

Year 7 Project #1 – Ergonomics - Instructions

Date Issued: Term 1, Week 8

Date Due: **Term 2, Week 2**

Syllabus Outcomes:

Technology (Mandatory) Years 7 and 8:

TE4-9MA investigates how the characteristics and properties of tools, materials and processes

affect their use in designed solutions

TE4-10TS explains how people in technology related professions contribute to society now and into the future



Program and Application used: Microsoft Word

Please note that it okay to use an alternate Word Processing software for this task, as long as the file can be read by the teacher. Examples of alternate Word Processing software includes “Google Docs” (accessed via your Student Portal), Open Office Word Processing, or a Text Editor. It is also okay to complete this task in handwriting, pasting in your images where appropriate.

The focus here is on learning about Ergonomics, Effective Researching and communicating information. All examples of best work will be happily received.

Steps

1. Read the document on “Effective Researching”. Use this as a reference material for all future research if you wish.
2. Start researching. You may use the following video links to help you get started:
Video:
Set up an ergonomic pc workstation in 3 minutes (YouTube, 2.58)
<https://www.youtube.com/watch?v=y mn87tfwX60>
Video:
Laptop Ergonomics – Basic Tips – Adult or child laptop (YouTube, 2.17)
<https://www.youtube.com/watch?v=ZLwIP8cBaWA>
Video
Smartphone ergonomics – Safe tips – Mobile or smart phone use.... (You Tube, 2.08)
<https://www.youtube.com/watch?v=4FBMWGGJMbY>
3. Build your Project 😊

If you have any problems, please do not hesitate to contact the school and speak to Ms Cockburn or Mr Gray.

EFFECTIVE ONLINE RESEARCH

Using the internet to research a topic or idea can be really easy – just type what you want to know into a Google search and pick the first result... right? Wrong! This sort of “surface research” often gives you wrong or very basic information only and can this can mean that you are often misinformed about the topic or idea which can get you into trouble.

When using the internet to research a topic or idea, you should try to dig a little deeper; get off the surface web and actually learn something from your research. It may sound weird now, but often effective online research can actually save you time. You see, surface research can see you “get lost” in links for hours, whereas more specific and targeted research will allow you to get the information you need (hopefully) from between 3-5 websites.

Five steps to effective online research:

1. Search terms

The words, keyword combinations and form of your search term can make a huge difference to you search results. The WWW is a massive source of information and the wrong search term can result in thousands (or millions) of results that really don't give you the information you want.

Try using specific keyword combinations, adding domain extensions (.edu, .nsw, .gov), using symbols (e.g. +, -, |), type AND or OR in caps to search for multiple terms or you may even try using the “Advanced Search” option.

2. Choose suitable links

Your web search will offer many results from all different types of information sources. It is important that you choose to gather your information from reliable, unbiased, accurate and topic-appropriate sites. The type of sites you choose will be dependent on the topic or idea, but as a general rule stick to .edu, .gov, .org, formal publications and sites that offer further information and references. It is also better to use, for example, a nature website to learn about the lifecycle of bees than a pharmaceutical article about hayfever. Try to avoid sites whose opinions may be biased or influenced by advertising or obvious sponsorship. Blogs can be a wonderful source of information, but remember they represent one side of the story.

Also, don't be afraid to click the links to archived news stories, databases, journals and even videos.

3. Go beyond Google

A variety of search engines existed before Google and they still exist today, they're just harder to find! These alternative search engines may not always have the vast mass of links that Google offers, or operate at the same speed, but they will often offer more precise results, with the right search term. Many of these search engines are based in the deep web, away from the commerciality of those closer to the surface, and many have a particular focus.

Search engines aside, there is a wealth of information contained in online libraries, databases, journals, annals, and area-specific less “pretty” html indexes that you can also access if you take the time to look.

4. Gather, Consider, Write

Always make notes (electronic or handwritten) of the information you gather during your research, and where you got that information from. Combine the information gathered from between 3-5 sources and consider whether it satisfies your requirements. If it does satisfy your requirements, read over the information several times and then, without looking, write down what you have learned. You can then go back and add information, but you must write the framework on your own.

