Science Teacher, joined 12 undergraduate students from around the world, including BHS alumni Paul Rudnicki '13 and Allison Rowe '12, as they conducted 10 weeks of research at the University of Maine's Forest Bioproducts Research Institute (FBRI) as part of UMaine's National Science Foundation grant entitled "Explore It! Build the Next Generation of Sustainable Forest Bioproduct Researchers."

Rudnicki is studying Chemical Engineering at the University of Notre Dame. His FBRI project is entitled "Unreliable pellet durability and varying devolatilization times and temperatures among wood pellet types." Rowe is a senior at Williams College, majoring in Environmental Studies with a Chemistry Track. Her FBRI project is "Thermal stability of polyvinyl alcohol (PVA) cellulose nanocomposites." Vassiliev's FBRI project was the distillation and dissemination of FBRI concepts and practices at the middle school level.

During the last week of research all participants visited Concepcion, Chile to learn more about the research conducted in Chile and to present their summer research results at the University of Concepcion.



Paul Rudnicki '13, Tracy Vassiliev, and Allison Rowe '12 in front of a Mapuche Ruka in Concepcion, Chile.

4 Humanities Academy Coming to BHS

The Humanities Academy will join the STEM Academy, Visual and Performing Arts Academy, and Business Academy for students interested in going beyond the minimum requirements in English, History or World Languages.

Pathway options are available in English/World Languages, World Languages/History, or History/English.

Students complete the required classes, engage in co-curricular and summer extensions, and create and present a Senior Capstone project. For more information call Principal Paul Butler at 992-5500.



BHS Student Research Will Help Students in Developing Countries Access Clean Water

“I first became interested in the world issue of clean water when I traveled to Honduras,” says Claire Tobin, BHS Class of 2016. Claire realized that students in developing countries don’t have access to clean water. She knew that biosand filters were used effectively in Honduran homes when water is filtered every day, but would they work when they’re allowed to sit inactive for long periods of time, which is typical of a school schedule?

“I started testing this theory last year by setting up one filter” says Claire, “but we needed more data. Dr. Barbara Stewart [BHS Physical Science teacher] helped me apply for a grant, and we’re thankful that the Perloff Family Foundation awarded us funding to set up four filters this year.”

“All of my teachers at Bangor High School have been really supportive,” says Claire. “Dr. Stewart, Mr. Cary James [BHS Science Department Chair], and everyone in the science department has mentored me and guided me in my research.”

Claire recruited three students to assist with the project. “Conor O’Brien has been doing a 6-week temperature study, because these filters may be used at high altitudes,” she explains. “William Tobin will begin a study



Claire Tobin ‘16 analyzes data collected from the filtered water.



Conor O’Brien ‘19 pours unfiltered water collected from the Kenduskeag Stream through the biosand filters.



(L-R): Student researchers William Tobin ‘19, Conor O’Brien ‘19, Charlie Budd ‘18, and Claire Tobin ‘16.

(Cont. on p. 16)

Intel Science Talent Search Names Paige Brown '16 Among 40 National Finalists

Paige Brown, Class of 2016, is one of 40 U.S. high school seniors recognized as a finalist in the Intel Science Talent Search (STS), the nation's oldest and most prestigious pre-college science and math competition.

Brown will travel to Washington, D.C. from March 10-16 to present her research, entitled "Identifying and Remediating the Sources of Pollution in Impaired Bangor Streams," and compete for more than \$1 million in awards from the Intel Foundation.

Brown's project won the Maine Stockholm Junior Water Prize last year, and she took home a fourth place award of \$500 in the Earth and Environmental Sciences category at the Intel International Science and Engineering Fair (ISEF) last spring, where she was also awarded a full four-year scholarship to Drexel University.



Brown is enrolled in Bangor High School's STEM Academy, now in its fourth year. "Our challenge as a school department," says Dr. Betsy Webb, Superintendent, "was to answer the nation's call to action for school systems to better prepare students for post second-

ary STEM learning and for STEM careers. We're so proud of Paige for rising to the challenge and for her accomplishments working on a local, real world problem."

"I have had the great pleasure of working directly with Paige for the past 3

years," said Cary James, Science Department Chair and Director of the STEM Academy.

"This is far more than a research project for Paige. The stormwater project has been a game-changer for her and something she sees as part of her life going forward. She

Paige Brown (cont.)

is relentless in her pursuit of finding solutions to a pervasive environmental issue that will affect us all for years to come. She has the ability to see the 'forest rather than the trees' and is being noticed at the highest level for the work she is doing."

"This is a great honor for Bangor High School and Paige who deservedly was selected as a finalist," says Dr. Mohamad Musavi, Associate Dean of the College of Engineering at the University of Maine. Dr. Musavi has been instrumental in the formation of the BHS STEM Academy, which has benefitted from a National Science Foundation funded Experimental Program to Stimulate Competitive Research (EPSCoR) program.

