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ABSTRACT

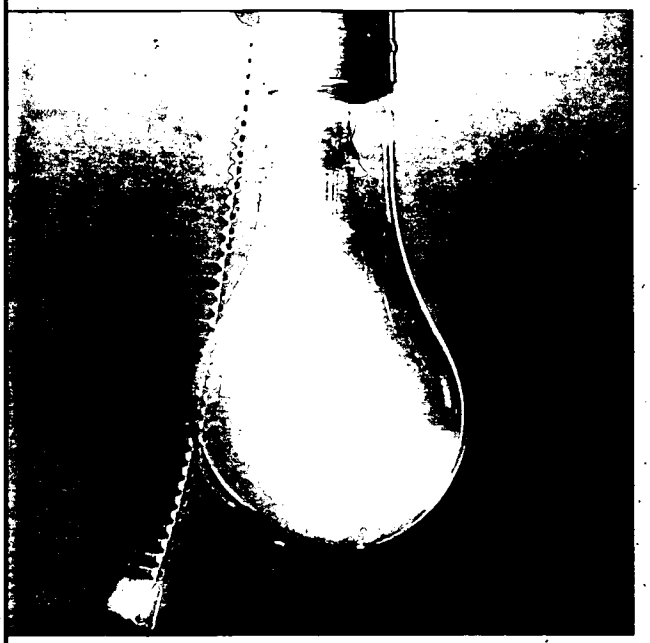
A growing number of schools are using community-based learning to apply classroom learning to the real world. In so doing, students acquire the skills to become successful problem solvers and lifelong learners. This guidebook offers a variety of ideas for introducing and using community-based learning in the classroom. The suggestions are designed to help teachers give students a realistic snapshot of career options and prepare for them. The guidebook provides practical suggestions for using the campus as a learning resource; bringing the community to the classroom; linking the classroom and community electronically; and using the community as a classroom. An A-to-Z list of specific occupations describes what kinds of skills are needed and what the job is like. Contains an index and a list of other products in the Connections: Linking Work and Learning series. (LMI)

A-Z

idea book

Learning in the Community

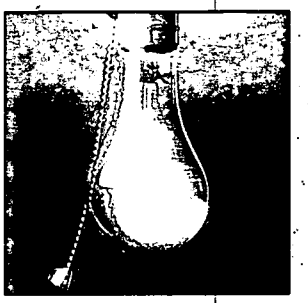
From A to Z



CONNECTIONS
LINKING WORK AND LEARNING

Preface

Community-based learning is nothing new. It is, however, finally being recognized as a valuable tool in our nation's schools. *Learning in the Community: From A to Z* is full of ideas for ways students of all ages can learn using nontraditional resources in their local communities. Written with a light touch, this idea book informs the reader about community-based learning through brief examples, suggestions, discussions, and advice drawn from field experience. It does not present a comprehensive plan or program. Instead it invites and inspires teachers and students to enlarge their horizons and pursue learning wherever it takes them.



The Northwest Regional Educational Laboratory (NWREL) chose to develop this idea book because it is committed to fostering productive partnerships between schools and communities, expanding opportunities for youth to make informed career and life decisions, preparing youth for the demands of a changing workforce, and using the community as a learning resource.

NWREL has a 30-year track record of providing research and development services addressing the needs of children, youth, and adults. While governed by a board of directors drawn from Alaska, Idaho, Montana, Oregon, and Washington, the Laboratory's leadership activities extend nationwide.

NWREL's Education and Work Program serves local and state organizations committed to building systems that serve all persons on their life and career journeys. The program has been a leader in school-to-work and educational reform for more than 25 years. Its staff of professional educators has worked with organizations throughout the Northwest and the nation to develop innovative educational programs in such areas as work-learning integration, assessment, career guidance, and school-business partnerships.

Northwest Regional Educational Laboratory

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The content does not necessarily reflect the views of the Department or any other agency in the U.S. government.

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Acknowledgments

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- *Experience-based Career Education*, the Northwest Regional Educational Laboratory
- *Experience-based Learning: How to Make the Community Your Classroom*, the Northwest Regional Educational Laboratory

learning in the community

introduction

Welcome to the growing number of schools extending the walls of their classrooms into their local communities. By breaking down artificial barriers that separate learning in school from real-world applications, students acquire the skills to become successful problem solvers and lifelong learners.

How do you do community-based learning?

There are many ways to define and carry out community-based learning. This book suggests a variety of ideas and examples, such as:

- **Using the campus as a learning resource**
  - Find physics applications by studying the school's heating/cooling system
  - Line the soccer field using arithmetic and geometry
  - Practice listening and writing skills by taking phone messages in the school office
- **Bringing the community to the classroom**
  - Invite experts in to speak: a pharmacist in a chemistry class; an architect in an algebra class; a painter in an art class
  - Bring documents from the workplace to use as source materials; write the annual report for a nonprofit group in an English class; examine city ordinances in a social studies class; use trade journals in an economics class
  - Bring in "tools of the trade" from local industry: transparencies from a printer to show how color is separated; a bar-code scanner to illustrate how inventory is tracked
- **Linking the classroom and community electronically**
  - Research class assignments on the Internet

- Use videoconferencing to interview professionals at their desks
- View policymakers at work on C-SPAN to see how parliamentary procedures are used

■ **Using the community as classroom**

- Create the "classroom" at a worksite: a high school health occupations program meets in a training room at the local hospital; a marketing program uses vacant space in a mall
- Conduct independent or group research: students from a middle school develop an oral history of their school neighborhood; economics students research local businesses that failed
- Study how art is used in public places: plan an extended field trip downtown; design an "art walk" guide
- Visit, observe, and participate in the workplace: use job shadows, career explorations, and internships to expose students to applications of academic skills, and give them an awareness of a myriad of career options

Why should you do community-based learning?

Teachers already fill their days to capacity. How can they take on anything else? Surprisingly, when teachers blend community resources with their everyday instruction, it's the students who take on many of the added tasks and responsibilities, thus freeing faculty for stage-setting, creative planning, and follow-up.

We're not saying there's no added work for teachers—it's a different kind of work. When you expand the context for learning, you rely less on textbooks, packaged materials, and standardized tests. Students learn to define real-life problems, find their own resources, and solve dilemmas that have meaning to them.

In fact, a teacher committed to using the community as the classroom spends less time planning lessons, making up tests, and grading papers, and more time facilitating, brainstorming, motivating, and reflecting with students on their learning experiences.

How can you help students see the big picture?

Consider Marisa. She wants to be an auto technician—an excellent choice if she's willing to master the sophisticated electronics and problem-solving skills needed today to work on cars. For a realistic snapshot of career options and how to prepare for them, Marisa needs opportunities to see:

- **Automotive technicians at work**—If Marisa is interested in repairing cars, it is important to help push her horizons. She could observe all aspects of the auto industry, from the independent mechanic to a full-service car dealership where she might not only see what each technician does, but also learn about the service manager's role, the parts department, accounting, the body and paint shop, brakes, tires, alignment, and new and used car sales. Or suggest that she visit a specialty shop, with such services and products as auto detailing, oil changes, or car stereo installation.

- The **transportation industry at work**—Marisa might be encouraged to consider not only car repair and maintenance, but also buses, trucks, tractors, trains, airplanes, ships, subways, helicopters, or earth movers. She could observe mechanics and technicians working for public and private organizations and learn how unions work, how safety and health are monitored, how jobs in this industry can be found in warm buildings but also in cold, wet surroundings.

- **General technicians at work**—Marisa might also be nudged to observe mechanics and technicians who maintain and repair a wide range of equipment and machinery outside the auto industry. She might "shadow" experts in office machine repair, local area network (LAN) maintenance, telecommunications installation, robotics, or manufacturing equipment maintenance.

A student like Marisa who starts out convinced auto mechanics is the only way to go may discover "fixing things" has many possibilities. This is the reward of community-based learning: always pushing the margins a little further.

learning in the community

A to Z ideas

A

All Aspects of the Industry

If you go out to dinner on your anniversary, you want the chef to know how to cook the best meal possible. Period. If that chef, however, were your son or daughter, you'd want them to be as successful as possible. You'd want your child (to say nothing of all the other kids in school) to have as much knowledge and as many transferable skills as possible so that one day, if they chose to, they could own their own business or branch out into related fields of interests.

