

# From White to Black: the Wheel of Colours in Science and Art

## 1. Stage 1: Engage: Colours in our lives (time: 20')

- A. Observe and discuss orally in pairs or small groups the colours of your clothes, how you combined them, why and if you like these combinations.
- B. Look at Matisse's [drawing "Woman with a hat"](#) on the class projector and answer the following questions:
  - *How are colours used in this painting?*
  - *Do you like the way they are combined?*
  - *Why is this painting considered to be revolutionary?*

Take notes on your Learning Diaries (either digitally on a tool such as [Adobe spark](#) or on a notebook). Then watch [video1](#) and try to guess the topic of this learning scenario, which relates to the ways colours are classified and combined in our everyday life, in art and in science.

## 2. Stage 2:

### A. Explore and Explain: Experimenting with Matisse's colours (time: 45' )

*"All the colors sing together; their strength is determined by the needs of the chorus. It's like a musical chord."*

- Divided in 4 groups, discuss this quote by Henry Matisse.
- Then, in the same groups, choose one of the resources below and create a short presentation (3-4 slides) about the way Matisse used colours and his life and work.

The fact that Matisse made a breakthrough in the way he used colours is featured during these presentations.

**You can browse these resources for information:**

[Europeana](#)

[Henri Matisse Cartoon](#)

[HM and colours](#)

[Getty.edu](#)

<https://www.bbc.co.uk/>

## B. Explore and Explain : Learning about Newton's Colour Wheel (time: 45')

"What is a Colour Wheel?" this is the question you will be working on for the next 45 min.

*As Tate Gallery's curator Matthew Gale, explains: "As Newton found, when all colours are brought together in light you get **white** - but when all colours are brought together in paint you get **black**."*

The questions to be inquired by the 4 groups are:

1. *What is a colour wheel?*
2. *What does it show?*
3. *How does it work?*
4. *When was it first created? By whom?*

Work in 4 groups, as in task 2A, differentiating the content you choose and the way you decide to present it, according to your learning styles. Here are the resources you can use:

[Tate Gallery](#)

[Newton's discovery](#)

[The Smithsonian Institution](#)

### Stage 3:

## A. Elaborate: Playing with the Colour Wheel (time: 45')

Time to play and do some hands-on activities while deepening and extending our knowledge!

The 4 groups experiment with colour wheels. First you see how a [tangible colour](#) wheel can be made and then you can study more information and go for a [virtual one](#).

## B. Elaborate: Decoding Matisse's Color (time: 45')

After becoming familiar with the Colour wheel and its uses, the 4 groups visit the [Europeana digital gallery](#) of Matisse's paintings.

You download one of his paintings that you enjoy (always with respect to the Licences provided by the aggregators) and use the [Canva tool](#) (color palette generator) to find the colour palette it belongs to and to generate your own colour palettes.

## C. Elaborate: Creating your own design (time: 45')

In the end, you will apply the new knowledge using this [canva tool](#) (100 color combinations).

You create a *poster of a woman with a hat* after choosing a colour palette. While working you can keep updating your Learning Diaries, with your observations, thoughts, comments, possible questions.

You create a *virtual museum* posting your posters-painting with the Sway [tool](#)

### Stage 4:

#### A. Evaluate: reflect on the topic (time: 45')

Now compare each other's portrait to Matisse's original painting "Woman with a hat". To be able to make this comparison you will watch this [video](#) first and read this [article](#) secondly, about Matisse's colours and the use of the colour wheel. Then you will discuss and record your findings on your Learning Diaries. You will present your findings in class.

#### B. Evaluate: reflect on the process of group work (time: 30')

Use a [rubric](#) to reflect and evaluate on the way that you have worked in the groups, using your notes in your Learning Diaries too.