The Stormwater Management Research Team (SMART) is one of EPS-CoR's tracks, and Paige Brown was invited last summer to be the keynote speaker at the SMART Conference.

According to the Intel Corporation and the Society for Science and the Public, "the 40 STS finalists were selected from 300 semifinalists and 1,750 entrants based on the originality and creativity of their scientific research, as well as their achievement and leadership both inside and outside the classroom."

A list of all the 2016 Intel STS finalists can be found online at <https://student.societyforscience.org/intel-sts-2016-finalists>.

Why Bangor?

Dr. Adam Leach
Guidance Dept. Head
Bangor High School
19 years with BSD

"Bangor High School is the best at creating a learning environment that closely represents the college experience. The size of our student population, the number of course offerings across disciplines, and the ability to challenge and excite students of all ability levels make Bangor High School the best college preparatory high school in Maine."



Did you graduate from BHS? We would love to hear about what you're doing now. Join our Alumni Network at bangorschools.net/welcome-alumni or call 992-4167.

Five Selected as Candidates for U.S. Presidential Scholars Program

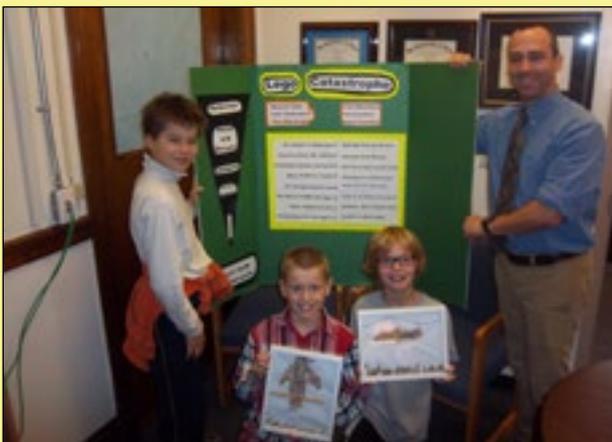
Paige E. Brown, Daniel O'Brien, William Reynolds, Isaac H. Robinson, and Conor J. Thompson have been selected as candidates for the United States Presidential Scholars Program.

The U.S. Presidential Scholars Program was established in 1964 by Executive Order of the President to recognize and honor some of our nation's most distinguished graduating seniors. Scholars are chosen on the basis of their accomplishments in many areas - academic and artistic success, leadership, and involvement in school and the community.

“Their exceptional talent is matched by their exceptional curiosity and commitment to meaningful, applied learning,” says Principal Paul Butler. “It is wonderful to see these talents validated by candidacy for such prestigious national recognition.”

The Program will select approximately 800 semifinalists in early April, and Scholars in early May. For more information about the U.S. Presidential Scholars Program, visit <http://www.ed.gov/psp>.

Middle School Students Excel at LEGO Competition



Mary Snow students Quentin Gabe, Geo Socolow, and Finn Oldenburg presented their project to Principal Brian Bannen

Bangor's FIRST LEGO league team, LEGO CATASTROPHE, made it to the State competition after earning 3rd place at the Northern Qualifier in November.

Team members are: Tyler McGoldrick, Fritz Oldenburg and Simon Socolow (6th Graders at William S. Cohen School) and Geo Socolow, Quentin Gabe, and Finn Oldenburg (4th Graders at Mary Snow School).

Grades 3-5 Receive Grants for Arts Education

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Thanks to the Leonard & Renee Minsky Grant for Arts Education, Bangor students in Grades 3-5 will experience visiting artists this spring. Students in Grade 3 will get hands-on clay experience with visiting artist Laura Fer, Fairmount's Grade 5 students will work with clay with artist Kal Elmore, and Grade 4-5 students will experience a visit from the Bangor Symphony Orchestra's Juniper String Quartet.

"We are excited to be working with Bangor High School on the new Business Academy. The Business Academy is a wonderful way for students to start thinking about their future careers and higher education as early as the 9th grade."

- Dr. Marie Hansen, Dean of the College of Business, Husson University

BSD Receives Grant for Improved Library Software

Thanks to a competitive grant from a local foundation, the school libraries have new software that makes it easier for students to select and check out books.

"The new system is very user friendly," says Barbara Quinn, Librarian at Fruit Street School. "Students love the inde-



pendence that the self-checkout gives them, and they're empowered by being able to locate their own books. It has also greatly increased my ability to spend time during book selection with my reluctant readers."

"I like the new check-out because you can do it by yourself. It's fun and easy," said a second-grader.

"I think it's very useful for helping me remember when to return my library books," said a sixth grader, "and the book list feature helps me remember what books I want to read in the future."

