WITH HV MFG STAFF

MOVING INTO THE FUTURE WITH A VISION



Drawing and Design instructor Patrick Reiser discusses student projects with Pine Bush High School Principal Aaron Hopmayer.

or the Leader Profile in this spring 2018 Edition, HV Mfg broke a bit from tradition. Past profiles have exclusively featured leaders in the manufacturing sector, however, for this edition we chose instead to feature a leader in the field of Education. Aaron Hopmayer has been Principal of Pine Bush High School for nearly 18 years. In that time he has helped transform the school into an innovative, student centered place of learning. Mr. Hopmayer has initiated several programs at Pine Bush High School including a Summer Enrichment Academy Program and the "Excelsior Academy" for seniors, both programs engage the community to help better prepare students for careers in various fields. Mr Hopmayer is also leading an effort to form a PRIME program (Partner Response in Manufacturing Education) at the school. Speaking with "Hop" as he is widely known, one is struck immediately by his passion for education, pride in his staff and students, and his genuine enthusiasm for his work.

HVMFG: How did you come to work in education? Was it something you always wanted to pursue?

AH: Heck no! When I was the age of the kids in this school I had no idea what I wanted to do after High School, I had no plans for after graduation. I ended up joining the Army, trained as a mechanic, served in Iraq and a bunch of other places too. When I got out of the Army I headed to SUNY New Paltz, still not really knowing what I wanted to do with my life. At New Paltz my advisor said -"well, you've been all over the world, why not teach global studies." Sounded okay to me so I became a Social Studies teacher. BA in Secondary Education/Social Studies, MA in Special Education.

I took to it right away, really enjoyed working with the kids.

HVMFG:

Where was your first job, here in Pine Bush?

AH: No, my first job was in Fallsburg, small district only 650 kids in a school with 7th – 12th graders. It was a

AH: This will sound cliché but the fact is our focus is on the kids. If an idea or innovation or program will help educate our kids we do our best to embrace it. Whether it's our really strong AP program and the Excelsior Academy, or our summer academies, if they will help develop kids, prepare them for careers or college or just make them better people we embrace it. The PRIME

HVMFG: What do you try to focus on with such a diverse

initiative we are working on with you is another good example. It will provide more opportunities for our kids – more paths to success - and that is our focus.



population?

Students Charles Bakleh and Osara Tubo operate a Haas cnc mill as Principal Aaron Hopmayer and Instructor Ken Marshall observe.

tough district at that time and really was good place to start my career. I became Dean of Students in addition to my teaching duties and returned to New Paltz to get my Administration Certificate. I really learned a lot in Fallsburg about education. What it takes to be a good teacher and how hard that job can be and how hard it is to reach some kids - to motivate them to learn. I also learned a lot about school administration. I learned what it takes to support teachers, to support kids, to satisfy State Ed. I learned some strong lessons there.

HVMFG: Then you took those lessons to Pine Bush?

AH: Yes, sir. 17 1/2 years ago.

HVMFG: Tell us a bit about Pine Bush High School? What are the demographics like?

AH: We have about 1,800 students in 9th - 12th grades. About 39% are free or reduced lunch eligible. It's a very diverse district. We are in parts of 7 Towns and 3 counties. We have a very diverse student body as well, which is representative of our community. We've also experienced quite a bit of growth the past 20 years. The district budget is around \$115 million.

HVMFG:

We'll come back to PRIME in a minute, its new... but let's talk about some of the existing programs you mentioned. Tell us about vour Summer Academies.

