

senior **living**
activity assistant
powered by **spectrio**

THE SCIENCE OF COLOR



ALL ABOUT... COLOR

Embark on a vivid exploration into the world of colors, where light transforms to touch every aspect of our lives. Lets dive deep into the science of colors, examining how they influence our emotions, dictate perception, and interact with our visual senses to create the colorful world we experience daily.

What are Colors?

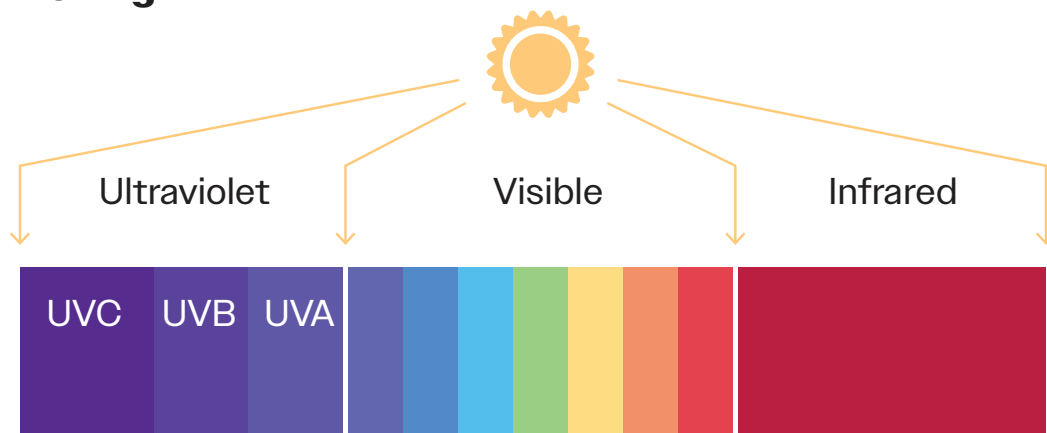
Colors play an essential role in our daily lives, influencing moods, communicating information, and even affecting decisions. But what exactly is color? Color is the way our eyes and brain interpret different wavelengths of light. When light strikes an object, it absorbs some wavelengths and reflects others. The colors we perceive are the wavelengths reflected back to our eyes. Wavelengths beyond red are called infrared, while those lower than violet are called ultraviolet. These non-visible lights border the visible spectrum of colors.

Sunlight, or white light, consists of a spectrum of colors. These hues—red, orange, yellow, green, blue, indigo, and violet (ROY G BIV)—make up what Isaac Newton identified as the visible spectrum. Through a prism, white light disperses into these colors, revealing that white light is in fact a combination of the visible spectrum.

The color wheel, a foundational tool in art and design, organizes colors into primary (red, blue, yellow), secondary (orange, green, violet), and tertiary hues. Artists and designers use this to mix colors and create harmonies—complementary, analogous, and triadic—which play crucial roles in design, art, and everyday aesthetics. While the color wheel helps us understand the relationships between colors, the human eye plays a crucial role in perceiving these hues.



Spectrum of Light:

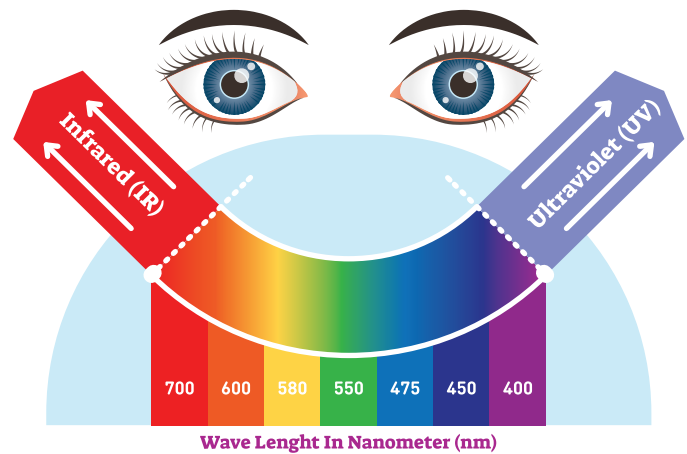


THE PSYCHOLOGICAL IMPACT OF COLORS

How the Eye Sees Color

Our ability to see colors comes from the eye's complex structure, providing the ability to process light. The retina, located at the back of the eye, contains millions of cells called photoreceptors—rods and cones.

