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NEWS

High School Students Discover The Wide World Of Corrugated

BY LEN PRAZYCH

The juniors and seniors in Nick Longo's Introduction to Engineering class at Valley Central High School in Montgomery, New York, last semester completed what has been considered one of their most challenging of assignments. It wasn't something as rudimentary as building a square box, slapping some graphic design on it and displaying it for



Two students in Nick Longo's Introduction to Engineering class at Valley Central High School in Montgomery, New York, show off their working design of a corrugated candy dispenser.

all the world to see. No, their assignment was to design and build a working mechanical device constructed of corrugated: a safe with a combination lock or a coin-operated candy dispenser.

Previous articles in *Board Converting News* have chronicled the learning experiences of the students at Valley Central as they discovered the power of corrugated as part of their engineering curriculum. Before taking Longo's course, many didn't know what corrugated was, much less the fact that a few minutes away a "super plant" dedicated to its manufacture and distribution was churning out millions of boxes each month. Nor were they aware that one could actually make a living designing boxes or operating the machines that manufacture them.

Richard Goldberg, Vice President of Operations at Middletown, New York based President Container Group (PCG), realized there was an opportunity to introduce high school students to the corrugated industry and possibly, one day, hire them as a PCG employee.

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Colbert Packaging Commits To Wind Energy Initiative

Lake Forest, Illinois based Colbert Packaging Corporation, a provider of paperboard packaging solutions, has announced its commitment to environmental stewardship through the purchase of renewable energy credits (RECs) in the form of wind energy. This initiative complements Colbert's overall sustainable strategy and commitment to reducing the environmental impact of its operations. The investment allows Colbert to lower its carbon footprint and protect the environment, and supports the development of renewable energy technologies.

"We manufacture paperboard-based folding cartons, which is a sustainable alternative to plastics," said Colbert President and COO, John Lackner. "Now we are able to further our strategy to meet our overall clean energy goals with wind energy credits. We firmly believe it's important to make sustainable decisions with the future in mind – for our employees and their families and our community."

Colbert made this investment in renewable wind energy by purchasing Green-e® Energy certified renewable energy certificates (RECs) to reduce the emissions associated with its electricity consumption.

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High School Students (CONT'D FROM PAGE 1)

“If you want to attract young people into our industry, I believe we have to get to them in the high schools,” says Goldberg. “We already have programs for college students through the fine work of the International Corrugated Packaging Foundation (ICPF). What about attracting the interest of students while they are in high school so



Two students constructing a corrugated safe.

they can develop an interest in corrugated manufacturing? Then if they are interested enough, they can learn where to go for packaging programs in college.”

Goldberg noted that many college programs focus on management, structural and graphic design and customer service. But what about operations? “The corrugated industry also needs machine operators and production workers, too. Where will these workers come from? Not every high school student has the desire or the opportunity to go to college,” he says. “We need to expose high school students to an industry many don’t know exists.”



Nick Longo of Valley Central High School, right, and Richard Goldberg of PCG instruct a student on how to build a corrugated candy dispenser.

To that end, Goldberg struck up a relationship with Nick Longo, a Technology Education teacher at Valley Central High School in nearby Montgomery, New York, who visited PCG with other invited members of the local Council of Industry five years ago. Longo saw the opportunity and the valuable resource PCG extended to the school and his stu-

dents and decided to incorporate a lesson in corrugated manufacturing into his Introduction to engineering class at Valley Central.

As it did when the program began, PCG provided all the corrugated sheets and supplies the students need to learn about corrugated – like the concept of fluting and the remarkable strength it can create – and to build something using it. Since Longo started the class, students have constructed corrugated sleds, boats, chairs, and snowboards. One group built a corrugated bridge. During the semester recently completed, however, students were challenged to create a working mechanical device out of corrugated, and built safes with movable dials and candy dispensers.



A student fine tunes her corrugated gumball machine.

And as he has done since the program began, Goldberg visited the class regularly over the course of the semester, beginning with an introductory presentation showing the students a video on PCG and what it does, followed by an AICC video on the importance of safety. As part of the supplies, every student received a cutting blade, gloves and safety glasses. Early in the semester the entire class took a field trip to PCG and enjoyed a tour of the plant.

