Colour Literacy Project

Designing an Inter-disciplinary Resource for Teaching Colour in the 21st Century

COLOR20
get the answers here

Inter-Society Color Council
International Colour Association
The Colour Literacy Project is a new Educational Initiative to provide Age-appropriate Colour Curricula and State-of-the-Art Resources for Teachers across Science, Art and Industry.
BACKGROUND

AIC/ISCC Munsell Centennial Color Symposium - June 2018

Discussions during and after the Munsell Symposium in Boston led to the formation of the project.

ISCC Colour Literacy Problems Committee - November 2018
ISCC Colour Literacy Project Approved - August 2019
AIC Project Endorsement – January 2020
WHY?

- Colour surrounds us. It is a visual language that affects how we feel and how we interact with the world around us.

- Colour is familiar to everyone. It is an engaging entry level topic in both science and art.
WHO is involved in the project?
The Colour Literacy Project is a joint project of the Inter-Society Colour Council and the International Colour Association.
The project committee is made up of nine colour educators from Science, Art, Design and Industry with a combined experience of teaching colour of 250+ years.
Colour Literacy Project Committee

Robert Hirschler
Budapest, Hungary

Maggie Maggio
Portland, US

Steve Westland
Leeds, UK

Robin Kingsburgh
Toronto, Canada

Luanne Stovall
Austin, US

Paul Green-Armytage
Perth, Australia

David Briggs
Sydney, Australia

Harald Arnkil
Helsinki, Finland

Andreas Schwarz
Essen, Germany
Colour Literacy
Project
Consultants

Osvaldo da Pos
Padova, Italy

Mark Fairchild
Rochester, NY USA

Nick Harkness
Newtown, NSW Australia

Roy Osborne
London, England

Berit Bergström
Stockholm, Sweden
WHAT is Colour Literacy?
COLOUR LITERACY

= Science Literacy + Visual Literacy
“Science literacy is the knowledge and understanding of scientific concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity.”

The National Science Education Standards
“... means that a person has the ability to describe, explain, and predict natural phenomena.”

The National Science Education Standards
“Visual literacy is the ability to recognize and understand ideas conveyed through visible actions or images (such as pictures).”

Merriam-Webster
“… the ability to interpret, comprehend, appreciate, use, and create visual media, in ways that advance thinking, decision-making, communicating, and learning.”

National Art Educators Association
SCIENCE LITERACY + VISUAL LITERACY
LITERACY KEYWORDS

Curiosity
Knowledge
Ability
WHY NOW?
K-12 Art Teachers
Color and Light Survey
Winter 2019
The SURVEY RESULTS

- There is little if any coverage of printing and computer colour.

- Most colour education in art and design still relies on using the RYB colour wheel as the principal means of organizing colour.

- Basic Colour Theory concepts are based on simplified 2D systems, with a lack of teaching 3-dimensional systems of colour.

- There is definite interest in collaborative, interdisciplinary approaches in teaching colour.
6d. Color Technology

![Chart showing color technology usage across different categories.](chart.png)
8. Here are some diagrams of standard color wheels or hue circles. Which type of color wheel do your students use MOST OFTEN in the classroom?

105 responses

- A. Red, Yellow, Blue
- B. Cyan, Magenta, Yellow
- C. Two Reds, Two Yellows, Two Blues
- D. Red, Green, Blue
- E. Red, Green, Blue, Cyan, Magenta
- F. Red, Yellow, Green, Blue
- G. Red, Yellow, Green, Blue, Purple
- H. None of the above

- 76.2%
- 8.6%
9. Color is 3D. What type of 3D color space, if any, do your students use MOST OFTEN to visualize the three dimensions of color?

105 responses

- Color Globe: 89.5%
- Color Double Cone
- Color Tree
- Digital colour spaces - e.g. HSB, HLS
- CIE color spaces - e.g. CIE L*a*b*
- None of the above
- We will begin using the warm/cool colors to create our 3-D art.
- Kolormondo Globe
5b. Have you ever participated in an art and science teacher collaboration to teach about color and light?

105 responses

- 70.5% Yes
- 18.1% No
- 10.5% No, but I would be interested in collaborating.
- 1% I sponsor art club & I worked with the science club to participate in a collaborative project involving bacteria & abstract art.
The **NEW VISUAL WORLD**

- We live in an increasingly visual world, inundated by images in photos, movies, videos and advertising.

- We are surrounded by information presented in visual form.
The global nature of the internet has made accurate, up-to-date facts harder to find while outdated info and misconceptions are easier to find – and share.

The viral nature of the internet will make it possible to spread the word about new models for teaching color.
The GAP

- Scientific and technical advances in colour have expanded over the past 100 years while colour education in art and design has diminished.

- Basic Colour Theory in art is now out of step with the latest information in colour science and industry.
STEM to STEAM

- Colour is an ideal STEAM subject. (Science, Technology, Engineering, Arts, Math)

- Integrated colour lesson plans can become models for the collaborative teaching of science + art.
LEDs

◆ In the past there was no easy way to demonstrate light mixing and the effects of different coloured light on objects. That has changed with inexpensive LEDs.

◆ The impact of LEDs as light sources in exterior and interior applications is changing how we see colour.
Availability of CMY PAINTS and INKS

- In the last five years many of the largest educational brands in the US, including Blicks and Sargent, introduced CMY student grade paints in economy sizes.

- CMYK inks for use in desktop printers are readily available and familiar to teachers.
The Current Model of TEACHING COLOUR
The Colours Around Us
Traditional Colour Primaries and Secondaries
Modern Primary Confusion!

**COLOR THEORY**

**RGB**
Additive Color

**CMYK**
Subtractive Color

**ANALOGOUS**
Colors that are next to each other on the color wheel.

**COMPLEMENTARY**
Colors that are opposite each other on the color wheel.

**TRIADIC**
Three colors spaced equally apart on the color wheel.

**SPLIT COMPLEMENTARY**
A color and the two colors next to its complement on the color wheel.

**WARM COLORS**

**COOL COLORS**

[nofilmschool logo]
Children’s Colour Set with RYB Itten Colour Wheel
Most children still learn RYB Mixing
NEW Model of Teaching COLOUR
◆ Start with Observing Phenomena

◆ Build a Strong Foundation of Basic Concepts

◆ Integrate the Science and Art of Colour

◆ Replace Misconceptions with Facts

◆ Update Colour Theory to Align with Colour Science
Traditional Colour History
Colour Mixing Systems
Intro to Pigments
Colour in the Natural World
Colour and the Brain
Light!
The Colours Around Us
We don’t need to throw out the baby with the bath water.
We do need to throw out the (RYB) water.
Give students a full set of colours to explore . . .
... before teaching CMY mixing and ...
... additive, subtractive, and additive averaging mixing processes.
PROJECT PLANNING
OBJECTIVES

◆ Identify the Basic Concepts that are foundational to learning about colour across all disciplines.

◆ Design age-appropriate curricula and teacher guides that merge the current science and art standards related to colour.

◆ Replace the common misconceptions and misinformation about colour with peer-reviewed explanations.
TARGET AUDIENCE

- Teachers of Teachers
- Teachers
- General Public
TIMELINE

- Phase One: Critical review of existing references
- Phase Two: Design and test new teaching materials
- Phase Three: Launch website and resources
LONG RANGE GOALS

- User-Friendly Colour Literacy Website
- Teacher Guides and Resources
- Training for Collaborative Teaching
What can YOU do?

- Action Steps
- Examples
- Real takeaways here!
Thank you for attending!