Hannah Jenkins PDE3 Project Summary

Make something disappear

RSA SCHOOL OF DESIGN THE GLASGOW SCHOOL OF ART

..Personal Brief..

A multi- purpose product to enable a task more easily and using alterative sources of energy other than battery or mains.

..Design Criteria..

Multi- quality capacity - combining products
Compatibility - connect past, present and future products
Disassembly and assembly - make task easier and more efficient
Use 'free' energy - eliminate batteries and do not use mains supply
Give 'second life' to product
Aesthetics - lasting appeal
Effectivity - user attachment
Innovative development - unique
Environmental influence - affect environment as little as possible
- less waste and less energy

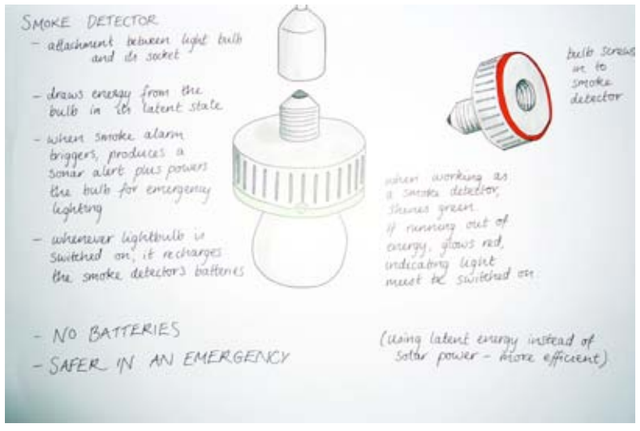
By defining design criteria relating to my personal brief, I was able to find solutions more easily, as the area for development was so broad and sometimes overwhelming.

I created 3 concepts for development. One was a child pacifier/thermometer which charged through solar power, and could measure baby mouth or forehead temperature, and bottle temperature, with quick light indicators. Another was a solar panel blind which was used to power a baby monitor. When developing my initial smoke detector idea, I decided not to use solar power. I discovered solar panels often do not 'pay themselves off' in terms of energy usage during manufacture compared to 'free' energy generated. Instead the smoke detector is charged up every time the light is switched on, and can run from mains if required. It can use latent energy stored in the bulb which is usually wasted.
My concepts were linked by the fact that they were monitoring or detecting something.

It would have helped to establish that I did not want to use solar power before designing the other two concepts.

..3 Concepts to take forward..

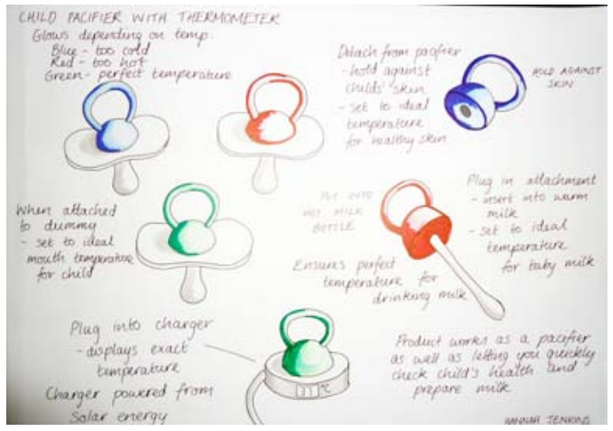
No battery smoke detector



Pros:
*Eliminates use of non-green batteries
*Will not run out of batteries therefore safer in an emergency
*Uses latent bulb energy and back-up mains supply to charge
*Easy to attach to any light fitting
*In case of fire, will power bulb attached and provide light for safety
*Could power other appliances

Cons:
*Still using some mains supply
*Originally solar-powered, but too expensive and would not pay itself off
*Not much design stretch

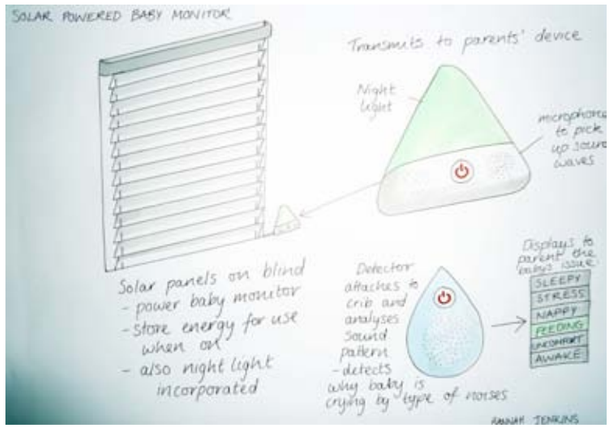
Solar powered child pacifier/thermometer



Pros:
*Charges from solar energy
*One product used for multiple purposes
*Solves multiple design issues
*Helps mothers keep babies safe

Cons:
*Inventing a new product which uses more energy, perhaps should be doing reverse
*More of an application for solar energy than a sustainable product
*Not very environmentally friendly
*Not making anything disappear

Solar powered baby monitor



Pros:
*Using 'free' energy
*Blind will collect energy throughout day
*Can be used to power any application
*Gives large design stretch
*Also works as night light - multi-purpose

Cons:
*Not making anything disappear - just using an alternative source of energy
*Source and application rather than one product

..Evaluation..

I found the concepts were becoming more of a 'power source plus application' than one combined product. There was not a huge amount of design stretch in any of the concepts and I found it hard to branch away from solar power. I realised that alternative energy did not particularly motivate me and so I looked to changing my brief instead of continuing with ideas I did not like.

On reflection, I could have continued with this brief and looked at new forms of technology which generated energy, such as piezoelectricity. There was more scope for a better product, but in the end I am glad I chose to change my brief, as I was given more of a challenge.

..Baby Market..

Whilst creating my three concepts, I found that I was keen to focus on the baby market; one of the most wasteful there is. Their appliances and devices use a lot of electricity. I also found that there are a vast range of products which babies use for short periods of time before they are thrown away. The life cycle of these products makes the market very unsustainable. If possible, I wanted to target my concepts towards improving this issue.