Developing Respectful, Responsible Citizens

In keeping with its goal to develop respectful, responsible citizens, the BSD continued its annual Bangor Day tradition. During December, students, staff, and City employees collected 3,037 pounds of food for the Good Shepherd Food Bank and \$2,400 for Bangor's fuel assistance program.



WSCS students wear cardinal red and white on Bangor Day.

“It’s comforting to know that we have the funds to keep our neighbors in need warm,” said Rindy Fogler, Community Services Manager for Bangor Public Health and Community Services.

Melissa Huston, Director of Philanthropy for Good Shepherd Food Bank stated, “Schools have become such an important partner in addressing the hunger issue. This project helped raise awareness of the challenges many Mainers face and provided a tangible opportunity to engage students, parents, and city employees in making a difference.” If you’d like to make a difference this summer, you can volunteer for the Summer Lunch Program in Bangor. Contact Ms. Huston at mhuston@gsfb.org.

Why Bangor?

Ron Bilancia
Grade 7 Social Studies
William S. Cohen School
9 years with BSD

“It is a privilege to work for one of the foremost school districts in the state and nation. We have dedicated, well-trained teachers who put best practices in front of their students every day. Everything we do is about good teaching, educational excellence, and what is best for students. We have high standards from academics, to personal behavior, to student performance in our huge array of extra-curricular programs, and our students rise to the challenge.”



BHS Earns 3rd Consecutive National Silver Award, Top 10% Ranking in America's Best High Schools

US News & World Report and the research team from the global social sciences research firm RTI International have established BHS in the top 10% of over 19,753 schools in the 2015 publication America's Best High Schools, earning BHS a third consecutive National Silver Award. BHS was ranked #10 in Maine and #1,421 nationally.

According to the online publication, RTI bases its research on these key principles: that a great high school must serve all of its students well, not just those who are college bound, and that it must be able to produce measurable academic outcomes to show it is successfully educating its student body across a range of performance indicators.

In similar recognition, the Washington Post recently identified BHS as #5 among Maine's Most Challenging High Schools, which evaluates the level of AP Exam participation within the school's most recent graduating class.



Alumni Spotlights:

Austin Smith, Ph.D. '06

Why is Daylight Saving Time risky? Just ask Austin Smith (BHS '06), Assistant Professor of Economics at Miami University of Ohio.

“I was reading about Daylight Saving Time in graduate school,” says Smith, who received a Ph.D. in Economics from University of Colorado following his B.S. in Economics and Finance from Bentley University. “The original concept was that moving an hour of daylight to evenings would save energy, because people wouldn’t need to turn on lights. That may have been true 50 years ago, but we’re not seeing the energy savings now because we use air conditioning so much, which is more energy intensive than lights. So I started to wonder what other impacts DST might be having. When we spring forward, we lose an hour of sleep in the middle of the night. Most Americans don’t make up for that loss, and the surprising result is that we see more automobile accidents during the week following the time change.” Smith’s article, “Spring Forward at Your Own Risk: Daylight Saving Time and Fatal Vehicle Crashes,” is forthcoming in the American Economic Journal: Applied Economics.

Smith credits Bangor High School with fueling his current passion. “The breadth of course options at BHS gave me the opportunity to take economics in junior year and it turns out I loved it. It opened the door to my career choice.”

Smith’s current research is about how people respond to incentives. “I’ve been looking at

(Cont. on p. 16)



Allison Rowe '12 ¹³

Allison Rowe, Class of 2012, is a senior at Williams College, majoring in Environmental Studies with a Chemistry track. She spent last summer with a select team of undergraduates doing research with UMaine's Forest Bioproducts Research Institute (see page 3).



“This past summer I researched the thermal stability of cellulose and polyvinyl alcohol composites with Professor Mehdi Tajvidi. These composites represent potential renewable, biodegradable alternatives to traditional, petroleum-based plastic films.

“Last year while studying abroad in Ecuador, I investigated the health of the Puyo River watershed through an analysis of its macroinvertebrate populations.

“My concern for the environment was kindled by participating in S.E.E.D. Club at BHS. At Williams College, I've continued my concentration on the environment with my studies in environmental science and participation in the Williams Environmental Council. While my future plans are undecided, I know my career will center around environmental stewardship.

“I am grateful for the education I received at BHS. My teachers clearly cared about my classmates and me, and were incredibly devoted to our learning. This encouraged me to put a great level of effort into my work, setting me up for success in research and academics. I feel that my education at BHS was a real community effort, drawing support from the administrators, faculty and staff, parents, and other members of the Bangor community. I will carry with me this lesson about how meaningful a community can be.

“After graduation this spring, I plan to spend a couple years working in environmental education or activism before going to graduate school for environmental science.”

14 Building Aspirations



In recognition of National Law Enforcement Appreciation Day, sixth graders at the James F. Doughty School showed their appreciation for local law enforcement.