AH: I am so proud of the Summer Academies. There are 6 of them now: "Leadership and Law," "Aviation," "Performing Arts,"

"Science" "Horsepower & Engineering" and "Medical." They are 1-4 weeks in length and they immerse kids in the subject for that time, connecting them with community professionals and other students interested in the topic, as well as, with their teachers. The first one we started 17 years ago was the Leadership and Law Academy. It's centered on government, economics and the Criminal Justice System. It's taught by social studies teachers, Town of Crawford Police Officers and the United States Army. It's done so well that kids can earn SUNY Orange Community College credits for the course - it counts as their Criminal Justice 101. We work with local theater technical professionals in lighting, sound design, make-up and auditioning to show the "realities" of professional theater for the Performing Arts Academy and kids can earn credit from SUNY New Paltz for that program. The Science Academy is the shortest, but it's one week of intensive investigation at Raquette Lake in the Adirondacks. The Medical Academy is a collaboration with Orange Regional Medical Center, Touro College and Crystal Run Healthcare - and others - kids learn about different medical professions and actually complete AED, CPR and First Aid Training. Finally the Aviation Academy is a partnership with Wurtsboro Airport, the United States Army and Pratt & Whitney. Kids learn the fundamentals of aviation,

20 HV MEG some meteorology avionics and more – they even get some glider lessons and time in a flight simulator.

The STEM Academy – started last summer and is designed to expose incoming ninth graders to various STEM initiatives and also expose them to the High School STEM/Manufacturing Program. Students are working on building rockets, ecology, coding, manufacturing, agricultural technology, robotics, and more.

HVMFG: Wow, that's a lot. It's great to see kids exposed – immersed really – in these possible careers. How is it paid for?

AH: It is a real opportunity for kids to see what these professions entail. To live it – so to speak – for a few weeks and to get to know people who are in those careers. It's something that needs to happen more. As to how we pay for it... Well, I write a lot of grants... but the district kicks in, there is a modest tuition and the community donates a lot of time to make them work.

HVMFG: What about the Excelsior Academies?

AH: Excelsior Enrichment Academies, I'm also real proud of these! They provide more chances for kids to learn about careers – to connect what they are learning in the classroom to what the "real world" requires of them. They are for seniors only and allows them to earn high school and college credit while experiencing "hands on" learning. Participating students attend classes in the morning and then afternoons are spent with one of 4 Academies, sometimes at school and sometimes at a location outside of the classroom.

HVMFG: What are the Academies – what are the areas of focus?

AH: "Engineering," "Education," "Law and Government" and "Medical." It is so great to see these kids so engaged with their learning. I am always amazed too at the support of the community. They are so generous with their time and really want to help these kids. Also the college partners, SUNY Orange, SUNY New Paltz and Dominican are very supportive and helpful.

HVMFG: We suppose the scheduling can be complicated for a program like this - counselors, teachers and staff have to be supportive, correct?

AH: It can be complicated, but we have a terrific staff – everyone wants this to be successful and we look for ways to make it work.

HVMFG: What makes a "terrific" teacher?

AH: Energy and enthusiasm. That is contagious in a classroom. A willingness to take some risks and to be creative. Also a firm belief that all kids can learn. It's no secret that there are lots of constraints – state requirements come to mind – that makes it difficult – but we try to create programs to allow creativity. Not just for students, but for teachers too.

HVMFG: What makes a "terrific" building Principal?

AH: Be firm, be fair and be consistent. Probably shouldn't need to be said but... care about the kids and remember that you are here for them. Support them both in and out of the classroom. Be a strong supporter of teachers and do whatever you can to give them



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Excelsior Engineering students test their program code in Pine Bush's Simulator room. Aaron Hopmayer and Ken Marshall Observe. Students pictured: Shaun Burgos, Charles Bakleh, Osara Tubo, and Ethan Newcomb.

the resources to be successful. I also think that order precedes learning. We need to respect each other and we need to have rules to ensure that happens.