Learning all aspects of the industry teaches those related skills and knowledge so a chef learns not only the *technical* and *production* skills of cooking, but also learns the *budgeting, planning*, and *management* required to keep a business in business; the impact *technology* has on restaurants; the benefits of a food donation policy on the local *community*; the impact of the city's recycling regulations on the *environment*; the position of the local service workers *union* on benefit packages; and the *health* and *safety* issues related to food handling and preparation. A chef with this background will not only be able to prepare a delicious meal, but will also have a brighter future in all aspects of the restaurant industry.

Bon appetit!

All of Us

Whatever background, natural gifts, or talents we have, sooner or later we all find ourselves in the marketplace of life.

Young adults with little preparation and exposure to the working world tend to meander through their 20s and 30s still searching for what to do with their lives. But those with a solid education, enriched by hands-on work experiences in their communities, will likely move along their career paths with more confidence and choices.

Antique Store

What can you learn in an antique store?

Think what students can learn about the history of their community, state, and nation as recorded in campaign buttons, military uniforms, kitchen gadgets, old books, and maps.

Now look at that same antique shop from a business perspective. There are a variety of skills at work—bookkeeping, customer service, merchandising, advertising, you name it.

Does the shop owner have stories about that antique chair or those children's toys? To prepare students for the future, show them the past.

A-Z

idea book

Architect

The architect's office —with its mix of the artistic, technical, and political—is a rich learning environment.

Students can learn about design, computer drafting, and engineering. But many will be surprised to see the writing, speaking, and organization skills that architects use every day in their projects. Budgets, city codes, environmental impact statements, agreements with consultants and contractors—this work calls on nearly every subject taught in school.

Buildings and cities illustrate history in their design and invite study of urbanization, population growth, the environment, and the ethical implications of how we build communities.

Here students can learn to appreciate one of the grand traditions of civilization, where projects are often enormous in scale and built with the knowledge that they will outlive their designers.

For those who face language and cultural barriers, discrimination, limited incomes, or lack of mobility, special considerations may be necessary so that they also have the opportunity to benefit from community-based learning. Our task as educators and community partners is to find the "what am I good at" in every young person. Then we help them build on those strengths so other potential barriers are overcome.

All means all, not some.

■ Apprenticeship

This centuries-old model for passing on trades and crafts to the next generation continues to be a standard by which community-based learning can be measured.

Registered apprenticeship programs are traditionally found in highly skilled fields, such as construction and manufacturing. Entry prerequisites are typically high, and supportive coursework must be offered, either by union/industry organizations or by local community/technical colleges that hire skilled craftworkers as teachers.

Are apprenticeship programs keeping up with today's fast-changing job market? Yes! Increasingly, new and innovative programs are emerging, thanks to the hard work of committed industry and education leaders who recognize that, particularly in rural areas, key occupational needs are not being met. As in all examples of community-based learning covered in this guide, the process still boils down to a committed "mentor" willing to devote extra effort to pass on skills to the next generation.

■ Art

If you're looking for art in typical art places—galleries, museums, artists' studios—you're missing a wealth of less obvious resources.

Imagine the inspiration and learning to be found in an advertising agency, a commercial photographer's studio, a hair salon, or a fine furniture designer's workshop.

What about helping a window display artist at work? What role does art play in the day of a city planner? A landscape architect? A florist, interior decorator, or printer?

The creative teacher, student, and mentor can discover innumerable art applications at these work locations and others, depending on how well the site has been analyzed for its learning opportunities. (See *Learning Site Analysis.*)

■ Articulation

As community-based learning becomes more widespread, the need to articulate programs and ensure a seamless curriculum will be even more critical than ever.

We currently see increased planning underway between education levels:

- Elementary school teachers help set K-12 standards and clearly identify their role in building strong foundations
- Middle-school staff are talking with high school staff about career paths
- High schools are meeting with community colleges to match curricula and desired student competencies

Including community-based learning in the dialogue about curriculum standards enhances academic instruction. And the earlier and more frequently students have community-based learning built into their education, the better career and life choices they'll be able to make.

■ Assessment

When a student has the opportunity to demonstrate skills—whether in music, science, electronics, or figure skating—to an expert in that field or a critical audience, *that* is authentic assessment.

Teachers can help set the stage by coaching their students on what to expect, and preparing them with practice runs. But

Activity Director for Senior Center

What happens when you bring youth and senior citizens together? Would you believe music, dance, literature, and art?

This is the place for your enthusiastic and creative students, the ones who act in school plays, write poetry, play an instrument, or paint. A place for those who have a warm heart and genuine respect for others.

Jobs in senior care are increasing as the population ages and activity directors play a key role in maintaining the health and well-being of seniors in care centers. In this work, students can investigate the special emotional and physical concerns of the elderly and examine their own attitudes about aging.

What happens when you bring youth and senior citizens together? Anything. Even a new purpose in life.

the ultimate test is successful demonstration of skills to the people who will be their future employers.

Scouting and other youth organizations recruit community leaders as counselors to assess young people's skills and knowledge. High school students involved in activities ranging from athletics to drama, agriculture to automotive technology, business to marching band regularly put their skills on the line at state fairs, competitions, and public performances judged by adults who know quality performance when they see it.

Barges

Anyone who lives near a large river or bay has watched tugboats moving piles of coal, stacks of containers, or rows of lumber to unknown destinations. Who are the people who work on barges? And what do they do?

What are the costs of moving goods? And how is that cost computed into the prices we pay at the store?

Think of the opportunities for the study of rivers and their usage, geology, geography, navigation, and the design, construction, and repair of vessels. Think, too, of all the coordination and communication skills needed to store, handle, and transport goods across water.

B

■ Biology

If you're looking for a biology-related curriculum in the obvious places—such as labs, farms, a zoos, or wetlands—look a little further.

Check out city parks, water- and air-quality control agencies, veterinary clinics, or garden supply stores. Why are local restaurants monitored by public health agencies? Why does the golf course greenskeeper check the porosity of the subsoil? Why does the athletic trainer use ice packs for one injury and heat treatments for another?

Try grocery stores, dental offices, or a food-processing plant. How about a bakery, a cosmetics counter, barber shop, or pet store?

Your students may never be bored in biology again.

■ Block Scheduling and Buses

Community-based learning is not without its challenges, two of which are time and transportation.

To successfully implement community-based learning, you'll need to take a hard look at school schedules, time blocks, the availability of buses, carpools, or other means of shuttling students back and forth. (See *Transportation.*)

Block scheduling means that class periods extend beyond the 55-minute timeframe. Some schools combine two or three class periods or vary the days some classes are scheduled. That means students and teachers have the flexibility to do work-based learning and integrated projects with enough time to get there, get set, get on task, get done, and get back to school with purpose and meaning.

That means creative juices don't dry up with the bell.

C

Career Awareness

You can learn about careers in many ways: books and articles, seminars, career counselors, field trips to name a few. But there's no better way to get a feel for a typical day in the work environment than to follow a real worker around for a few hours or a few days. (See *Job Shadowing* and *Career Exploration.*)

Granted, this form of learning offers students a mere sampling of what a job and its responsibilities are all about. But it plants seeds.

Other community-based strategies that increase career awareness and confidence are internships, service learning, and apprenticeships. Each has its own challenges and rewards; each is doable; each needs to be structured, rigorous, assessed, and documented.

An early glimpse into a particular profession is often all it takes to hold a student's interest while looking into the field further, or branching off to look at other options.

All eighth graders in one small-town middle school spend a day following a person in an occupation of their choice (preferably not their parent). They always come back from the experience excited and amazed at what they've learned.

One student flew in a small plane to survey flood damage; one handed a newborn baby to its mother for the first time;

Courtroom

Perry Mason was only one piece of the picture. Every courtroom includes a plethora of people, each with important jobs, who help our justice system run. What are the roles of the judge, jury, court reporter, bailiff?

A courtroom is the ideal location for students to witness sophisticated communication skills: persuasion, logic, summation, questioning. The verbal jousting in a courtroom can lead students to big questions about the law and society, right and wrong, ethics and morality.

