Learning Activity
~ Problem-based Learning (PBL) Design Tool ~

Activity Title: Careers in Manufacturing

Author: Linda Jacobi - Twin River High School, Genoa, Nebraska

Focus/Goals/Objectives:

1. To broaden career knowledge with students and to share with students skills needed to perform various jobs in the manufacturing industry
2. To learn about the importance and development of leadership skills from a large progressive business view
3. To share with students job interviewing and resume tips used by BD Medical
4. To broaden student knowledge about the health care industry

What type of course(s) would this activity be best suited for:

This activity can be used in business classes covering subjects including computers, business communications, and technology procedures

What concepts could be incorporated from Science, Technology, Engineering, and Math?

Science	Technology	Engineering	Math
Microbiology Physics Chemistry	Office 2007 Suite Program Writing Interfacing New PCS Scanning of Images Internet/E-mail—shared files	Statistics Problem solving Importance of taking as much math as possible Writing, grammar, & reading strengths are very important	Geometry Algebra Trigonometry

Pre-requisite Knowledge:

Background information about BD Medical for the students. Students can explore BD Medical's website (http://www.bd.com/us/) and share information learned about the company and the important work BD Medical contributes to the health industry.

Time Required

This is designed as a 14-21 day unit which will also include leadership, interview, and resume information.

Materials:

Computer
Access to Internet
Notes from instructor externship at BD Medical
OneNote software
PowerPoint

Method:
This activity can be accomplished using OneNote 2007 (Microsoft Office product) as an electronic note-taking tool. Students will apply their technology skills in using OneNote as a notebook or information organizer. Students will use OneNote to gather and refer back to notes from lectures and class discussions about BD Medical. Students will use OneNote to collect research from the Web or other sources and annotate the information. Students will also work closely with classmates and the instructor in sharing notes and files while working on projects. The instructor can use the leadership information along with interview procedures and resume tips gathered from a job shadowing experience. Once the unit has been completed, students can share their learning as a career unit for the sixth grade students in the school. A classroom bulletin board will also contain information that other students can view to learn more about the healthcare/manufacturing industry and BD Medical. Information will also be shared with the local guidance counselor it can be passed on to other students.

(RTW) Business and Industry Connection(s) - Context:
Being able to experience firsthand work at a business is invaluable for relating the experience to students. The development of a closer relationship between business and education is a tremendous resource for teachers. Seeing work in action as well as talking with BD Medical employees allowed me to learn what skills are needed to perform various jobs. As a result, students will be able to experience a real situation that people in the workplace face. The collection of data, use of questioning, problem solving, and possible interviews with BD staff will make the learning more real and meaningful to them. I developed some networking contacts who will continue to serve as resources for my students and myself.

Knowledge-Skills-Attitudes (KSA) of the PBL Activity:
Knowledge:
Specific student content knowledge gained will include: products/services provided by BD Medical, markets served, company profile of BD Medical, skills required for various jobs, safety procedures, mission statement and core values of the company, company history and milestones, research strategies, company facts, domestic and international BD locations, and company benefits.
Skills:
Upon the completion of this activity, students will be able to effectively use OneNote, increase PowerPoint and presentation skills, expand researching, resume, and interviewing skills, as well as increased knowledge on teamwork and problem-solving strategies.
Attitudes:
Students should develop the attitudes that individuals need to be life-long learners. Individuals need to keep an open mind and be flexible to new career opportunities. The knowledge, skill development, and learning from one job can be applied to different career positions. Students need to keep current on industry needs and requirements and to try to continue to improve individual skills and work experience. In order to remain competitive in today's workforce, students need to develop a positive attitude and to work for self-improvement. This will lead to a more qualified and versatile employee.

Resources for the KSAs:
I will implement manufacturing and career video clips, OneNote technology, photos, charts, graphs, guest speakers from business partnerships, field trips, web site links, Internet usage, online articles, interviews, and other data sources to supplement classroom learning.

Department of Labor. This product is copyrighted by the institution that created it and is intended for individual organizational, non-commercial use only.

Assessment Strategies: Students can be evaluated on OneNote usage, information gathered, organization of the information, learning logs, class discussions as well as smaller group discussions, presentation techniques, and technology used in the development of PowerPoint for class presentations. Pre- and post-activity assessments can reveal the progress of students' learning throughout the problem-based learning experience. An instructor can look to see what students learned about the manufacturing industry, career opportunities, skills required for various jobs, leadership tips, as well as resume and interview strategies. The instructors can use BD Medical financial data and other company data to illustrate traits of an effective industry leader.

Reflection and Debriefing:
Students can reflect both individually and as a group. A summary PowerPoint can be developed based on student and instructor comments where all students will have the opportunity to reflect and debrief.

Evaluation of the Activity and the KSAs:
Students may conduct a self-evaluation, and the instructor can use several assessments discussed in the assessment strategies section to evaluate student learning.

References:
BD Medical web site, online articles, textbooks, magazines, newspapers, career and health web sites, Nebraska Career Clusters data, textbooks, BD Medical staff, as well as other industry and business leaders

This product was funded by a grant awarded under the President's High Growth Job Training Initiative as implemented by the U.S. Department of Labor's Employment & Training Administration. The information contained in this product was created by a grantee organization and does not necessarily reflect the official position of the U.S. Department of Labor. All references to non-governmental companies or organizations, their services, products, or resources are offered for informational purposes and should not be construed as an endorsement by the Department of Labor. This product is copyrighted by the institution that created it and is intended for individual organizational, non-commercial use only.