FARBE, LICHT UND INTERAKTION - DOKUMENTATION

„WHAT WE DO TODAY MAKES A DIFFERENCE TOMORROW"

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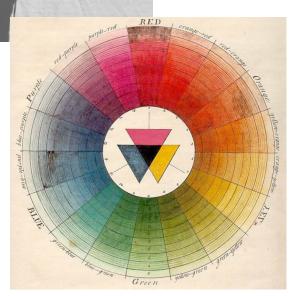
INSPIRATION

NATURAL DYE COLOR CHART

RED:
beets, cochineal, hibiscus

PINK:
avocado, raspberries, cherries

YELLOW/ORANGE:
turmeric, marigold, yellow onion skin, citrus peels

GREEN:
spinach, grass, mint leaves

BLUE/PURPLE:
indigo, blueberries, blackberries, black beans

BROWN:
coffee, tea, walnut shells

Interactive natural pigment project.

DIY: Tune your clothes with a small ecological footprint that you can calculate.

installation:
• pieces of naturally dyed fabrics and clothing pieces on a line + pegs to hang.
• light is installed to make a shadow on a wall.

Example color sources from nature that I tried out:

- **Orange:** carrots, onion skins
- **Brown:** walnut, nutmeg, tea, coffee
- **Pink:** red berries, seeds
- **Blue:** red cabbage, blueberries
- **Red:** pomegranates, beetroot
- **Green:** spinach, broccoli leaves
- **Yellow:** turmeric, saffron

Process:

• First I went to the store and bought a lot of different fruits, veggies, and berries that could work as a pigment

• I also used onion peels that I had saved from food waste.

Process:

•I used two different methods: boiling the ingredient on the stove with water and blending the ingredient and boiled water.

•The method I used depended on the ingredient (if it was soft or hard).

Process:

- I used a woven cloth as a filter since it had small enough holes.
- I used old glass jars and bottles that I washed with boiling water as the containers.

Process:

- I tested different pigments that I made on one piece of fabric so there was no waste.
- I placed the dyed fabrics in plastic bags for a few hours to let the pigment attach to the fabric.

Process:

• For the tie-dye result I used rubber bands to hold the fabric in a tied position and then placed it to the dye.

Process:

- I tied the fabrics in different ways to get different results.
- I also tried to dye synthetic material, but it didn't work out as I thought.

Process:

• I mixed Red Cabbage with baking soda and got some interesting results: the color changed from purple to blue.

• I also got red color by squeezing lime into the Red Cabbage.

input1. = Clothing piece
Dropdown:
*//value means cup of colour times by amount of colour cups needed. (input2 value * input1 value)*
T-Shirt value: 1
Trousers value: 4
Coat / Hoodie value: 5
Underwear value: 0.3
Socks value: 0.4
Top value: 0.5

input2 = Color
Dropdown:
//value means amount of ingredient needed to make one cup of colour.
Amber value: 3 g of Turmeric + 1 table spoon salt + one table spoon vinegar
Lilac value: 100g of Red Gabbage + 1 table spoon salt + one table spoon vinegar
Citrus value: 1g of Saffron + 1 table spoon salt + one table spoon vinegar
Khaki value: 40g of Spinach + 1 table spoon salt + one table spoon vinegar
Coffee value: 100g of roasted coffee beans + 1 table spoon salt + one table spoon vinegar
Blueberry value: 180g of fresh blueberries + 1 table spoon salt + one table spoon vinegar
Orange hue value: 110g Onion peels + 1 table spoon salt + one table spoon vinegar
Aquamarine value: 140g of Pomegranate seeds + 1 table spoon salt + one table spoon vinegar
Nutmeg value: 20g of Nutmeg + 1 table spoon salt + one table spoon vinegar

Process:
•Part of the requirement sheet that I made to make a well-structured code.

```
   3                  const colors = [
   4        {
   5            label: 'Amber',
   6            value: 'amber',
   7  carbonFootprint: 14,
   8            ingredients: [
   9    {
  10  ingredient: 'Turmeric',
  11  amount: 3,
  12  unit: 'g'
  13  },
  14  {
  15  ingredient: 'Salt',
  16  amount: 1,
  17  unit: 'tbsp'
  18  },
  19  {
  20  ingredient: 'Vinegar',
  21  amount: 1,
  22  unit: 'tbsp'
  23  }
  24  ]
  25        },
  26  {
  27            label: 'Lilac',
  28            value: 'lilac',
  29  carbonFootprint: 73,
  30            ingredients: [
  31    {
  32  ingredient: 'Red Gabbage',
```

```
  95    *          @param {$w.Event} event
  96    */
  97
  98    function refreshTables() {
  99          // Add your code for this event here:
  00          let colorIndex = $w('#colorList').selectedIndex;
  01    let carbonFootprint = colors[colorIndex].carbonFootprint;
  02    let ingredientsLength = colors[colorIndex].ingredients.length;
  03    let txt = 'Ingredients: \n';
  04    for (var i = 0; i < ingredientsLength; i++) {
  05    let ingredient = colors[colorIndex].ingredients[i].ingredient;
  06    let amount = colors[colorIndex].ingredients[i].amount * parseFloat($w('#size').value) * parseFloat($w('#
  07    let unit = colors[colorIndex].ingredients[i].unit;
  08    txt = txt + ingredient + ': ' + amount + ' ' + unit + '\n';
  09      //Do something
  10    }
  11    let carbonFootprintCalc = carbonFootprint * parseFloat ($w('#size').value) * parseFloat ($w('#coloringTe
  12    let carbonFootprintText = 'Total carbon footprint: ' + carbonFootprintCalc  + " gCO2e";
  13
  14    $w("#textField").text = txt;
  15    $w("#carbonFootprintField").text = carbonFootpr      xt;
  16    }
  17
  18    export function colorList_change_1(event) {
  19          // This function was added from the Properties & Events panel. To learn more, visit http://wix.t
  20          // Add your code for this event here:
  21          refreshTables();
  22    }
```

Process:

• I made a calculator that shows the number of ingredients needed for a dyeing process and the Carbon Footprint of the process.

• I coded Javaskript on my Wix website, where I also added information about the process and the pigments that I made. www.sonjanatalia.com

Exhibition:

● I wanted to show my project also in a natural way. I got the inspiration of the laundry line and installed light to bring shadows to the wall behind the clothes.

Scan this QR - code to learn about the materials and to enter an ecological footprint calculator that I created!

Nutmeg

Exhibition:

- I brought some ingredients that I used to the exhibition so everyone could get a better understanding of the materials used.

- I also added QR-codes that people could scan and easily visit my page with more information about the ingredients used and test out my carbon footprint calculator.

- I made tags for all the products so people could see what ingredient was used.

REFERENCES:

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+Lots of Youtube and TikTok videos about Natural Dye methods.