If the information you gather does not satisfy your requirements, it's back to the researching stage – but that's okay cause you've halved the time by researching effectively in the first place 😊

5. Reference

You must ALWAYS acknowledge where you got your information! Failing to acknowledge your source, or passing off another person's knowledge as your own is a serious offence called plagiarism. Your teachers expect you to reference minimally by including the web address of any website used as part of any task. As you progress in school, the expectations for referencing increase.

Referencing is also useful because it reminds you of where you gathered your information and allows you to get back to that site easily if required.

Reference:

Additional information for this learning resource was gathered from “AboutTech”;
<http://netforbeginners.about.com/od/navigatingthenet/tp/How-to-Properly-Research-Online.htm>

Full reference:

Gil, P. (2015). How Proper Online Research Works: *Legitimate methods, suggested techniques, good sense and plenty of patience*. About.com. Accessed: November 2015, Via:
<http://netforbeginners.about.com/od/navigatingthenet/tp/How-to-Properly-Research-Online.htm>

Year 7 Project #1 - Ergonomics

Date Issued: Term 1, Week 8

Date Due: **Term 2, Week 2**

Program and Application used: Microsoft Word

Aim: Students gain an understanding of the importance of ergonomics and apply practical skills to ensure physical health during technology use.

Technology Aim: Students will build competency in the use of Microsoft **Word**.

Instructions:

Students are combine research and their own knowledge to compose responses to the five (5) Tasks given below. Students are to publish their results using Microsoft Word and should endeavour to reference the sources of all information used.

Tasks:

1. Clearly define the term “ergonomics” (1-4 lines).
2. Explain why ergonomics is an important consideration when using technology (2 – 10 lines).
3. a) Pretend you are teaching your parents about ergonomics when using a laptop computer. List and explain at least five (5) factors of good ergonomics that they should practice.
b) Use the internet to locate a picture that demonstrates good ergonomics when using a laptop computer. Paste the picture into your document.
c) (EXTENSION) Compare ergonomic factors when using a desktop, laptop and smart device.
4. Ergonomically designed office furniture is big business! Safe Work Australia requires workplaces to supply ergonomic furniture for their employees.
a) Discuss the contribution of ergonomic furniture in the workplace to improving quality of life and supporting the emergence of technologies within our society.
b) Use the internet to identify ONE quality supplier of ergonomic furniture in Australia and report on the types of products available. Choose three products, include an image of each and explain how each product may contribute to increased Health, Safety and productivity in the workplace.
5. Repetitive Strain Injury (RSI) is a common health problem associated with incorrect ergonomics when using computers, particularly for individuals who work on computers a lot. Research Repetitive Strain Injuries and compose an information leaflet explaining how good ergonomics can prevent RSIs. The target audience for the leaflet is the general public. Your leaflet should be one (1) double-sided page.



Submission:

The completed task is to be submitted in hardcopy or digitally by upload to Google Classroom on the specified completion date.

Don't forget...:

- Include a list of all of the books, websites, videos and any other sources you used when researching this project.
- Name your files appropriately (include student name and project title) and save progressively.
- Ensure your name is on the document submitted for marking.

Syllabus Outcomes:

Technology (Mandatory) Years 7 and 8:

TE4-9MA investigates how the characteristics and properties of tools, materials and processes affect their use in designed solutions

TE4-10TS explains how people in technology related professions contribute to society now and into the future

Skills Checklist:

On completion of this task, a student should be able to:	*Achieved
★Gather and present relevant information from the internet	
★Reference the source of information gathered	
★Use Microsoft Word to present the results of research in a student's own words and reflecting personal understanding.	
★Use basic editing tools including font, page setup, page layout, paragraph spacing and spell check.	
★Insert graphics and modify their size, shape and layout on page	
★Save work to USB, personal file or G-drive	
★Name Project file appropriately and submit via Google Classroom	
★Accurately follow both written and verbal instructions	
★Work effectively to complete task within given time frame	

**Students should assess whether they have achieved each skill at the time of submission*