The history of our judicial system is both gruesome and noble. Students are fascinated by the kind of injustice that fueled the Salem witch trials. How has our system changed to prevent such travesties? Or has it? And who wouldn't want to read Arthur Miller's *The Crucible* after a stint in a modern-day courtroom?

and one helped prepare a window display for a department store. Another student taught math to third graders, another was interviewed live on radio, and another helped examine a dog!

For a follow-up presentation, each student was asked to describe the work environment in detail and demonstrate how one of their school subjects fit the occupation they observed.

Customer Service

It's the hottest topic in business today.

And what's the best "boot camp" for learning customer service skills?

Offices. Restaurants. Retail stores. Hotels. Any position where dealing directly with the customer is part of the job description.

When students learn to smile when it's positively the last thing they want to do, and can recite "the customer is always right" through clenched teeth, you'll know they've mastered this very important skill.

■ Career Exploration

Whether students are interested in baking or banking, they need to see the full cycle of activities unfold over time. A good career exploration (10 to 30 hours over a period of days or weeks at a selected work site) shows students all angles of a business.

Many community-based youth organizations have career-focused programs. For example, the Exploring Program and 4-H encourage young men and women to investigate career areas such as business, marine biology, search and rescue, police work, architecture, animal science, and aviation. Many zoos, hospitals, and science museums seek volunteers to work in their programs, giving students valuable work experience.

Summer "camps" for future business leaders and teachers put students face-to-face with experts in these fields. Volunteer fire departments willingly allow interested students to join up and participate in weekly training and drills.

As with all strategies for accessing the community for learning, school-sponsored career explorations take time to arrange, structure, document, and follow-up. (See inside back cover for information about the *Career Exploration Guide*.)

■ Committees

Chances are, advisory committees already exist locally to recommend policies and procedures for community-based learning. Look to school boards, site councils, economic

development offices, school-to-work advisory boards, chambers of commerce, and service clubs for help.

Make sure the people on these committees listen to the customers and partners in community-based learning: students, parents, teachers, volunteers from workplaces, unions, trade associations, business managers, and government agencies (employment service, labor and industry departments, vocational rehabilitation agency).

If such groups don't exist in your area, create an ad hoc committee when you need help leveraging resources, reviewing health and safety procedures, interpreting evaluation data, or improving communication with key groups.

■ Communication

Community-based learning can't happen without new lines of communication: teachers talking to employers about what students can learn; students talking to employers about the rewards and challenges of their jobs; employers talking to teachers about the application of academics in the workplace.

What's exciting to see is students talking to parents about what they are learning, teachers talking to other teachers about community resources, employers sharing with teachers why they are happy to help students make the connection between school and life.

■ Contextual Learning

If you asked a pipe fitter how to use an hypotenuse, you'd probably get a blank stare. But ask that pipe fitter to describe the computations for the "fall" when installing a system for moving fluids in a beverage bottling plant, and this essential concept in plane geometry becomes clear.

Contextual learning occurs when a physics teacher takes a class over to the automotive technology lab and asks the students to demonstrate how a torque wrench is used and explain what happens if it is misused.

Chef

With plates as their canvas, chefs create edible art. This occupation offers a tempting array of skills and opportunities. Students can explore chemistry and nutrition, food trends and prices, sanitation and safety. They can learn the art of combining flavors, colors, and textures, practice measuring and mathematics, and use a medley of tools.

Chefs learn early on to work with what they have. And the student who can see how those slightly burned greens can be turned into "Smoked Greens With Vinegar" or a surplus of beets into borscht has learned an essential life skill. In addition, students can practice organization, timing, and communication skills, and the ability to work quickly and efficiently when under pressure. Adventures—and meals—await.

Caddy

Greg Norman, Nancy Lopez, and Joe Osaki have more in common than a good swing. Behind each stands a quiet voice that advises them in the difficult moments of their professional lives: their caddy.

Golf courses always need a young golfer with a good eye, a calm temperament, and the right personality to assist the amateurs and professionals. There's no better place to learn sportsmanship, poise, course decorum, and how to "read" the subtleties of the terrain than working next to more experienced golfers. And look at the possibilities for study of the history of golf, the evolution of rules and equipment.

Great exercise and a paying job make caddying appealing to young athletes.

Likewise, an automotive teacher may take students to the physics lab to see how formulas related to force and vectors are derived mathematically, or to review the concepts behind heat transformers.

One English teacher tested the critical thinking and communication skills of automotive students by asking them to write out error-free, step-by-step directions for jump-starting his car. Each student had to watch as he read and followed their instructions. One slip-up could mean a fried battery or shower of sparks!

■ Cooperative Education

For decades in America, cooperative education has been the pacesetter for community-based learning, particularly in high school business education and marketing programs. In its strictest sense, cooperative education requires a training agreement between the student, employer, and educational institution, spelling out the skills that will be taught and certified at the worksite.

In a typical high school model for cooperative education programs, seniors spend part of every school day working in, say, a retail store, insurance office, warehouse, or medical clinic. Their tasks might include reception, word processing, working with customers, or similar duties.

A school faculty member or work-experience coordinator stops by occasionally to check on students' progress, while the students' supervisors instruct and measure skill attainment. Usually these students are paid and contribute to the bottom line of the firm after a few weeks on the job.

Another version of cooperative education enables a student to learn occupational basics in a field where no courses are available at school. In such programs, a class period is often set aside regularly for students to discuss what they're learning at worksites and how they handle job-related problems.

These models are useful as far as they go, but one drawback of both is the missing academic component. It is a rare school in which instructors of mathematics, social studies, English, or science know how to effectively connect classroom

education with the practical applications that students are learning on their jobs. (See *Part-time Jobs.*)

D

Databases

Keeping track of resources, students, and businesses in the community requires an efficient information system. For some, a card file or display board works fine, but larger communities need more than a written list of available resources.

A computer and database are the answer. Databases manage names, dates, addresses, site descriptions, and student profiles better than any other system, cutting time and redundancy while automating such tasks as sending confirmations, monitoring use of certain sites available at certain times, and linking student interests and skills with sites offering them opportunities.

Disabilities

Thanks to the Rehabilitation Act of 1973 and the more recent Americans With Disabilities Act, workplaces are becoming accessible to the physically challenged. Barriers such as stairs or curbs that once limited access—and choices—are steadily becoming a thing of the past. Employers who already accommodate employees with disabilities will likely be comfortable working with students with disabilities.

National and state school-to-work legislation encourages all schools to introduce all students to work-based learning. Teachers who need extra help accommodating students with special needs will find special education coordinators in their districts a good source of information on school-to-work opportunities for students with disabilities.

Dairy

Never mind the pastoral images of three-legged stools. Dairy farming these days is big business.

A successful farmer must know genetics and breeding, nutrition and chemistry. How do you breed for milk production and a product that has the right balance of butterfat, cholesterol, and fatty acids? And how is milk handled to prevent bacteria and contamination? Let students experiment with untreated milk and discover why Louis Pasteur's work in the 1860s is fundamental to modern food-handling practices.

What is all the high-tech equipment in the milking parlor? How do you manage pastures and compute chemical composition and price equations for alternative feeds? How are production costs figured into milk prices? Where do dairy farmers market their milk? How does any farmer stay competitive?

Environmental Quality

Specialized environmental jobs are everywhere: wetlands restoration, sewage and garbage disposal, fuel storage, hazardous waste management, noise control ordinances, watershed enhancement, reforestation.

With increasing jobs in these areas, employers are more willing to participate in community-based learning—especially when it involves their future workforce.

Science teachers may be the first to see the learning opportunities, but social studies and math teachers are also taking advantage of everyday issues that invite students to gather data, research local laws and ordinances, develop hypotheses, and write reports.

E

Employer Rewards

Most employers are quick to say yes when asked to participate in community-based learning. Why? Often it's because they want to give back to the community. More likely it's because they enjoy the chance to introduce someone else to their line of work—especially interested, enthusiastic students.

Money can't buy that kind of satisfaction.

English

English lessons exist in far more—and far more interesting—places than a textbook. And because good communication skills are the cornerstone of so many occupations, your students can only benefit from practicing English in the workplace.

Most jobs rely on the ability to communicate: salesperson, teacher, nurse, counselor, lawyer, food server, receptionist, copywriter. So it's not surprising that even workers with excellent practical training may falter on the job when they lack the communication skills needed to get their ideas, feelings, instructions, or goals across.