While rods detect light intensity and are crucial for night vision, cones are responsible for detecting color. Cones are categorized into three types, each sensitive to different light wavelengths corresponding to blue, green, and red. Once light stimulates the cones, they send signals through the optic nerve to the brain, which interprets these signals to produce the rich spectrum of colors we see.



Beyond their visual appeal, colors have a profound influence on human emotions and behaviors, affecting how we perceive the world around us. Color preferences also exert an influence on the objects people choose to purchase, the clothes they wear, and the way they adorn their environments.

Examples:



Red: Often associated with passion and intensity, red has been linked to appetite stimulation and urgency, making it common in advertising and emergency.



Green: A color linked to nature, green tends to be calming and refreshing. It is also associated with money and wealth.



Blue: Known for its calming and soothing effects, blue can help reduce stress and create a sense of tranquility. It's often used in bedrooms and medical settings to help relax individuals.



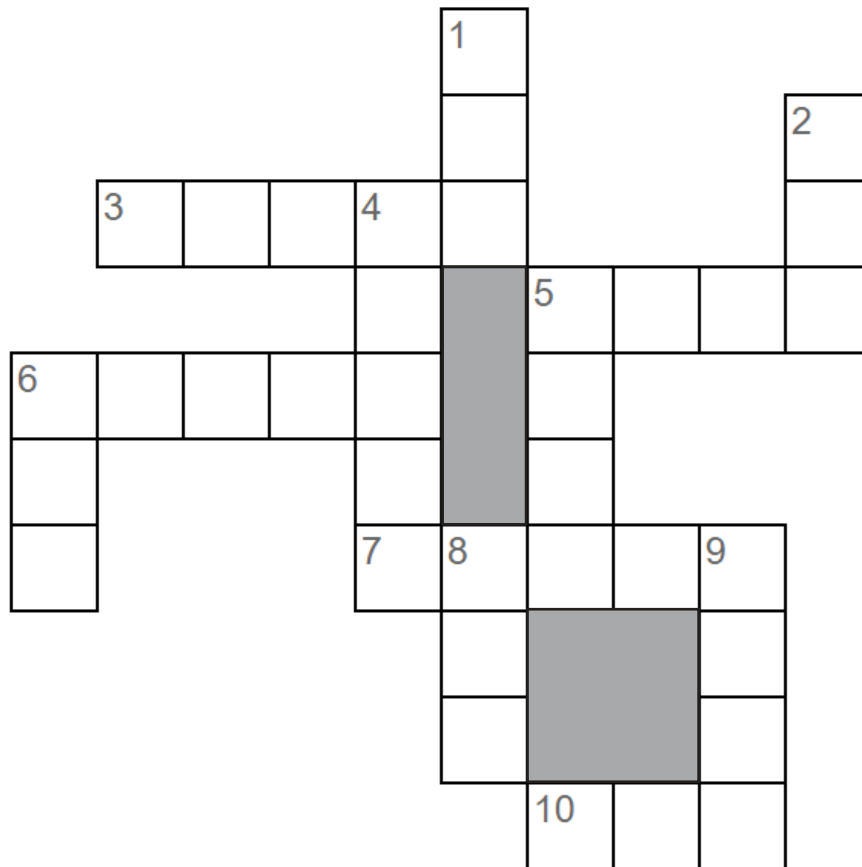
Yellow: Generally bright and uplifting, associated with happiness and creativity. However, in excessive amounts, yellow can be overwhelming and may even cause anxiety.

Much of the evidence regarding color psychology is anecdotal, but researchers have made important discoveries about the impact of colors on moods, feelings, and behaviors.

JUMBLE

EVERY ANSWER USES ONLY THE LETTERS IN THE WORD:

ULTRAVIOLET



Across

- 3. Legal action
- 5. Entice
- 6. Treasure _____
- 7. Snack
- 10. Made-up story

Down

- 1. Sick
- 2. Beer
- 4. Turn aside
- 5. Mythology
- 6. Leaf drink
- 8. Rodent
- 9. To carry

WORD SEARCH

L O C J D N Y J K F Y T D U R
M G Z O M B L E O M F K E H T
Y M S F L E V T L X I Y C T S
W U K U I O L J V L R X V C P
I D B V U T R C W O O E D M E
N T Z A J O G O V Z O W D P C
F X A H J G J G R W L I G H T
R G R A J C J C B A A T Q V R
A Y U G H S U L V U N Q B I U
R Q J N U K W Q I W R G J O M
E W E U D B K D E Y T Y E L O
D C G N O L V I S F A C B E O
Q Y Y H Y Y G R E E N F L T T
W M C E P I N D I G O P U N Y
U L T R A V I O L E T Y E R L

