

# Colour Theory Worksheet



## Secondary Light Colours

1. Name the 3 *secondary light colours*? \_\_\_\_\_

2. Write the equation for each secondary light colour – which two PRIMARY light colours make up each secondary colour?

a. \_\_\_\_\_ = \_\_\_\_\_ + \_\_\_\_\_  
(secondary light colour) (primary light colour) (primary light colour)

b. \_\_\_\_\_ = \_\_\_\_\_ + \_\_\_\_\_

c. \_\_\_\_\_ = \_\_\_\_\_ + \_\_\_\_\_

3. When two colours of light combine, the colours that BOTH lights have in common (reflecting) is the colour that we see. If no colours are reflected, we see black.

**Example:** When Magenta (made of red and blue) and Yellow (made of green and red) combine, we see RED because that is the colour that they have in common.

a. Which colour is reflected when the following light colours are mixed:

i. Magenta and Cyan: \_\_\_\_\_ ii. Cyan and Yellow: \_\_\_\_\_

4. **Complementary Colour** means the primary colour or combination of primary colours that are *subtracted* from white light to give the colour we see.

**Example #1:** The complementary colour of **red** is “blue and green” which is actually **CYAN**. Therefore the complementary colour of red is cyan.

**Example #2:** The complementary colour of **yellow** (made up of red and green) is **Blue**, because that is the only primary light colour that is not making up yellow.

a. Write the complementary colour for...

i. Blue: \_\_\_\_\_ ii. Green: \_\_\_\_\_

iii. Magenta: \_\_\_\_\_ iv. Cyan: \_\_\_\_\_

v. Red: \_\_\_\_\_

5. **Subtractive Light Theory** deals with pigments and dyes. When light is shone on a particular object, the colours that the object or pigment is absorbing will determine which colour of light is being reflected.

**Example:** *Which colour will be reflected if a blue light is shone on a green leaf?*

**Answer:** Green absorbs all red and blue light, it only reflects green. Therefore, if a blue light is shone on the green leaf, it will absorb all the colour, leaving only BLACK to be reflected.

**Complete the following chart: Which Colour Will You See If....**

1. White light on a magenta t-shirt:

\_\_\_\_\_

2. Cyan light on a red carnation:

\_\_\_\_\_

3. Magenta light on a green lantern:

\_\_\_\_\_

4. Red light on a blue balloon:

\_\_\_\_\_

5. Yellow light on a white skirt:

\_\_\_\_\_

6. Green light on a red convertible:

\_\_\_\_\_

7. Blue light is on a magenta sheet:

\_\_\_\_\_

8. White light on a black dog:

\_\_\_\_\_

9. Magenta light on a green book:

\_\_\_\_\_

10. Blue light on a green hat:

\_\_\_\_\_

11. Cyan light on a blue blanket:

\_\_\_\_\_

12. Cyan light on a yellow rose:

\_\_\_\_\_

13. Green light on a green tree:

\_\_\_\_\_

14. Yellow light on a blue blazer:

\_\_\_\_\_

15. Red light on cyan hairbrush:

\_\_\_\_\_

16. White light on a magenta toothbrush:

\_\_\_\_\_

17. Magenta light on a cyan laptop:

\_\_\_\_\_

18. Green light on a cyan hair tie:

\_\_\_\_\_