When thinking of English in the workplace, think of memos, manuals, sales letters, ads, contracts, or simple phone messages. Management training guides, reference books, codes, and regulations all require a high degree of skill to read and comprehend.

Even literature finds its way into the worksite. Ask students to note the types of books employees are reading on their breaks or while commuting to work. Do some employees write poetry and other creative writing for the company newsletter, for advertising, informative brochures, or for a personal or creative outlet?

■ Entrepreneurship

In rural and urban areas alike, students are getting a taste of being in business for themselves.

Students today are operating their own banks, credit unions, school stores, automotive shops, delicatessens, and espresso carts. In some cases, students leave high school as owners of their own company. Other times the business remains a school operation with new students stepping in as their predecessors graduate.

Examples of this "bottom-line learning" include:

- Students of a small, isolated rural high school operate a small farm, donating profits to a scholarship fund.
- In some communities, secondary students operate their own radio or station, credit union, restaurant, day-care center, or catering service.
- In other communities, students start businesses from scratch, performing market research and building customer profiles. They also identify start-up capital investment needed, use federal and state small business resources, research state and local zoning and licensing requirements, apply for small business loans, and sometimes even hire adult workers to maintain operations during the day while students-owners are in school.

As in the real world, some of these businesses succeed and some fail. But the long hours, ups and downs, and valuable experience make this type of endeavor as much a lesson in life as in work. And for those whose businesses succeed, a positive bottom line is as big a thrill as receiving a diploma.

■ Essential Survival Skills

What makes a person successful, independent, and productive day in and day out?

If you can dismantle a computer and put it back together again, but can't figure out how to get to work when your car

Emergency Room

For students with a bent toward medicine there is no better place to see it all. A typical emergency room doctor handles a whole spectrum of human ailments in a hurry and under pressure.

What questions do the medical staff ask a patient and how do they determine what the first treatments will be? What can a student learn about public health and safety in an emergency room?

Aside from medical training, the emergency room worker must draw on exceptional personal skills, such as the ability to think fast, make decisions, be compassionate, and work independently. A nurse who admits an accident victim must quickly decide whether the patient can sit in the waiting room or should be seen immediately by a doctor. Lives depend on good judgment and problem-solving skills.

Fast Food

The undisputed leader in part-time youth employment!

Not only does a fast-food establishment apply all subject areas of the school, the successful outlets require full application of the so-called "soft" skills employers value: problem solving, critical thinking, teamwork, judicious use of resources, planning ahead, taking initiative, and getting to work on time.

When students say, "I'll never flip hamburgers for a living," they are also turning away the opportunity to learn a lot of valuable—and marketable—skills sought by a lot of other employers.

battery dies, how long will you hold a job?

If breakfast is typically donuts and soda and your energy and productivity screech to a halt by 10 a.m., how long will your co-workers cover for you?

Essential survival skills are as much the building blocks of employability as the mechanics of a job. Although many of us take such skills for granted, they're not so obvious to a high school student who has yet to face full-time employment.

In your efforts to expose youth to the larger world of work, make sure they gain competencies like mobility, health, financial independence, communication skills, community participation, self-awareness, and ability to find shelter. And consider using community experts—accountants, mechanics, hotel managers, lawyers—to teach and certify these skills. (See inside back cover for information about *Survival Skills: A Guide to Making It on Your Own.*)

F

■ Field Trips

Taking trips to the museum, fire station, city park, or local businesses has been a part of the school experience practically since the beginning. But going with a specific learning goal in mind, that's new.

Make your next field trip a brainstorming session. Ask your students to take notes, observing the workers as well as the work. What are they doing? Are they doing it independently or in teams? Make a list of how information is shared at this site. How many examples of mathematics can students spot? At a fire station, students might list the technology present—radios, computers, fire-fighting equipment—and the skills required to operate each. Provide a checklist to guide students' observations.

Follow-through

When you design community-based learning activities, whether it's a short field trip or a longer internship, don't forget to structure time for reflection and follow-through.

Reflecting on what they've learned helps students see the experience from several angles. And reflection should include observations on how their experience might lead to others, influence future decisions, or point to new career opportunities.

Certainly, an important part of every follow-up is the thank-you note from students and teachers to their community contacts.

Greenhouse Manufacturing

Greenhouses are a growing business in both urban and rural areas. And a greenhouse builder can offer students some complex lessons in plant physiology, construction, solar energy, geometry, and physics.

What materials are the most energy and cost efficient and why? What is the difference between using glass, fiberglass, or polycarbonate sheeting? How do you figure cubic air mass and how do you plan for air exchange? How does the design of the greenhouse affect humidity, heat, cooling, and watering? Who buys greenhouses? Where are they manufactured and by whom?

G

General Work Experience

Most schools today are eliminating "general work experience" that has no connection to a formal learning program or coursework.

Historically, schools allowed students to leave campus early to work part-time jobs. Suffice it to say, their employers were less interested in providing a rich learning experience than in getting cheap labor. For the student, a paycheck—small as it was—was the biggest reward.

With community-based learning, students earn school credit only for work directly connected to a structured learning plan. Back at school, their teachers assign classroom activities and homework that complement the tasks and events students encounter at their worksites. Employers and union reps clearly know when a learning task becomes an earning task.

Geography

A solid understanding of geography is a skill used every day

Grocery Store

Every town has one. What lessons are embedded in yours?

Students have been known to do it all, from taking over all store operations for one day, to taking inventory.

Art students have been commissioned to paint murals and signs for their community stores, or analyze food packaging colors and the subliminal messages they send.

Music and speech students get a kick from analyzing Muzak and store announcements, while chemistry students can gather data on fats in various products.

Food for thought.

by travel agents, land-use planners, meteorologists, and pilots. Sound different than learning state capitals?

What role does geography play for construction workers? Real estate developers? Highway engineers? Property tax assessors? Surveyors or landscapers? What about airport planners, truckers, overnight delivery firms, taxi drivers?

We may have landed on something here.

■ Getting Along with Others

A student visiting an architect, engineer, or other professional soon discovers success is seldom defined by technical skills alone. People skills are as important in business as making sure the product meets professional standards.

A copy machine repairer, a service representative in a car dealership, or an airline gate agent knows that calming an irate customer takes a higher level of communication and social and cultural skills than any job-specific skills they learned from training manuals and textbooks.

Community-based learning teaches students the people skills they need to hold a job and advance in any occupation.

■ Getting the Big Picture

When a 20-year employee at a cookie factory retired, her manager asked, "What's the one thing you'd like to do on your last day?" Having worked in the packaging department all those years, the employee answered, "I'd like to see where the dough is made."

Her response launched a radical change in company procedures and employee training. Today every workstation in the cookie factory has a TV monitor displaying each step of the manufacturing line, enabling the employee to act quickly if there's a problem at any stage.

Today, more employers recognize the need for people with a broad systems view, workers who can visualize what's

happening around them and understand where they fit into the big picture.

Community-based learning does the same thing for students: it lets them see where the dough is made and how that's part of a complex system.

■ Government

It's easy to forget that one of the largest employers in any community is the public sector, with education often being the largest industry, followed by city, county/parish, state, and federal agencies.

Because of their tax-supported status, these employers are often inclined to provide students with safe and valuable learning environments. A school district, for example, resembles a miniature city requiring individuals with a wide variety of skills to maintain its many departments, including accounting, transportation, warehousing, maintenance, administration, technology, food service, health, library, office, printing, social service, counseling, and security. Starting within the school district can be an easy way to begin community-based learning activities.

H

■ Health Care

Look beyond pills and shots for a moment. Within the health care workplace are dozens of career choices and learning opportunities.

At the local hospital you'll find administrators, medical transcriptionists, lab technicians, physician assistants, physical therapists, accounting and purchasing specialists, marketing and communications specialists, maintenance workers, nutritionists.

A basic understanding of safety, sanitation, nutrition, anatomy,

Hygienist

Advances in technology make this a career to watch. Not long ago, hygienists only cleaned teeth with metal hand tools. Now many are using machines that propel water with sound waves to remove plaque. The applications of science and health, technology, physics, and math are wide open.

Consider also the history of dental care and medicine in general. When did doctors first recognize the connection between vitamin C and scurvy? Do hygienists ever see cases of scurvy and what are the major dental problems facing our population now?

Human Resources

What if you could decide who to hire? What kind of person, what kind of skills, would you look for?

