MY

GCSE PRODUCT DESIGN REVISION

@moretondt

REVISION CARDS

REMEMBER...

Designs between 5th and 95th percentiles creates a 'one size fits all' product that is designed with 90% of the population in mind.

TYPES OF USER NEED

DEAF / HARD OF HEARING
VISUALLY IMPAIRED
REDUCED MOBILITY

HUMAN FACTORS IN DESIGN

The opportunity for new products arises from developments in technology or customer need. The effective design of these products does not just consider how they work. It also has to take into account a broad range of issues, including social, cultural, market and environmental factors.

Key Words (that you *MUST* know the meaning of!):	
Inclusive Design	Designing so that it is suitable for as many people as possible.
Exclusive Design	Designing for a specific user group- prosthetic limbs, braille products for the blind, firemen jacket.
Ergonomics	How easy/comfortable a product is to use or understand
Anthropometrics	Measurements of the human body.
Technology Push	Design development driven my technology advancements.
Market Pull	Design development driven by consumer(market) demand.

TOP TIPS

- TECHNOLOGY PUSH IS NEW **TECHNOLOGY** BEING **PUSHED** ONTO US.
- MARKET PULL IS THE **MARKET** (US) **PULLING** (DEMANDING) FEATURES AND DEVELOPMENTS IN PRODUCTS

MARKET PULL

A need or desire emerges in society. This prompts designers to search for a solution to this 'gap in the market'.

For example, the increase in RSI (repetitive strain injuries) led to a need for padded mouse mats.

Market pull often causes products to develop in an evolutionary way.

- Consumers create the demand.
- Products usually evolve gradually from one form to another.
- The technology driving the product usually exists already.
- Products created from a market demand are often re-styled versions of older products.

TECHNOLOGICAL PUSH

New developments in technology or improvements in knowledge stimulate new solutions to existing problems.

For example, new technology has led to mp3 players replacing personal CD players.

Technological push tends to cause revolutionary development.

- A new technology becomes available.
- This technology offers new ways to solve problems, and creates opportunities to make wholly new products.
- New products are made which were not possible before the technological advancement.
- New technology might make existing products cheaper, function better or more aesthetically pleasing.

SOCIAL or CULTURAL NEED

- Radio broadcasts might help stop the spread of AIDS in Africa.
- Rural parts of Africa do not have electricity to power radios.
- Trevor Bayliss designed and made a wind-up radio that did not rely on electricity.

POLITICAL or ENVIRONMENTAL NEED

- Political pressures to be more 'green'
- Environmental products are more popular.
- Consumers are put off products that waste resources or not be recycled.

Did you know...
New cars are legally required to contain a percentage of parts that can be recycled.

INCLUSIVE DESIGN

Designing a product that is suitable for as many users as possible. Consider how your design may need to be adapted for the following types of user:

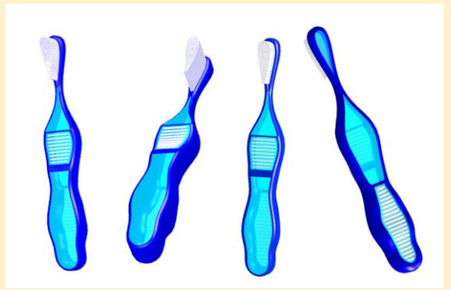
- Deaf / hard of hearing users
- Visually impaired users (blind / colour blind)
- Users with reduced mobility (wheelchair / walking stick)

Things that may help your design become more 'inclusive' are:

- Vibrating panels or flashing lights for deaf users.
- Use of brail / raised areas for visually impaired users.
- Clicking or beeping pitch noise when product is in use for visually impaired users.
- Larger handles / buttons for users with reduced mobility.

ERGONOMICS

To create a product that is easy to use to the target user, the design uses anthropometric data.



ANTHROPOMETRICS

Designs that use anthropometric data between the 5th and 95th percentiles are classed as 'ONE SIZE FITS ALL' and can be classed as inclusive products as these are designed for 90% of the population. Common anthropometric data used in development is for grips/handles as many products are used by our hands.