

New and Emerging Technologies

Name: _____

Market Pull is when consumers demand a new product to be made. Normally to improve their life.

Example: Smaller, greener car with better fuel consumption and less environmental impact.

Technology Push is when scientific research and development has led to the creation of new products.

Example: The Apple Watch was a new technology developed.

Some products are designed to **become obsolete** (useless) quickly. E.g. a disposable razor becomes blunt after a few uses and its blade can't be changed. This is **planned obsolescence**. Another example is a mobile phone, made not to last or they go out of fashion quickly. Most people will buy a new phone to get the latest fashion or technology. This is not good for the environment and increase waste.

Planned obsolescence
Built not to last



Global Production is where products are made in different parts of the world. This can make products cheaper to produce for manufacturers. But it can also cause harm to the environment due to the amount of travelling the products do. Causing harmful emissions to be released into the environment.

Lion mark Shows a product has been made by a member of the British Toy and Hobby Association and will therefore stick to safety, marketing and ethical guidelines.



Legislation: There are laws to protect both consumers and manufacturers. This is known as legislation.

British Standards Institute (BSI): is an organisation that produces standards that British designers use to make products. By using these standards it ensures a product is made to a safe standard. Giving consumers trust in the product.

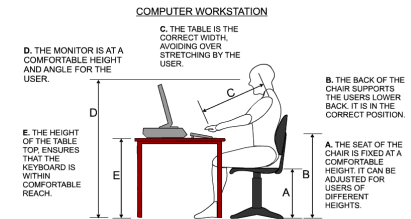


The International Organization for Standardization (ISO): is an organisation that makes standards to be used worldwide by designers.



Risk Assessments: is used to identify and minimise any risks when working/manufacturing. When writing a risk assessment, think about what could be the hazard? And what precautions could be taken to reduce the risk and minimise harm to the worker.

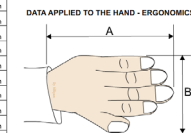
Ergonomics: is the study of people and their relationship with the environment around them. Designers should make a product that is easy and comfortable for people to use. Anthropometric data is used to help designers make products that suit the consumer's body. You can have good and bad ergonomics on a product, such as the example below. The stool is bad ergonomics as it isn't very comfortable. As the office chair is comfortable and supports the human body.



Anthropometric Data: Measurements of human body parts are called anthropometric data. This includes measurements like height, hand width, arm length etc. Measurements are collected from a wide range of body types and put into a table.

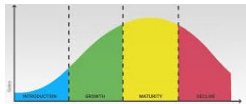
Then this data can be used to help designers make a product suitable for the consumer, that is comfortable to use.

FU/P/PERSON	A	B
Child A	102mm	53mm
Child B	103mm	45mm
Child C	90mm	47mm
Child D	95mm	44mm
Child E	102mm	50mm
Child F	87mm	41mm
Child G	75mm	43mm
Child H	102mm	51mm
Child I	104mm	51mm
Child J	74mm	36mm
Child K	79mm	46mm
Child L	81mm	39mm
TOTAL(S)	1091mm	546mm
AVERAGE	90.9mm	45.5mm



The product life cycle is the process a product goes through from when it is first introduced into the market until it declines or is removed from the market. The life cycle has four stages - introduction, growth, maturity and decline.

Different products will have a longer or shorter life cycle. Cola has a very long life cycle.



Life cycle assessment: You can work out the potential environmental impact of a product by doing a life cycle assessment. This assessment will look at every stage of production. These include choosing material, manufacture, using the product and disposal. As a designer you should try to minimise the effect on the environment that your product has.



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Market Pull



Technology Push



Planned obsolescence

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Built not to last



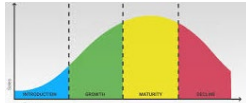
Global Production



Lion mark



The product life cycle



Life cycle assessment:



Legislation:

British Standards Institute (BSI):



The International Organization for Standardization (ISO):



Risk Assessments:

Ergonomics:



Anthropometric Data:

ANTHROPOMETRIC DATA		
PUPIL/PERSON	A	B
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Child B	103mm	45mm
Child C	90mm	47mm
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Child L	81mm	39mm
TOTAL(S)	1091mm	545mm
AVERAGE	90.8mm	45.5mm