Do you choose the computer whiz in the tweed coat or the ace analyst with the red briefcase?

Crucial lessons lie hidden among the various tasks of human resources. Yes, students can learn about interview skills, screening and reference checking, employee relations, budgets, labor laws, basic benefits and compensation, client orientation, and payroll.

But more importantly, they can learn how to think like a human resources manager and match their skills to a job. What does this employer need to run an efficient and competitive company? What can I offer?

and interpersonal skills (empathy, ability to listen) can all be addressed through community-based learning in the health care field.

■ History

What's more interesting? Learning your town's history from a textbook or a cemetery?

What has more impact? Listening to a lecture about your city's founding leaders? Or visiting the local newspaper and sifting through 100-year-old news clippings written about your neighborhood?

Explore the archives of the county courthouse, the town's oldest law firm, the historical society, your own school!

Interview senior citizens about how the town used to be, and their role, large or small, in "historic" events.

Kids need to learn how to love history. And when they see what it has to do with them and their neighbors, they will.

■ How to Start

Small schools and large, rural and urban, have set remarkable precedents you can use as models.

One way to get started is to let teachers experience what their students eventually will:

- Classroom speakers: Before a class presentation, have speakers from the community address department or faculty meetings.
- Job shadows: On an inservice day, teachers go for a morning and afternoon job shadow with two different local employers.
- Career exploration: Have teachers visit an employer each day for a week, or long enough to find real applications of subject matter and work-readiness skills that can be woven into lesson plans.

27

- Internships: Teachers can work for several weeks in the summer, just as a student would, making a genuine contribution to a company and identifying ways to enrich their curriculum.

Once you get started, the enthusiasm is contagious.

I

I Did That

When students research, design, build, test, and evaluate a project outside the classroom, the experience lasts a lifetime.

Looking back, they'll chuckle at how nervous they were when asking the city council for a zoning waiver to build a schoolyard gazebo (but not nearly as nervous as making their final presentation before the senior project review panel).

One day they'll show their own kids that gazebo, or that recycling center, or farmer's market pavilion and say, "I helped build that!"

Imagination

Can't get a real space shuttle to put your classroom of future astronauts on board? How about converting a vacant hospital room into a simulated space shuttle for a night?

Let adventurous students hole up in a closed-off room, eating only dehydrated foods, drinking from plastic bags, sleeping strapped to the bed, monitoring bodily functions, taking a sponge bath, and surviving without MTV.

It's about as close as you can get until we can put students on the moon.

Irrigation Systems and Equipment

The crops we grow for food wouldn't last a season without water. And the same is true of grass at parks.

Irrigating a lawn or field requires knowing the growing requirements of your crop, understanding how pumps and pipes work, computing the acre-feet of water needed and the length of time to run a pump given well pressure or gallons per minute.

Students can learn concepts behind water flow, soil chemistry, and evaporation. They can research water rights and laws.

Battles over water plague our country. Conserving water and growing food are both critical to our survival. Have students set irrigation pipes for a field and run tests on their system. Can they design a more efficient way to water crops?

A-Z

idea book

Insurance

When you need it, you're glad you have it.

But how exactly does insurance work? Why do those under 25 years old pay a higher rate for car insurance? Who figures the costs and benefits and what data do they use? How do you calculate life expectancy, gather statistics, or compute annuity premiums? What happens to an insurance company when a storm wipes out a community? Who takes the loss?

Behind the policies and services of insurance companies are collection agents, market researchers, benefits processors, customer service representatives, underwriters, training specialists, analysts—the list goes on.

A job in insurance requires a variety of people and technical skills. Students who work here will need a good education. And like insurance, they'll be glad they have it.

■ Industry Skill Standards

How are industries working to improve bottom-line performance? One way is to establish criteria used to measure a person's competence in a certain industry. These criteria are called industry skill standards and they are common to all businesses within an industry. The standards are validated by employers and can determine whether or not an applicant is employable in that industry. Now that's bottom line.

In communities across the country some of the industries developing skill standards are welding, printing, retail trade, health care, electrical, and human services—and they are beginning to require certification of skill mastery, just as a CPA or physical therapist would have. Does industry trust the schools and colleges who issue the certificates? They will only when they are satisfied their new hires actually have those skills and can meet the standards.

■ Information Interviews

Akin to a short job shadow, the information interview is often used by job hunters and job changers.

The purpose is to learn about a particular job or company, not to leave behind a resume or ask for a job.

Students can also do information interviews, which shouldn't last longer than 30 minutes. This way, they can return at a later date to request more information or names of influential people, without wearing out their welcome.

■ Integrated Workplace Learning Projects

Integrated learning is the answer to that pointed question, "Why do we have to study this?" It is a project-based experience that connects the skills and knowledge students learn at school with those they learn at a workplace.

An integrated project asks students to apply academic skills to solve real-world problems. Students plan and carry out

project activities both at school and a worksite, then organize, test, modify, interpret, and reflect on ideas. At the completion of a project, students demonstrate what they have learned by presenting products to members of their school and/or community. (See inside back cover for information about the *Integrated Workplace Learning Project* guide.)

International Comparisons

In northern Europe, students as young as 12 begin week-long *practiks*, their version of community-based learning.

These *practiks* continue through the ninth grade and last as long as three weeks, giving students exposure to and hands-on experience in various career fields.

We can learn a lot from these comparisons, but we also learn that there is no magic bullet out there. Upon closer examination, we've found in Europe the same troublesome issues we face in this country: little connection to basic academic coursework. Therein lies the challenge.

Internet

Students today can access experts and resources anywhere in the world, interviewing a microbiologist in Moscow by e-mail or checking out job opportunities at an ad agency in Chicago.

Soon they will be posting their resumes in cyberspace and conducting information interviews with companies across the state or nation on desktop videoconferencing equipment.

J

Job Shadowing

Job shadowing offers a glimpse into a particular profession or occupation.

Journalism

Few workplaces are as exciting as a newspaper, radio station, or TV station.

That's why many students jump at the chance to see what it's like to work there.

Some lucky kids have been invited to go on the air, accompany a reporter on a story, or even conduct interviews and write stories for print or broadcast.

Others have operated cameras and control equipment, used desktop publishing software, or helped design marketing and sales materials.

A behind-the-scenes peek at a newsroom reveals the importance of listening, observing, writing, counting, speaking, checking facts, looking for angles, getting a big picture. Long, stress-filled hours are the norm.

Prepared with a set of questions, a student interviews an adult at his or her worksite and spends three to five hours observing a typical day in that person's job.

One middle school engages all eighth graders in a one-day job shadow experience as part of a humanities block. The students spend several hours researching their field, contacting potential hosts, and preparing lists of questions to find out how their school subjects apply to the job.

Students handle the details of the actual visit, thanks to supportive teachers. Afterward, they write their hosts a thank-you letter and, finally, deliver in-depth reports (oral and written) to their classmates.

In the process, these classmates will have learned about some 30 occupations! (See inside back cover for information about the *Job Shadow Guide.*)

Karate

A visit to a karate school can kick off research on the martial arts, health and fitness, even sociology. After all, what is behind the rising popularity of this form of self-defense?

The martial arts have a long history, reflecting techniques developed in ancient China, India, and Tibet. Karate offers insight into Asian culture, philosophy, and religion, and teaches personal skills that everyone values: memory, self-discipline, and control.

■ Journals

By the time they graduate, most students will have been asked to keep a journal or diary documenting their experiences, personal growth, changes in attitudes, and goals.

In some cases, these may be shared with significant adults in their lives, or used as a basis for reporting progress. In other cases, journals are understood to be strictly private records of one's life, growth, development, and a heartbreak or two.

The most important part of a journal is reflecting on changes in one's own attitudes, feelings, and behaviors.

K

■ Kudos

How do you acknowledge those employers who have contributed to your community-based learning activities?

First, and always, a thank-you letter from your students. A

handwritten letter detailing what students learned is the most personal and enduring way to say thanks.

On a larger scale, some students plan an appreciation celebration at the completion of each term or an end-of-the-year banquet. Some schools give employers attractive, framed certificates of appreciation to hang in their offices.

In the long term, perhaps the most rewarding acknowledgment an employer can receive is a student who stays in touch.

Lab Technician

Lab techs can be found in a lot more places than medical centers.

