How will I use Math in my Career Project

Name_____   **Date**_____
Period_____

Goal: Students will use technology (Internet and e-mail) to research mathematics in careers in order to increase their awareness, appreciation, and application of mathematics in the "real world."

Timeframe: The project will be spread across a 4-5-week period. We will have chromebooks in the classroom to allow for research and design. This will count for at least half of your final grade. Some class time will be allotted for working on the project, but students should plan to do most of the work at home. Students are welcome to come to my room from 2:30-3:00pm daily for help or computer use.

Student Tasks & Responses

Phase I: The Research

Your first duty is to research information on one of many different careers and how mathematics is used. You will be expected to organize the information in an outline. You can use web sources but you they must be credible sites. Your information should not be identical to anyone else's. The outline must contain the following information:

- Why?
- Career Description
- Colleges/Training schools: Cost and Scholarships
- Expected Salary
- Who is Hiring & Where?
- Employment Outlook
- Personality Traits
- Interview at least 1 person in this field (include their contact information)

Why?

Think about *why* you chose this career. What makes it interesting? What is your favorite thing about this job? What challenges do you think you might face in pursuing this career? What jobs could you have now that might gain you experience?

Career Description

   Choose 1 from the 3 careers you may be interested in pursuing. Search Web sites on the Internet for ideas & responses of different careers.

As you compile information there are items that must be included within your Career description:

1. What education is necessary? High school Diploma? College Degree? Post Graduate Degree?

a. Specifically identify what math classes are required. ('None' is not acceptable)
b. What other tests or classes are also required.

2. What do you do on a typical day in this career?
    a. Specifically what math is used on the career? (It isn't used is not an acceptable answer).

3. How is the math used in this career? ('It isn't used' is not an acceptable answer).

Colleges: Cost and Scholarships

If the career requires higher education (post high school), include information on colleges (at least 3) that offer programs related to your career. Also include available scholarship information. (If possible, obtain brochures from the schools for bonus!)

Expected Salary

You should determine what salary can be expected in your field. Below are a few possible sites.

Who is hiring and where are they?

What companies are hiring in your chosen field? Are they located in urban or rural areas? Are careers internationally based or specific to the United States?

Employment Outlook

What is the employment outlook in your field? Are more careers becoming available or are they hiring fewer people in those careers? Are careers available for professionals in your chosen career?

Personality Traits Best Suited for the Career

There has been a tremendous amount of research done recently on personalities and careers. A person spends 8 to 10 hours, 5 to 7 days per week working. It might as well be at a career one enjoys. What personality traits are best suited for the career you are researching?

Phase II: The Infographic
Now that you have all your research available, you are now going to create an infographic of the information, using PowerPoint or any other presentation software.

For the power point presentation include as much information as you collected from the research phase, but use more pictures than text. Use appropriate photos/graphics, appropriate text style and font.

Below are some possible sites to search on the Web.

Mathematical Sciences Career Information http://www.ams.org/careers/

Career Builder http://careerbuilder.com/

American Mathematical Society's -- Seeking Employment
http://www.ams.org/committee/profession/seeking_employment.html

Women in NASA http://quest.arc.nasa.gov/women/WON.html

Careers In Math and Statistics http://www.math.yorku.ca/Careers/menu.html

Career Center http://www.monster.com/

Math Fields and Applications (mathematicians in industry and government)

http://www.ams.org/careers/mathapps.html

The College Guide

 http://mycollegeguide.org/

Colleges and Universities

http://www.mit.edu:8001/people/cdemello/C.html

CollegeNet (also a good site for financial aid)

http://www.college.net.com/elect/app/app

The College Board

http://www.collegeboard.com/splash/

Job Smart

http://jobstar.org/index.php

The Monster Board

http://www.monster.com/

www.jobsonline.net

www.careerbuilder.com/employment

Occupational Outlook Handbook

http://stats.bls.gov/oco/oco2003.htm

Seeking Employment in Mathematical Sciences

http://www.ams.org/committee/profession/seeking_employment.html

O*NET OnLine

http://online.onetcenter.org/link/summary

Careers Online

http://www.careersonline.com.au/disc/jia.html

Rubric Checklist

1. *Research:* contains information on why, career description, colleges, expected salary, who is hiring and where, employment outlook, and personality traits for your chosen career. It specifically includes what and how math is used in the career (30 points). Information could be organized in outline form or written as a paper.

2. *Infographic:* is submitted electronically (70 points) via email to teacher, Visual must:

   - Contain all sections from Phase 1
   - Clear understanding of audience & purpose is demonstrated in the choice of source images or text.
   - Organized Consistently
   - Layout makes it easy for viewer's eye to skim/scan information
   - Layout makes it easy to know what information is meant to be grouped together.
   - Color & Contract make infographic easy to read.
   - Font styles are easy to read and appropriate to context
   - Font sizes are easy to read

3. *Bonus:* (optional)
   - include a mathematical problem that would have to be solved by a professional in your chosen career. (Bonus of 2 pts)
   - **Professional interview-** Find a person currently working in your field. Contact them (either via email, phone, or in person) and ask them a few questions about their job. What questions are you going to ask them? Get these questions approved by me before you contact them (at least 5 questions should be asked) (Include contact info) (Bonus of 5 pts)

Total Scores

   1. Research Information (30 pts) _____
   2. Infographic (70 pts) _____
   3. Bonus (+7 max pts) _____

Total Project Points (100 points) _____