**Computing Science Careers Assignment**

Part 1 - Learning about more Careers (50%)

The next 3 pages of the document list more job titles and areas of study.

1. Skim through the list
2. Add 6 new terms to the mind map by choosing the terms you know the LEAST about. Add these terms with a YELLOW Fill/background color so your teacher can distinguish the new from the old.
3. Connect them with lines to whatever is most appropriate. If they are sub-areas of something already on your chart, connect them to that.
4. Choose 3 of those 6 terms and add a definition for each. You may copy and paste this definition but ensure what you find specifically explains the term in relation to CS career or study areas.

Part 2 - Focusing on one Computers Related Career (50%)  
For this section, you can choose any career that is heavily influenced by computing science.

Go to <http://occinfo.alis.alberta.ca/occinfopreview/info/browse-occupations.html>to look for Computers/Technology related careers that may interest you.

1. On the left side (or where the filters are), filter by High School Subject and choose Computer Science AND Networking
2. Skim through the careers and find one that is sincerely interesting to you as a possible future career. If none interest you, choose one you that you know little about.
3. In YELLOW, add the career title to the Mindmap if it is not already there by connecting it to the the career area that it best applies to.
4. Link into the career and then read and skim through the info available
5. As you scroll down toward the bottom, a section will be added that includes Duties, Working Conditions, Skills, etc. Using info from this section, answer each of the following questions in a new textbox.

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| --- |
| * 1. Describe the job in one or two sentences: |
| * 1. What are the working conditions like? List a few. |
| * 1. What are the highest and lowest salaries/wages for the average person? |
| * 1. What level of education or training is needed?   2. Does this job interest you? Why or why not? |
|  |

EXTRA INFO

Computing Science Influenced Career Areas and Areas of CS Study

**CS Career Titles**

The following is a small selection of job titles are often associated with CS Careers. The job title does not indicate what industry you work in as many of these titles appear in many industries. Many are synonymous with each other and/or share duties

Computer Scientist Data Scientist Computer Engineer

Software Engineer Decision Scientist Database Administrator

Network Administrator Programmer

**Career Areas and Areas of Scientific Study**

This list is designed to help bring awareness to some career areas and disciplines directly related to computing science. The groupings overlap and are by no means exhaustive.

Robotics

Artificial intelligence

Machine learning

Mechanical & Robotics Engineering

Mechatronics (such as in manufacturing)

Automation Engineer

Robotics Technician

Networking

Design and installation

Network administration and support

Network Security

Telecommunications Engineer

Microwave Communications Engineer

Hardware Engineering

Embedded systems

Mobile devices

Technician

Computer Hardware Engineer

Medical Technologies and Bioinformatics

Research simulations (such as those trying to find a cure for cancer)

Training (surgery simulations, etc.)

Robotic surgery

Prosthetics

Diagnostic devices (hardware and software engineering of devices such as an MRI)

3D Modeling of dental work

Cyber Security (Law Enforcement, Data/Networ Security and Cryptography)

Offensive Security Specialists (White-hat Hackers)

Security consultants

Cryptologists

Police Officers specializing in Cybercrime

Digital Forensics - [Learn more here](http://robomatter.com/cs-careers-digital-forensics/?utm_medium=email&utm_campaign=CS%20Careers%20Digital%20Forensics%20VEX&utm_content=CS%20Careers%20Digital%20Forensics%20VEX+CID_488fe4a25fe7bc3c460d87c13694f76f&utm_source=Campaign%20Monitor&utm_term=Read%20More)

Cryptography is used very widely in:

–mobile phones (protecting calls and texts);

–banking (chip and PIN cards);

–Internet (protecting transaction details using SSL, SSH);

–corporate computer security;

–home computing (Windows and other OSs come with a set of crypto

algorithms);

–satellite TV (e.g. Sky);

SmartPhone and Web Development

Graphic Artists

Animators

Programmers

Web site developers

Database Administrator - Server side web design (ex. E-commerce)

Gaming

Programmer

Graphic artist

Writers

Audio

Level Designer

Management

Sound, Image and Video

Recording and playback software and hardware

Compression

Security

Movie CGI (computer graphics)

Other Cross-Industry areas of study

Nanotechnology researcher

Advanced Man-Machine Interfaces

Technical Support and Help Desk

RFID (Radio Frequency Identification)