Look for tech jobs in manufacturing plants, or in sewage treatment facilities and creameries, where constant monitoring of bacteria is a must.

Think about dental labs where crowns and bridges are made. Or optical labs where lenses are ground.

If you think about it, virtually any food processing, manufacturing, agricultural, high-tech, or research industry employs lab technicians.

And the biggest white jacket user of all: medical centers. When students think of health occupations, do they limit their visions to doctors and nurses when technical occupations are the biggest support system of all?

L

■ Learning Site Analysis

While one person might see a flower store, a donut shop, or medical clinic as having one purpose—to deliver a product or service—believers in community-based education see these sites as rich and complex learning labs.

The challenge is to turn the skills and tools used in these workplaces into instructional resources for students. We highly recommend that educators analyze a worksite before they send their students out.

The *Learning Site Analysis Form* is designed to facilitate a conversation between a teacher and an employer or employee who will be working directly with students. Together the teacher and the worksite contact person identify examples of how subjects such as math, science, history, or sociology are present in the work environment. They also identify specific employability skills linked directly to school subjects.

Spending time on these details beforehand ensures students a quality learning experience linked directly to school subjects. (See inside back cover for information about the *Learning Site Analysis Form*.)

■ Liability

Yes, students and employers need clear, maybe extra, protec-

tion when leaving the confines of the school building. But using liability as an excuse to deprive kids of valuable "real world" experiences is taking the easy way out.

For every administrator, business person, labor leader, or government official who says, "The liability is too great," there are just as many schools and community leaders who say, "So are the learning opportunities, and we are doing it."

Machinist

Forget getting your hands dirty.

Today's machinists are writing sophisticated computer programs that drive multimillion dollar robotic work cells.

Precision and no-tolerance measurements have a whole new meaning in machining, too.

Trigonometry and geometry teachers can have a field day in this environment.

The reading, problem-solving, and team-building skills needed by today's high-performance manufacturers likely exceed what college professors measure.

■ Loaned Faculty

Inviting professionals to speak to a class or mentor students is becoming more and more common. Some schools have become so bold as to negotiate a loaned expert to provide direct instruction for a term or a year, with guidance from certified personnel as needed.

M

■ Mathematics

With calculators and computers, math applications today are harder to spot. Math is part of all occupations, but sometimes you just have to look a little closer.

Forget about the mathematics used by accounting firms for a moment. Consider the math used by airline pilots, meteorologists, government purchasing agents, or any type of sales person.

What about farmers, fishing boat crews, truckers, or carpenters? How does anyone earning a paycheck figure out how much is left after deductions to pay bills?

■ Mentors

In Germany they're known as meisters. In a registered trade, they're called journeymen.

In community-based learning, the volunteer adult who counsels, guides, teaches, tutors, demonstrates, tests, and even certifies students is known by many names: advisor, supervisor, advocate, employer-instructor, or role model.

We can call them mentors. Your students will call them friends.

■ Middle School

In grades six through eight, students are still building the foundation of their future education and careers. In high school, their focus begins to narrow as they learn what they like, what they're good at, and perhaps are pressured by their parents to "start thinking about the future."

But with their eyes and minds still wide open, middle school students are simply at the best age to see the world of choices available to them, as well as how academic lessons are applied on the job.

By carefully defining tasks, guiding preparation, removing barriers, and following up afterward, you can provide middle school students with unforgettable experiences in their local neighborhoods and communities. Sometimes these opportunities are just a short walk away.

■ Music

Yes, music is big business. And your students—musically inclined or not—can discover a number of career opportunities in music.

In addition to examining a band or choir room, CD store, community orchestra, or local rock group, consider an inside look at music as a marketing tool, mood enhancer, or avocation. How is music used in advertising? In grocery stores? In film?

What are some lesser-known ways people in your community make a living in music? Interview a piano tuner, a disk

Nutritionist

One part scientist, one part chef, and one part educator. A nutritionist offers a smorgasbord of lessons and opportunities for students.

Students can use the Internet to investigate the latest nutritional advice, study the chemistry of foods and the effects of food on the body. Which diseases respond to changes in diet and why is this so?

As the food fads of the 1970s and 1980s prove, no one will eat foods that taste like cardboard. So the challenge for the nutritionist is to create delicious meal plans that are good for us, too. Here is a chance for students to play in the kitchen, let the artist in them loose. And when it's all done, express—in articles, posters, flyers, meals and speeches—what they've learned and why it's important.

jockey, a studio musician, a musical equipment and supply store owner, or even a speaker manufacturer.

Stop, look, and listen. Music lessons are all around you.

Occupational Therapist

"Wanted: a caring person with good communication, organization, and problem-solving skills, certified and experienced. Psychiatric experience a plus."

From a real help-wanted ad, this description says it all. Occupational therapy is an excellent career choice for tough, compassionate people who are inspired by the will and courage of the human spirit.

The occupational therapist helps the 90-year-old man speak after a stroke or explains to an office worker how to reorganize a workstation to avoid aggravating a carpal tunnel condition. This career pulls from anatomy, psychology, chemistry, technology, even engineering. After working with an occupational therapist, students might be moved to invent new methods and equipment for helping the physically challenged.

N

■ Naysayers

Naysayers are not hard to spot. They're the ones shooting down every new idea that comes along.

"We tried that once," they might say; "it didn't work." Or, "Labor laws won't allow us to do that," or, "It costs too much," or, "We don't have enough employers in our town."

The road to school reform has potholes and detours, but what road doesn't? Encourage the doubters to at least consider another way of doing things. Share ownership and take it slowly, and you may find an ally. More than one reluctant person has become a forceful advocate after seeing the payoff of learning activities built around community workplaces.

O

■ Object Lessons

One elementary teacher in an isolated community decided to hang his entire curriculum on a single year-long project: repair and refurbish an old, cast-off photocopier.

This project involved students in complex math and physics concepts as well as electrical theory, basic economics, business practices, and the history of technology. By the end of the year, with the support of experts, students met their academic goals, and ended up with a good-as-new copier for their school.

P

Part-time Jobs

If the class roster listed each student's part-time job and community service activity, would teachers somehow use that information? Most would say yes.

For example, a student who is working in a fast-food restaurant could do an independent science project on E.coli or an economics project about the spread of American fast-food franchises worldwide.

Until we reach the time when school and community coordinators can link all students to meaningful worksites, teachers need to take advantage of the many ways students are already involved in the workplace.

Performance

The standards used to judge a student's performance should be the same as those used by a workplace to evaluate its workers.

Your students are in the real world now. Ask them real questions. And make sure they measure up.

Physics

Where can you find physics? Where can't you?

There are the usual places, such as the utility companies, airports, construction sites, and crane companies.

But also take a look at x-ray and CAT-scan equipment, radio and TV stations, or even framing and drywall contractors. Where do physics apply in sports? Billiards? Engine overhaul shops? Printing? And what about physicists at the local university?

Because physics applications can be found anywhere you

Planner

Let students learn how they can shape their future world. Planning—city, county, state—is a critical component of any community.

Planners are team players who need excellent written and verbal communication skills. They provide zoning and permit information to the public, prepare staff reports, enforce planning regulations, update maps. They must have knowledge of urban and regional planning principles, research techniques, and report writing.

Can you see the possibilities for English and speech classes here? And what about social studies, civics, and science classes? The connections are endless.

look, the world is your classroom. And plenty of math is embedded in this subject area, too. Is there a physics principle called "double whammy?"

■ Portfolios

For college admissions and job interviews, a portfolio is beginning to hold as much weight as school credits, SAT scores, or class rankings.

The best portfolios are the most personal and authentic ones. Samples of the student's work can be filed and displayed as hard copies in a binder, or electronically on a smart card or floppy disk. Some graduates are incorporating video files of themselves demonstrating the skills they have mastered. Some employers require applicants to present a portfolio that proves their qualifications for the job.

■ Prescription Pad

Educators must be prepared to teach the background, knowledge, or skills required to complete tasks in the workplace.

If a student working in a lumber yard must know how to compute board feet, but doesn't know how to convert fractions or decimals, the employer should send the student back to the math teacher for some fast assistance.

If a student working as a guide in an art museum knows nothing about the Renaissance, then the history teacher or librarian could provide one-on-one tutoring or suggest appropriate reading material.

