

We are in an age of technology where computers, cell phones, Ipods, satellite radio, flat screen TV's, electric cars and other innovations rule our lives. The United States and Canada are well behind other industrial nations with respect to the number of technical degrees given on a per capita basis. Your challenge is to research a job field where someone with a background in physics may have a job. You will need to research the schooling they needed to get where they are, how much money they make and what the general availability of jobs in their field is today.

Project Guidelines:

Job Description:

- o Research a technical field that someone with a background in physics may be working. Technical Fields that you may consider, but not limited, to include (**Alternate choices must be approved by the teacher**):

o Physicist	o Structural Engineer
o Electrical Engineer	o Architect
o Mechanical Engineer	o Computer Hardware Designer
o Nuclear Engineer	o Biomechanical Engineer
o Petroleum Engineer	o Biophysicist
o Aeronautical / Aerospace Engineer	o Pharmaceutical
o Astronaut	o Patent Lawyer
o Civil Engineer	o Mathematician

Educational Requirements:

- o What schools would you choose? Choose three schools one of which must be from outside Ontario.
- o What prerequisites are required to get into the program at the school (high school average, SAT scores, etc.)?
- o What are the requirements for getting the degree? That is, what types of courses do you need to take, and how many years will it take to complete the program?
- o Is a professional license required to perform job.
- o What are your prospects of getting a job once you are through with school (Is there a need in the workforce for people trained in your particular discipline.)?

Employer and Location:

- o Who will be your most likely employer? List at least three likely candidates.
- o Where will you be employed?
 - o What is the sector of the economy that you will be employed in, e.g. transportation, computers, communications, energy, manufacturing, etc.
 - o What will be your geographical setting?
- o What will be your salary?
- o What is your salary potential (maximum value)?
- o What percentage of the workforce is employed in your profession?

Research:

- Primary sources such as a family member or friend could be very helpful.
- Use the library.
- Professional Occupations (<http://www.bls.gov/oco/oco1002.htm>)
- Job Search Website (<http://www.monster.com/>)

Written Report:

- Write a three-page summary (double spaced/ Times New Roman/12 point font) describing the job itself in detail that covers the types of activities and importance of the job relative to our economy and or furthering the understanding in a particular field.
- Include, i.e. **included in the written summary:**
 - Table on educational requirements from three different institutions, one of which must be from outside Ontario. See above for details.
 - Table on Employers, location, salary that includes differences between degree levels (BSc vs. MSc vs. PhD). See above for details.
 - Sources from which information was obtained (minimum of three required.)

Grading Rubric: Jobs of people with a physics background in education.

Criteria	Unsatisfactory	Satisfactory	Exemplary	
Job description.	Poorly written summary of the job description. Summary lacks details and facts.	Summary of job description is relatively complete? Summary includes adequate details and facts to get a good visual of the job.	Excellent summary of the job. All aspects of the job including details of job duties are clearly discussed.	K – 20
Educational requirements.	Limited or no reference to educational requirements for the job.	Some of the educational requirements are present, but they may not be clearly connected to the job description.	Educational requirements are fully discussed and connect well with the job description.	I – 10
Employer and Location.	Limited or no evidence of research on the potential of the job.	Student shows some effort on the research of job potential. Most elements are covered.	Student fully covers the potential of the job, including starting salary, geographic location, potential employers, etc.	A – 10
Format and Layout	Limited effort used to communicate research in one clear and concise package	Students show good organizational and communication skills in presenting their research in a clear and concise fashion.	Student masterfully lays out their research in an easy to read informative fashion. It is both well organized and well written.	C - 10

Due Date:

- November 30, 2009