

Career Direction for Children – Preparing for Sustainable Careers in Growth Industries

Society of Manufacturing Engineers

Celebrating its [30th Anniversary](#) [1], the SME Education Foundation, a catalyst for innovative education, provides enumerable resources for young people on tech-based careers including [ManufacturingisCool.com](#) and [CareerMe.org](#).

DEARBORN, Mich., August 24, 2010 — Children are fascinated by things their parents no longer see, solve problems with simple solutions, and if left to explore, are naturally exhilarated by learning. The first step in providing career direction for children is making sure they have simple access to resources that will provide them with a solid grounding in science, technology, engineering and mathematics (STEM) education. The [SME Education Foundation](#) [2], a catalyst for innovative education, and in lock-step with young minds, is providing enumerable resources for young people, their parents and educators.

As students begin another school year, the award-winning, [www.ManufacturingisCool.com](#) [3] can help with science projects and offer opportunities to attend future [Gateway Academy](#) [4] summer technology camps while a new website [www.CareerMe.org](#) [5] presents ideas on advanced manufacturing careers. The Foundation website provides [Scholarship resources](#) [6] with detailed requirements. All designed to prepare young people for sustainable, technology-based careers.

A recognized advocate for sparking a love of science and technology in young people, Sherril K. West, former president of the SME Education Foundation (2005), and vice president (ret.), Technical Services Division at [Caterpillar](#) [7], Peoria, Ill., says, "Individually and collectively we all have the opportunity to leave an imprint on future generations. The Foundation provides an excellent opportunity to pool our efforts so our children and their children will benefit by what we have learned. As we celebrate our [30th Anniversary](#) [1], successes will continue to grow as we introduce increasing numbers of young people to their career options. Science and math will help them leverage and explore a variety of career possibilities."

As U.S. industries transition, and repetitive assembly jobs continue to be lost to overseas markets, near and long-term career opportunities will be in the medical device industry, now in a growth and development mode. Other key future career opportunity industries include energy and energy resources, alternative energy, and the traditional industries of oil and gas. In the long term, more focus is also being placed on micro and nano products.

According to the Bureau of Labor Statistics, job projections through 2018 identify two of the fastest growing occupations: computer specialists – including computer

applications software engineers; and biomedical, where there is a growing need for medical scientists, biochemists, biophysicists and biomedical engineers. The projected growth of medical equipment and supplies manufacturing is estimated at 16 percent, or 49,800 jobs through 2018. Projections for the pharmaceutical manufacturing industry similarly show growth of about 6.1 percent or 17,600 jobs through the same time period.

[Medical Manufacturing 2010](#) [8], a special supplement to [Manufacturing Engineering](#) [9] magazine, reports that many [new materials, technologies and products](#) [10] are continually being introduced and refined in this country. In addition, the rate of innovation in medical manufacturing is reported to be very rapid in product and process development, and in business process innovation."

Two young engineers profiled at CareerMe.org reflect the reported advancements in computer specialization and bio-medical careers. Each found their career in medical device manufacturing at Norwood Medical, Dayton, Ohio. The website details their stories and many others to inspire young people in their education and career direction.

While in high school, Dan Linville, now an Industrial Engineer, worked for a small company assembling pneumatic cylinders. Later, he enrolled at Sinclair Community College taking classes preparing him to understand processes, shop floor support, time-studies, and value engineering. A robotics programming class on controls helped him to understand CNC machining and he was able to work with machine programmers. He is now certified as a Six Sigma Green Belt. Says Dan, "You wouldn't think that knowing where the placement of aspirin or a defibrillator needs to be is important, but it means everything to the patient and their family. Everything is a process that can be made better."

Helen Rodriguez, a young quality engineer at Norwood, works on the development of new medical products. Her responsibilities range from working with the customer about their part prints and dimensions, to making sure the first article, or prototype, not only meets customer need, but that it can be efficiently manufactured and gauged. She holds a BS in Industrial Engineering from the University of Dayton. She minored in Quality and was recently certified as a Green Belt through ASQ (American Society for Quality) and is working on her certification for Six Sigma Black Belt.

She approaches her job every day with a sense of awe. Says Helen, "It's amazing to me that surgeons can visit our company one day, bringing a prototype they are trying to improve, and we are able to turn it around, develop and manufacture the product, and get it into the market." In the medical device world, we are saving and changing people's lives."

The concept of the [Gateway Academy](#) [11] was created in a partnership between the SME Education Foundation and Project Lead The Way, a not-for-profit organization that promotes engineering courses for middle and high school students. In 2010, the SME Education Foundation held 237 Gateway Academies and reached over 4,800 students in 34 states. For more information about the Gateway

Academy program, contact Project Lead The Way at info@pltw.org [12].

The SME Education Foundation is committed to inspiring, supporting and preparing the next generation of manufacturing engineers and technologists in the advancement of manufacturing education. Created by the Society of Manufacturing Engineers in 1979, the SME Education Foundation has provided more than \$31 million since 1980 in grants, scholarships and awards through its partnerships with corporations, organizations, foundations, and individual donors. Visit www.smeef.org [2]. Also visit www.CareerMe.org [5], a new website supporting advanced manufacturing careers, and our award-winning Web site for young people – www.ManufacturingisCool.com [3].

Questions or comments may be directed to the SME Education Foundation by phone 313.425.3300, or email foundation@sme.org [13].

[SOURCE](#) [14]

Source URL (retrieved on 06/19/2013 - 8:55am):

<http://www.mdtmag.com/news/2010/08/career-direction-children-%C3%A2%E2%82%AC%E2%80%9C-preparing-sustainable-careers-growth-industries>

Links:

- [1] <http://www.smeef.org/30/index.html>
- [2] <http://www.smeef.org>
- [3] <http://www.manufacturingiscool.com>
- [4] <http://www.youtube.com/watch?v=m4UDERynEkc&feature=channel>
- [5] <http://www.careerme.org>
- [6] <http://www.smeef.org/programs/scholarships.html>
- [7] <http://www.cat.com/>
- [8] <http://www.sme.org/cgi-bin/get-item.pl?ME10SUP1&2&SME>
- [9] <http://www.sme.org/manufacturingengineering>
- [10] <http://www.imts.com/visitor/attendmedical.html>
- [11] <http://www.smeef.org/programs/youthPrograms.html>
- [12] <mailto://www.sme.org/cgi-bin/info@pltw.org>
- [13] <mailto://www.sme.org/cgi-bin/foundation@sme.org>
- [14] <http://feedproxy.google.com/~r/sme/~3/nwdw6kquQIU/get-press.pl>