Employers should not be expected, nor do they have time, to provide basic academic instruction or to guide a student's self-directed learning. Instead employers can be encouraged to fill out a prescription pad (an educational R_x) that notifies the school about a student's deficiencies; then teachers can offer the help students need to perform job-specific tasks.

Quality Control

Everyone who makes a product wants to be sure it's the best it can be. Who needs quality assurance? Companies that make injection molds, sheet metal, diskettes, food products, piping, medical supplies. You get the idea.

Students can learn and practice computer skills, report writing, statistical sampling, blueprint reading, technical math, chemistry, spreadsheets, engineering, construction —the list is as varied as the products we make and buy. Quality control is critical for everyone in today's highly competitive marketplace.

■ Problem Solving

Rather than thinking up problems that bear little resemblance to the real world—like designing and building a device to protect an egg from cracking when dropped 20 feet—challenge your students to solve real problems that companies actually face.

How about designing a device to help students with physical disabilities in their schools? Or building an indoor climbing gym for the neighborhood day-care center? Or researching ways to promote a new products? Or doing a market analysis to determine the need for a new child-care facility?

Q

■ Questions

Any time you try something new, people will ask questions. "Why are we doing this?" and, "What's in it for me?" Welcome these as an opportunity to introduce the community to the value of building connections between the workplace and school.

Many of the products in the *Connections: Linking Work and Learning* series contain quick summaries and fact sheets that answer the most frequently-asked questions about community-based learning. Share these and watch a dialogue unfold. (For more information about the *Connections* series see inside back cover.)

R

■ Reading

What kind of materials will students be expected to read and analyze when they enter the workforce?

Employee manuals? Materials Safety Data Sheets (MSDS)?

Retail

Whether whipping up lattes at the corner coffee cart, selling sweaters at a clothing store at the mall, or cashiering in a supermarket, a student working in the retail environment can get unlimited mini-lessons in life and work.

Students will learn skills in listening, reading, writing, math, organization, record keeping, market research, statistical analysis of buying trends, quality, and customer service.

They may also get an employee discount.

Technical reports? Trade magazines? Professional journals? Promotional materials? Customer letters?

If your students aren't heading out into the world just yet, bring the world to them in stacks of these publications.

Maybe the list of words to learn in a particular field will be far more relevant than memorizing definitions from a spelling manual at school.

Sewage Treatment

These workers sit before a wall of computer panels like scientists at NASA getting ready for a lunar launch. And somehow they turn the proverbial sow's ear into a silk purse. How?

With chemistry, microbiology/bacteriology, engineering, planning, hydraulics. And a good background in government regulations, safety and health, and budgets.

■ Recruiting Community Resources

How do you go about recruiting companies, professionals, and experts from the community to help with your program?

After researching many approaches, techniques, forms, and questionnaires, we've come up with only one effective method: just ask.

One remote rural valley discovered a wealth of resources by looking for senior citizens and self-employed individuals available to teach short classes on Wednesday afternoons. This "adjunct faculty" grew to include a world-renowned physicist, a master gardener, a retired test pilot, a notable artist, a software writer who telecommutes to work, and a professional storyteller—some 250 volunteers in all. (See inside back cover for information about the *Employer Recruitment and Orientation Guide.*)

S

■ SCANS

What skills and abilities do employers look for in their workers? Lots! What are they? Look to the SCANS report.

This popular 1991 report was based on a national survey of job supervisors by the Secretary of Labor's Commission on Achieving Necessary Skills (SCANS). The commission was made up of employers, labor leaders, and educators.

SCANS identifies competencies and skills such as the following

that are critical for success in the workforce: interpersonal skills; allocating resources; finding and applying information; understanding the big picture; using technology; and of course, reading, writing, listening, speaking, problem solving. Also essential is being a responsible person with self-esteem, initiative, and integrity.

The message is clear that employers want their new hires to know a lot more than just the technical skills required to get a job done.

■ School-to-work

What is school for? What is the purpose of education, anyway? The purpose of education is to empower students to reach their fullest potential, whatever that may be, so that they have the skills to be independent, contributing, and satisfied members of their local (as well as the global) communities. Naturally, a big piece of this is earning a living.

School-to-work (or career) is a systemic way of structuring education that blends academic, career, and personal goals. All students in a school-to-work system will usually complete job shadows, internships, integrated projects, and other learning activities in the community. They will have made that elusive connection between learning and earning. These students will graduate with a good understanding of the real world of work—and they'll be prepared for a lifetime of learning.

■ Senior Citizens

An often overlooked resource, senior citizens love to share their experiences and expertise with kids. Usually retired, these individuals often have the time, ability, and willingness to contribute to community-based learning activities. In addition, a special bond may occur between seniors and youth, transcending any "generation gap" you might find between students and their parents or teachers. Remember to look for volunteers from all walks of life and diverse racial and cultural groups.

Sign Design

Drive into any city or town in America and commercial signs greet you. They advertise everything from the hotel with the biggest swimming pool to the nearest espresso in town, or maybe they just help you find your way back to the interstate. They range from the common and banal to the clever and beautiful.

Once these designs were done freehand with pencils, pens, and brushes, but the sign designer of today will need to learn both Mac and PC graphic programs. Students with a combination of artistic, math, and computing skills would be welcome in a sign company. And who knows where technology will take us? Will it be your students who design the signs of the future?

Stonemason

This is the realm of earthly materials—of ancient granite, sandstone, marble, and basalt. It is the permanent world—the world of rock.

Masonry projects range from the smallest fireplace to the tallest office building. From the grey stone wall to the indoor hearth. Stonemasons built Paris, St. Petersburg, and Chicago after the great fire. And even now the Roman aqueducts in southern France bear the carved initials of masons who for centuries made pilgrimages to the ancient columns.

In masonry, students can apply mathematics, chemistry, engineering, geology, welding, history and art.

■ Senior Project

More and more high schools are requiring a senior project to help students demonstrate skills, knowledge, and concepts they've learned over 12 years.

The senior project is an opportunity to showcase one's talents or special knowledge in such areas as planning, design, writing, presentation, or understanding of core academic subjects, like history, science, mathematics, or civics.

Students in specialized programs, such as music, art, drama, speech, marketing, agriculture, apparel, or automotive technology, are accustomed to being judged using high industry standards. They've been participating in competitions, fairs and contests all along—often with scholarships as an added incentive.

■ Service Learning

A sixth-grade class volunteers to clear out a vacant lot so that it can be used as a community garden. Clearly they can provide an important service to their community. But is it service learning?

The teacher decides to integrate several district objectives: planning skills, reading skills, understanding local government, life science, and state history. A few ways to fold learning into the cleanup activities are to poll the neighborhood to assess residents' opinions about planting a community garden; investigate different varieties of insecticides to find the ones that are the most environmentally safe; make a presentation to the neighborhood association about the costs and benefits of different kinds of gardens; or research the history of the lot—what was it and what happened to it?

■ Show Me

Does community-based learning stick? How can students demonstrate what they've learned? How do you test for it?

Let your students show you. Let them illustrate real solutions to real problems they've encountered at work. Have them demonstrate mathematical, grammatical, or scientific applications specific to their work experiences.

Would a trigonometry teacher be able to test math applications using a carpenter's square? Would an English teacher see progress when a student catches and corrects three grammatical errors in a company memo or the principal's daily bulletins?

■ Start Slowly

Expecting immediate results from community-based learning is simply not realistic. That's why many schools start gradually, often with one teacher who sees a way to enhance academic achievement using community resources.

The next year another teacher grows interested. In the third year, after witnessing positive results, five more teachers join in.

And so on.

T

■ Teachable Moments

To make lessons relevant to kids, sometimes you have to take advantage of unexpected or unusual events: a natural disaster, a film being made at your school, a lunar eclipse. Even these call upon basic skills and core subject matter.

When our emotions are at play, we often devote more energy to understanding ourselves and what's happening around us than we would if the event were more remote.

During a major flood, students from all over one city lent a hand constructing sandbag barriers against the rising rivers and streams. Day and night, as water threatened to pour over the river banks young people came to help and learned an important lesson about rivers and water and what a community can do when it works together.

Travel Agent

More people are traveling farther and more often than ever before. In one day, a travel agent might arrange a business trip to Paris, a vacation to New Zealand, or a tour of China. The responsibility is awesome.