Let me tell you a quick story. You saw the orange "No More" t-shirts the kids are wearing and selling today? Those are part of an anti-domestic violence, safe homes campaign the students are engaging in. In 2007 there were 160 fights at this school - almost one per day. Last year that number was 10. When there were 160 fights my AP's (Assistant Principals) and I were spending a lot of our time just patrolling the halls, handling paperwork, disciplining students. If that's all we're doing then we're not helping teachers or building creative programs. By looking at root causes and engaging the students and teachers we were able to look at anger management, build mediation programs etc. It caught on. Today these kids have gone even further tackling domestic violence. There's going to be a ceremony at the basketball game tonight (at this writing the Bushmen are ranked 4th in the state) because the whole school community thinks it's important. That negative has completely flipped into a positive that has rallied the student body.

I tell you that story, not because I did it, because I didn't. But, I like to think I helped it along – created an environment where the people who did make it happen had the resources and felt empowered to do it. That's what I think makes a good building Principal.

HVMFG: Now let's talk about PRIME. What is it and where is it taking Pine Bush?

AH: PRIME is a program from the Society of Manufacturing Engineers (SME) Education Foundation. It stands for Partnership Response In Manufacturing Education. The idea is to engage and build a collaborative network between students, educators

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and industry to grow and train the next generation workforce and also build interest and awareness in manufacturing. Through our Engineering Excelsior Academy for the past few years we have been doing a lot for our students with 3D printing, 3D modeling and more. The teacher there – Ken Marshall had done an outstanding job. We already work with education, Orange Community College gives kids college credits. They work with industry too, Lloyd Greer of Lloyd's Motor Works helped them build a motorcycle that set records at the Bonneville Salt Flats. And, they worked with Allendale Machinery to learn how to program and operate a CNC milling machine. Plus, the summer Aviation Academy has a long standing relationship with Pratt and Whitney in Middletown.

When I read the magazine, HV MFG, about a year ago I invited Harold King to visit the school. I wanted to share with him what we are doing here. I guess a few weeks later he learned about PRIME and introduced us to the folks at SME. The program is ideal for what we are doing here. It will give our teachers more resources, it will build programs and courses directly related to local manufacturers. It will give our kids work-based learning opportunities and so much more. The collaboration between education and industry is important to us. We will be teaching kids things that our local industry needs them to know. What I really like about manufacturing is that there are opportunities for kids with a wide variety of interests. We've got really smart kids, for example, who just don't care about literature and no interest in learning math but love working with their hands. Classrooms are a struggle for them, but show them what that HAAS milling machine can do, how it can make parts for that motorcycle or a jet engine - and they become enthused, the math makes more sense and they are now active learners. At the same time, for

those kids that love math and science, we can show them a path in manufacturing to engineering where they can, one day, design the next most fuel efficient engine or whatever the next greatest technology is going to be.

We met with Pratt and Whitney, Lloyds Motor Works, Allendale Machinery and several other companies to get the financial support to make it happen, and they have stepped up — especially Pratt and Whitney. We need a little more support and hope that will come in the next few months but we are moving forward and very excited to be working with these companies and the Council of Industry.

HVMFG: Final thoughts – What do you think the future of Education is?

AH: Big question and I have many thoughts but 2 things stand out. First, CTE, Career and Technical Education is going to be more and more important in the next decade. We got away from it but, now the time is right to integrate it into everything we do. We need to mix CTE into the Core 4: math, language arts, social studies and science. That will give meaning to our learning and opens more paths to success for students. Second, technology needs to become more integrated into learning at all levels. That can be very disruptive – no doubt – but the potential is tremendous. Virtual reality, video, the list is only limited by our imagination.

HVMFG: Thank you for your time and your commitment to education.

AH: Thank you for the opportunity.



Excelsior Engineering Class of 2018 stands with Principal Hopmayer and Instructor Ken Marshall. Left to Right: Osara Tubo, Aaron Hopmayer, Charles Bakleh, Nick Maurizzio, Nick Desantis, Mike Zawojski, Andrew Bardin, Zach Futrell, Michael Buckridge, Tyler Sullivan, Skylar VonDeben, and Ken Marshall.

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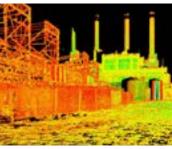
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