Red
Orange
Yellow

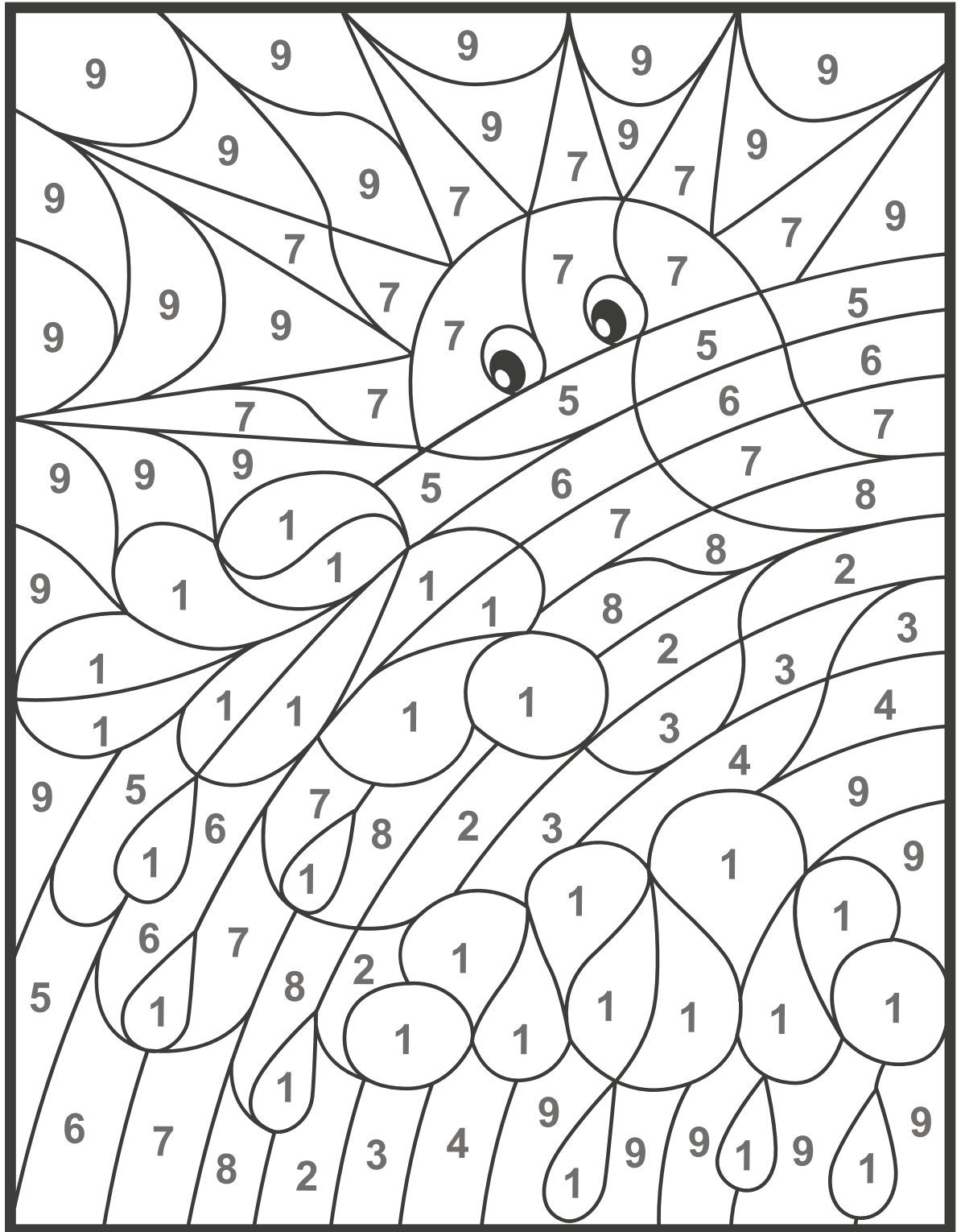
Green
Blue
Indigo

Violet
Color
Spectrum

Ultraviolet
Infrared
Light

COLOR BY NUMBER

Using colors similar to the ones numbered on the left, fill in each numbered area of the image with the color that corresponds with the number.



SOLUTIONS