A taste for adventure and a command of geography and computers, as well as math and organization skills, are indispensable for this career. A good understanding of world languages and culture helps too. Bon voyage.

Such episodes, unpleasant as they may be, can be an opportunity for youth to provide hands-on service, comfort victims, and even help gather data on losses and damages for official records. These real-life lessons will last forever, long after class worksheets and end-of-the-chapter tests are forgotten.

■ Technology

The microchip has revolutionized the way we teach, learn, work, shop, play. In the classroom, desktop videoconferencing enables students to talk with experts anywhere in the world. On the Worldwide Web, students can learn about any product or service with the click of a mouse, and at little or no cost.

Research possibilities are unlimited as students compile and analyze from primary sources in such areas as space exploration, geographic information systems, weather data, and financial markets.

As for jobs, students are creating and publishing their own Web sites to be used in lieu of a traditional resume and portfolio!

■ Training

Lifelong learning is now a fact of life.

Larger companies often have their own formal training programs on site and allow teachers and students to sit in on real courses with their regular employees.

The facilities, presentation tools, and techniques are often state of the art and provide school personnel a rare exposure to the latest, and often most expensive, equipment.

■ Transportation

Where there's a commitment to community-based learning, there are creative ways to deal with the transportation issues. Parents, friends, and relatives drive when needed.

Utilities

Phone, gas and electric, or cable company—most utilities today are undergoing rapid change, explosive growth, mergers, and in some cases a complete transformation.

Public or private, utility companies are eager to share their expertise and resources with local schools whose students represent the company's future workforce.

We're familiar with the installation and billing functions, but what about the people who design the system, plan for expansion, buy the property, maintain the equipment, communicate with the public, and build the infrastructure?

School districts budget for public transportation, van purchase,s or bus rentals; corporations provide vehicles; students walk or ride bikes to nearby businesses.

Students always find transportation for volleyball practice and after-school jobs, don't they?

U

Understanding Cultures

The workplace is changing in terms of people, not just job skills and technology. By the year 2000, an estimated 60 to 80 percent of new workers in the United States will be people of color and women. With this in mind, many businesses have begun diversity training to help employees understand and respect differences in communication and working styles.

Help prepare your students for the workplace by recruiting employers representing various cultural groups. Seek worksites that will also accommodate the varied learning styles and needs of your students.

What better way to promote intercultural understanding than by working and learning together?

Unions

Labor leaders are supportive partners in community-based learning—when they're involved from the beginning and not just invited to rubber stamp procedures that were developed without them.

Unions are a rich source of literature and information about apprenticeships, training programs, workers' rights, employment opportunities, and workplace safety.

And unions share with employers a major concern about the quality of life in their communities and career fields: Will highly qualified workers be available in the future to carry on similar leadership?

Videography

In the last 15 years, the world of moving images has undergone a revolution of form and content. And never before has there been such a demand for innovative directors, camera operators, editors, designers, artists, and technicians.

What skills open the doors to this work? A background in the visual arts, photography, composition and lighting, and basic filmmaking. For others, a technical understanding of electricity and how the camera works coupled with the know-how to solve lighting and camera problems on location.

What kind of people do best in video and film? Those who are flexible, who can work under difficult conditions—often away from home. Those who can communicate well, in writing and speech. And most importantly, those who love creative and fast-paced work.

V

■ Very Popular Site

One of the most sought-after sites for community visits, no matter what age the students, is a veterinary clinic. Paws down.

While labor market demand for vets is not high, this occupation does offer a unique insight into health-related fields and animal care, and demonstrates the need for a solid understanding of core academic and vocational subjects.

In addition to the top vet, many offices employ assistants as support technicians. An animal clinic is also a business requiring excellent customer service and high-tech office systems.

Animal care is another area where students can get hands-on experience and even part-time jobs as helpers and trainers in kennels, pet supply stores, and pet training businesses. Students should be shown, too, how this field is connected to many other health-related careers.

Wedding Consultant

A lot of planning goes before that walk down the aisle.

The wedding consultant must be able to ask questions, listen carefully, and plan accordingly.

How do you create a timeline for all that needs to be done? How do you plan for announcements, location, musicians, food preparation and service, rehearsals, photographers, and decorations? How do you figure costs?

There's a lot more to this than saying, "I do."

W

■ When Will I Ever Use This?

How many times do students ask this question? Perhaps every teacher in the United States should spend 15 minutes a week answering it using real-life examples from the local community. Algebra teachers could collect examples of ways local workers factor equations or English teachers could ask students what the newspaper would be like if the writers didn't know how to edit.

■ Who Else Offers Community-based Learning?

Looking for community contacts? Look to those already involved in community-based learning activities such as scouting, Junior Achievement, or groups that prepare people for work using "on-the-job" concepts—such as nursing programs, teacher education institutions, apprenticeship councils, beauty schools, vocational rehabilitation centers, and volunteer fire departments.

■ World Languages

As our planet shrinks, the need for students to use a world language grows.

All around us, trade delegations, consulate staff, immigrants, tourists, visiting business and sales representatives, even exchange students present opportunities to speak and write greetings and phrases, translate simple documents, explain school and community customs, and otherwise help students practice reading, speaking, and writing in additional languages.

On the Internet, language students can reach a country of their choice, strike up daily conversations with new friends there, and experience another culture to a depth they'd never reach with traditional classroom resources.

Zoo

In addition to monkeys, polar bears, and tarantulas, all sorts of occupations are wandering around at the zoo.

There are zoologists, veterinarians, and animalkeepers, along with tour guides, food vendors, ticket sellers, gift-shop attendants, and the landscaping crew.

Don't overlook the business behind the zoo, such as administration, fund-raising, marketing, special events coordinators, accounting, purchasing, community outreach. Which of your students belongs in the zoo?

X, Y, and Z

■ Xenophobia: A Fear of Anything Foreign

Using the community as an integral part of the academic curriculum may be foreign now, but not for long. With each success, schools, students, business leaders, and the community at large will grow to trust and believe in this rich complement to classroom learning.

A-Z

idea book

Zamboni Operator

What's a Zamboni? If you've ever been to a hockey game or an ice rink, you've seen one at work. The Zamboni is that big machine that lumbers its way across the ice, scraping up the loose ice so that the skating surface is once again smooth and uniform. Safety, of course, is of primary concern, as is precision and consistency. A job not well done can put the skaters at risk and can jeopardize the fairness of the game.

This is one of the many off-beat jobs that many of us have never heard of. There are others, too, such as square dance caller, clown, closet organizer, or dog-house maker. As with any off-beat job, there aren't a lot of Zamboni operators around; but if the game's going to go on, it's a job that needs to be done and done well.

■ Yes, You Can!

Lots of schools are doing community-based learning. For resources, support, and models look around your own community, area, and state. One eager, creative person can launch community-based learning in your school. Maybe you?

■ Zero...Blast Off!

This is the end of our book, but the beginning of a new way of thinking, teaching, and learning.

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Connections: Linking Work and Learning

This is a series of products designed to facilitate work-based learning so that youth make informed career choices and experience success in the world of work. Other products in the series include:

Employer Recruitment and Orientation Guide—Helps school staff develop and implement strategies to recruit and orient employers for providing work-based learning experiences for students. The guide includes 15 fact sheets, answering the questions most commonly asked by employers, that can be used for a variety of recruitment and orientation purposes.

Job Shadow Guide—Helps a student investigate a specific job during several hours at a worksite. A companion piece for staff outlines how to plan and implement effective job shadow experiences.

Career Exploration Guide—Helps a student explore all aspects of a job/career over the course of several days at a worksite. A companion piece for staff outlines how to plan career explorations that are of maximum benefit to students.

Learning Site Analysis Form—Used collaboratively by school and worksite staff, this tool helps identify and analyze the learning potential of a worksite.

Integrated Workplace Learning Project—Highlights how to design individual or group projects that integrate academic with work-based learning.

Survival Skills Guide—Provides strategies for identifying and teaching survival skills essential for independent living.

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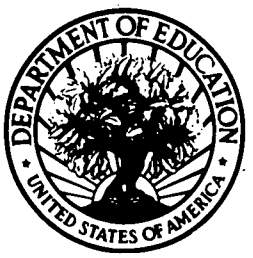

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