



WANDLE INDUSTRIAL MUSEUM

EDUCATIONAL INFORMATION SHEET supporting KS 1/2 History & Art and Design:

H KS2 - a study of..a site that is significant in the locality

A&D KS1 – study the work of a range of artists, craft makers and designers

D&T KS2 – understand how key individuals in Design and Technology have helped shape the world

NATURAL RESOURCES FOR DYEING

People have been dyeing cloth for over 5000 years. Until 1856 all dyes were made from plants or animals. Insects or sea molluscs provided red or purple colouring; plant juices supplied most other colours. The most common dyes found in the Wandle Valley mills were a black from the **logwood tree** and red from the **brazilwood tree**. A red was also obtained from the root of **madder** mixed (*mordanted*) with alum, and blue from **woad**, and indigo from the **Indigofera genus** of plants.

The dyes were removed from the animals or plants by **crushing and collecting** the juices, or **pulping and fermenting**, or **boiling and condensing** the steam. Once the dyes had been collected they were diluted in large **vats**. The clean and wet fabric was placed into the vat, which was then brought to the boil and simmered until the fabric is the colour required. The cloth was then taken out, rinsed and dried. It was then ready to be made into clothes or coverings for furniture.

At his works in Merton, **William Morris** designed and printed cloth and textiles using natural dyes. The famous **Liberty's** store in Regent Street sold expensive oriental styled clothing, often made from printed silk using natural vegetable and plant dyes. **Arthur Liberty** even marketed a range of called "*Liberty Art Colours*" which he developed with help from **Thomas Wardle**, who was also printing for Morris. The popularity of these block-printed textile designs led Liberty to work with designers and print at **Edmund Littler's** works at **Merton Abbey** by the River Wandle.

Plenty of clean and clear water is essential in the dyeing and printing of cloth. The Wandle, springing from and filtered by the chalk of the North Downs, was able to both power the mills and support the textile printing industry. In 1904 Liberty bought the Littler workshops including the mill wheel, built by Littler to power the **jennys and rinsing spools** and the **hydro extractor**, which was like an early spin dryer! When the printed cloth was rinsed of excess dye, the water was discharged freely into the Wandle; Liberty used to joke that they sent their dirty water to William Morris who had his textile print workshops further downstream.



Some suggested follow-up activities and research:

- Where do we get natural dyes from?
- Describe **THREE** ways of extracting these natural dyes.
- Can you match up the following plants with their dye colours?

BEETROOT

BLACKBERRY

RADISH

NETTLE

CARROT

LING HEATHER

GREEN

YELLOW

ORANGE

PURPLE

RED

BROWN

- Find out which colours are produced by these plants...

MADDER, INDIGO, WOAD, WELD

- You could try using natural dyes on an old T-shirt to make it colourful! Get some advice from one of the **natural dye organisations** such as **WildColours.co.uk**, **The Heritage Crafts Association** or **DIYNatural.com**. Or have a look at the resources from the **River&Cloth Project** on www.riverandcloth.co.uk



What the Wandle Industrial Museum can do for you:

The Museum is able to cater for school groups, either at the museum itself or by visiting your school, to learn more about the use of **natural dyes in block-printing**, or **celebrating the textile heritage of Merton** using a DVD produce by the River&Cloth Project. There are many **photographs and examples of real printed cloth** to see, as well as original **printing blocks**. There is also a detailed **scale model showing the layout of the William Morris works** at Merton. We can also provide a talk on the **fabric patterns produced** and the opportunity for students to **produce their own print** to take away!

For further enquiries or to make a booking please contact us as below:

The Wandle Industrial Museum 020 8648 0127 or email office@wandle.org