Deputy Toulouse of the Sheriff's Department, Officer Dube of the Maine State Police, and Officer Sanborn of the Bangor Police Department, spoke to students about the importance of lifelong learning.

Sixth grader Jack Patterson (second from left) and Principal Ed Hackett (far right) presented the officers with certificates of appreciation.



James F. Doughty School and William S. Cohen School eighth graders heard an inspiring message from aviation hero Barrington Irving. In 2007, Irving became the first African American (and at that time the youngest person) to ever fly solo around the world. Captain Irving inspired students to pursue careers in STEM and spoke about having a dream, and persevering to see that dream come to reality. (Photo: JFDS Principal Ed Hackett, Capt. Irving, WSCS Principal Michael Missbrenner)

NCLB Report Card

The Elementary and Secondary Education Act (ESEA) as amended by the No Child Left Behind Act mandates that all states and school units provide an annual report card that shares the achievement of students as well as information on the "highly qualified" status of teachers in the school unit. The data gleaned from the report card serves to inform school and district improvement initiatives. In addition, the data can assist parents and community members in working effectively and productively with educators to support student achievement.

The 2015-16 report card also includes 2012-13 statewide results from the grade four and eight National Assessment of Education Progress (NAEP) reading and mathematics assessments as well as NAEP participation rates for students with limited English proficiency and students with disabilities. Administration of the NAEP is through random selection and schools do not receive results other than state and national data.

(Cont. on p. 16)

Why Bangor?

Shannon Shaw
First Grade Teacher
Abraham Lincoln School
10 years with BSD

"For me, teaching in Bangor means being part of something special. Bangor's culture is one of educational leaders who believe that every child deserves the absolute best education and work relentlessly to provide it. There is tremendous pride in being part of this deeply-rooted tradition."



Girls Soccer Wins State Championship

Congratulations to the Bangor High School Girls Varsity Soccer team on winning the State Championship! The Rams won 2-0 over Gorham to claim the title. They finished the season with an outstanding record of 15-2-1.

The 2015 Varsity team was led by seniors Emily Gilmore (Goalkeeper), Erynne Sauda (Striker), Danyel Conway (Midfield), Emma Barnett (Mid/Striker), Maeve Harrigan (Back), Keely Markevich (Back), and Sarah Bragg (Mid/Back). Joe Johnson is the Head Coach, assisted by Mark Boulier, Dave McMahon, and Shannan Fotter.



Why Bangor:

Jeffrey Fahey
Physical Education
Bangor High School
27 years with BSD

“The Bangor School Department emphasizes the importance of being a well-rounded student. Through its core academic offerings and variety of co- and extra-curricular activities, the Bangor School Department has something for everyone.”



Check out our YouTube channel, BangorMaineSchools, for informative and inspiring videos. Some of our recent videos include interviews with students on the math team, speech and debate team, and the state champi-

onship girls soccer team. You can even subscribe to the channel and get email notifications when new videos are posted.

Alumni Spotlight: Austin Smith (cont. from p. 12)

how poker players perform when using their own money versus using an investor's money. The results of this research could impact public policy; there is talk right now about changing how loans for higher education are structured, with a lender or bank basing a loan on the student's future earnings, like buying stock in that person." You can read more about Dr. Smith's research at <https://sites.google.com/site/austincrowley-smith/>

"I'm thankful for all the teachers that took the extra time to help me become a critical thinker and develop my writing skills," says Smith. "I hated English in high school but my teachers pushed me and I'm grateful because it turns out that my writing skills have been critical to my career."

Smith has advice for current and future BHS students: "BHS gives you a lot of options, so don't be afraid to branch out and try something different. The sooner you find what you like, the sooner you can pursue that interest."

BHS Student Research (cont. from p. 5)

using Madi Drops, a new technology that uses colloidal silver to reduce the bacterial growth in the buckets after the water is filtered. And Charlie Budd has been collecting water from the Kenduskeag Stream, testing it, and analyzing data. We work really well as a team."

In October, Claire traveled to the University of North Carolina where she was invited to present her research at the 2015 Water and Health Conference. Her project can be seen in March at the Maine State Science Fair. Claire received early admission to Colorado College, where she plans to major in molecular biology with a minor in psychology. "I plan to continue my water research in college," says Claire, "because access to clean water throughout the world is still a major issue."

NCLB Report Card (Cont. from p. 14)

Actually, the achievement data contained in the 2015-16 report card is 2014-15 MEA data compiled from the spring administration of the state accountability tests. The 2015-16 report card serves only for informational purposes. It has no impact on the individual school accountability status. Beginning in 2016-17, a new accountability system for schools and school units will be implemented.

The Bangor School Department NCLB Report Card can be viewed online at <http://www.bangorschools.net/leadership/superintendents-office/nclb-report-card/>.

Bangor School Department

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