



FASHION



Chemistry is what we wear and the way we look. Fashion is Chemistry.

Clothing - Synthetic chemical fibres such as nylon, acrylic fibre and spandex when mixed with natural fibres such as cotton or wool enable the production of fabrics with improved strength, elasticity and shape retention.

Dyes made from organic and inorganic chemicals give fabrics vibrant colour so that people can choose the shades that are most appealing and flattering to them.

Waterproof coats and jackets are available thanks to fluoropolymer coatings and polypropylene takes moisture away from the skin making it ideal for sports clothing.

New ranges of smart textiles are being developed. One such textile includes materials which can change with your mood. If you are depressed, for example, the material would change colour and release the appropriate aroma accordingly

<http://www.abiquim.org.br/english/youandthechemistry/qui04.htm>

Cosmetics - In an age when image is all important, the use of cosmetics has become an integral part in the quest for the body beautiful. Chemistry is heavily involved with the development of user friendly cosmetics.

UV adsorbers have been added to protect skin from harmful UV radiation, and biocides are added to prevent the cosmetic from spoiling on the store shelf and at home.

Chemicals with concealing properties are used in foundation make-up to hide skin blemishes and it is iron oxide and other pigments which provide the diverse colour palette for lipsticks, mascara, eyeliners etc.

Sun Cream - Topical sunscreens are made up of constituents that either absorb or reflect the sun's radiation. Absorbents are organic chemicals which do not offer significant protection against UVA radiation. Reflectants are generally inorganic compounds which offer significant UVA and UVB protection. However, they are cosmetically less acceptable due to their tendency to leave a visible white film.

<http://www.cefic.org/templates/shwNewsFull.asp?NSID=362&HID=2&P=3&NID=1>

Hair Dyes and other products – Temporary, semi-permanent or permanent - all hair dyes use chemistry in one form or the other. Then there are all the mousses, gels, hairsprays and other products which we can no longer do without.

<http://pubs.acs.org/cen/whatstuff/stuff/7811scit4.htm>

Jewellery – As well as being responsible for many of the gems in this world, chemistry, in the form of cyanide, is used in the isolation of gold and silver particles from gold-bearing ore during mining and silica is used in the smelting process to remove impurities.

Keeping that sparkle!!! Solvents are used to clean jewellery surfaces and mild abrasives are used to polish finished jewellery.



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Useful RSC resources

Contemporary Chemistry for Schools and College



An excellent resource comprising of a book and a CD-ROM which contain useful information about the chemistry of fashion. 2 subject areas covered include:

Crystal Chemistry, the chemistry of the sparkle! – This section includes a fact sheet about a girl's best friend – diamonds; it may spur you on to think of ideas for events focused around jewellery.....

Hair – Hair is a major preoccupation with the young and other people. Each year a huge amount of money is spent on having hair styled, coloured and treated. This section of the resource focuses on the chemistry of hair and shampoo and provides fact sheets which will be of particular use when putting together events perhaps focussed around hairdressers?

For information about ordering this resource please visit the web site:

<http://www.rsc.org/publishing/books/0854043829.asp>

Dyes and textiles

This resource provides a fascinating insight into the chemistry involved in the development of dyes and textiles throughout history. The booklet outlines many of the advances and major discoveries in dyes and textiles technology. This resource is available to buy and selected sections are available to download at:

http://www.chemsoc.org/pdf/LearnNet/rsc/Dye_select.pdf



Include in this section are examples of fact sheets and experiments reproduced from these publications to inspire ideas for events.