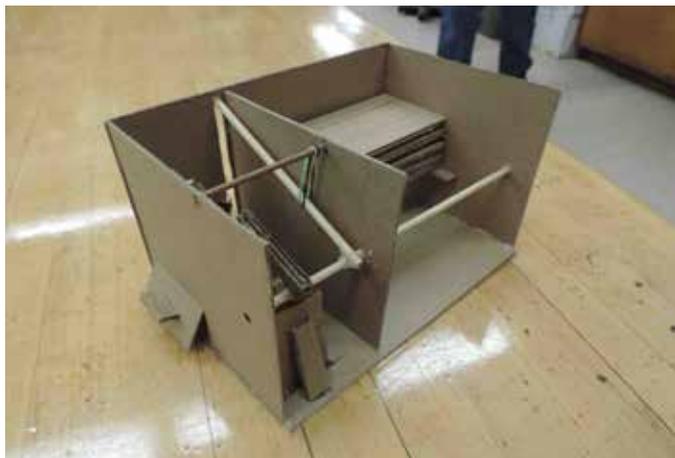
“It’s all about exposing students to the world of corrugated that most of them don’t even know exists,” said Goldberg. “It’s manufacturing. But they don’t really know what that means until they see a video or actually visit a plant to see the machines running to understand what corrugated manufacturing is all about.”

Even Longo admitted to not completely understanding manufacturing until he visited PCG, saw the machines in operation and watched how a corrugated box was made.

“At the beginning of my course, we talk about the differ-

ent types of engineering they will see,” says Longo. “They learn the vocabulary of engineering and are introduced to the concept of corrugated. Then they are challenged to design and build something out of corrugated. They learn CAD and become the engineers of their project. I help facilitate the process. The students are doing so much more than just gluing pieces of corrugated together.”

Every semester presents a different corrugated challenge and Longo admits that the most recent project was perhaps the most challenging to date since it involved a



A student's prototype of a corrugated candy dispenser.

series of mechanical operations to work properly.

“The project required a lot of planning before the actual building began, from deciding exactly what to build, to looking at YouTube videos, to designing the parts, actually building the parts out of corrugated and how it would all go together,” says Longo. “And students aren’t just building a safe or a candy machine and getting a grade. They must show me that it actually works.”

This means that the corrugated safe needed to have a series of tumblers that rotated and aligned in order to open. For a gumball machine to earn a passing grade, it had to be able to receive a coin that activates a lever that



Nick Longo helps a student with the details of his project.

opens a chute and allows a gumball to be delivered to its recipient.

Students attended Nick Longo’s engineering class every morning of the semester to work on their projects, about 40 minutes at a time. Goldberg made regular visits to Longo’s daily class to consult, teach and help the stu-

dents through their projects while instilling some foundational lessons in creativity and real world problem-solving. He expressed his satisfaction at watching students learn about corrugated. “They come in to the morning class still half asleep. When they begin working on their corrugated projects, they wake up, and they are engaged, they are learning and they are happy. I wish I can get some of my employees to be so enthusiastic!”

When asked if he had any prior knowledge or interest in corrugated and problem solving prior to taking this course, one student said, “No, but this has definitely sparked my curiosity. I’m not sure what I want to do as far as a career path goes, but engineering is definitely in the air for me.”

Another student said she was amazed at how many things come in a box. “This course really was eye-opening and it was fun building a little machine that actually works but I want to learn more about graphic design and how I can make a box beautiful.”

An Ongoing Challenge

Attracting and retaining employees into corrugated and folding carton manufacturing continues to be one of the most challenging issues the industry faces. Presentations at association meetings focus on attracting and retaining the “next generation” of employees, specifically Millennials, who will soon represent about 50 percent of the U.S.



Richard Goldberg bought the first Snickers candy bar from a student's fully operational corrugated candy dispenser.

workforce. There is a school of thought, however, that says that attracting Millennials to careers in the industry is difficult because they have likely begun their careers in other more popular or “sexy” industries, ones that don’t usually involve the manufacture of paperboard packaging.

PCG continues to provide opportunities for high school interns who want to experience a world-class manufacturing environment, whether it be something they would like to study in college or perhaps, a career in the corrugated industry. “Our door is open to every kid within a hundred miles of here to take a tour of our plant,” says Goldberg. “I want them to know that there is a potential career for them here. Whether its one student or five, we are gaining an interest in what we do. Spread over the entire industry, how many students could we attract?”