Some of Middle Tennessee’s biggest business names are partnering with Metropolitan Nashville Public Schools to help teachers answer an age-old question from students: When will I ever use this?

As part of the ongoing evolution of the career academies set up in some of Nashville’s public high schools, dozens of teachers participated this summer in “externships” at local companies. They shadowed business partners and used the experience to develop lesson plans being used this school year. The $50,000 project was paid for by the Nashville Area Chamber of Commerce, which has identified improving public education as its No. 1 priority, and The Memorial Foundation.

Marc Hill, the chamber’s chief education officer, said the career academy model already has helped improve graduation, dropout and attendance rates at 12 high schools, but there hasn’t yet been marked improvement in academic achievement.

“The hardest part is changing the way teachers teach,” Hill said. “Teachers, to make this academy curriculum come alive for students, they need to integrate real-world experience into the lessons. They don’t often have those experiences themselves.”

From the businesses’ perspective, Hill said the externships program offers the first opportunity for the private sector “to get involved in high schools in a way that lets them convey their expertise and passion for an area of work.”

“It allowed us to understand better what the finished product we produce here ... needs,” said John Marshall, an engineering teacher at Overton High School who developed a project with Louisiana-Pacific Corp. that involves the study of wood pellet manufacturing.

Marshall said he expects the relationship with LP to continue and that Dave Crowe, the company’s vice president of corporate engineering and technology, plans to visit students at the school.

“When he comes in and says, ‘This is what you need to know to get a job with my company,’ it has a huge impact on the kid as opposed to me saying it as a school teacher,” Marshall said.

The externships, and the lessons offered:

The externship
Company: HCA
School: Academy of Health Sciences at Hillwood High School

The lesson: Students will revamp Southern Hills Hospital’s diabetes outreach campaign for Nashville’s Latino community, incorporating the study of Spanish, English, science, health science and social studies. Assignments will include public service announcements, marketing and patient data analysis.
Creating a credit union
Company: The Tennessee Credit Union
School: Academy of Business and Hospitality at Antioch High School

The lesson: Students will integrate language arts, social studies, science, math, finance and mathematics to create a marketing campaign to promote financial literacy. Later this year, students will open a fully functioning branch of the credit union at the high school.

Building business
Company: Dollar General
School: Academy of Marketing and Business at Hunters Lane High School

The lesson: Students will work in small groups to develop a business plan. They will learn how to research and write a plan and incorporate English, history and math in the process. After a presentation of the plans, one will be chosen to be submitted for competition to DECA.

Health care policy
Company: Vanderbilt University Medical Center
School: Academy of Health Science and Law at McGavock High School

The lesson: Students will stage a health and law symposium. After a portfolio of assignments covering several content areas, students will be asked to carry some through into presentations that will take several forms, including a medical report on a patient’s propensity for a knee injury, a mock trial and a debate of a topical health care issue.

Party planning
Companies: Hutton Hotel, Holiday Inn, Vanderbilt, Belle Meade Plantation
School: Business, Entertainment, Hospitality and Tourism Academy at Hillwood High School

The lesson: The students will work as event planners and hold a function at the high school. Students will be divided into departments such as culinary, guest services and accounting. Subjects from biology to psychology will be covered in the process.

Pellet production
Company: Louisiana-Pacific Corp.
School: STEM Engineering Academy at John Overton High School

The lesson: Students will study LP’s foray into wood pellet manufacturing, as well as its feasibility and concerns. Science instruction will include measuring pellets burn rates and heat and energy production. Lab safety techniques will be taught along the way. Lots of math is involved, and government regulation will be covered as a social studies topic.

Talent training
Company: Country Music Television
School: Academy of Digital Design Communications at McGavock High School

The lesson: Students will plan, construct and produce a fan-based talent show. It will emulate the process CMT uses for its video music awards and integrate visual communications, geometry, world history and English.

McGavock High School faculty examined the red carpet layout for the CMT Music Awards as part of an externship program.
Sales pitch

**Company: Lee Co.**

School: Academy of Architecture and Construction at Cane Ridge High School

The lesson: Students will create a commercial for Lee Co. and its green initiative. Several academic connections will be made. For example, construction instruction will be involved in interpreting the Clean Air Act and EPA requirements and music instruction will be used to create music for the commercial. Other subjects include visual arts, business, speech and theater, math, science and social studies.

By the numbers

73%: The graduation rate for children in the Metropolitan Nashville Public School System, for the 2008-09 school year. That improved from 61 percent just six years earlier. Graduation rates were the No. 1 concern according to a survey conducted by McNeely Pigott & Fox Public Relations in May 2009.

$503,000: That’s the amount of lifetime wages that a student can expect to miss out on if he or she drops out of high school, says Connie Williams of the PENCIL Foundation, which supports Nashville’s Public Schools.

$936,000,000: The amount of money that will be sucked out of the Davidson County economy every year in the form of lost wages if one-quarter of students continue to drop out. The economic impact is even greater when the flight to outlying counties’ school districts is considered.