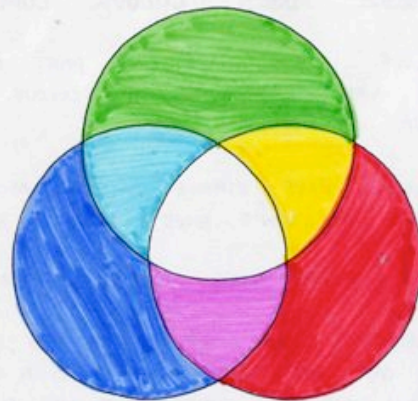


COLOUR MIXING.

TRY MIXING COLOURED LIGHT USING COLOUR FILTERS [GELS] WITH THREE TORCHES OR PROJECTORS. WHAT HAPPENS WHEN YOU MIX RED, BLUE AND GREEN LIGHTS TOGETHER? WHICH TWO COLOURED LIGHTS MIX TOGETHER TO MAKE YELLOW?

OVERLAP TWO OF THE FILTERS AND HOLD THEM UP TO DAYLIGHT. NOW LIGHT IS SUBTRACTED AND THE MIX IS DIFFERENT.

LOOK CLOSELY AT A COLOUR TELEVISION OR A LARGE COLOUR ADVERTISING POSTER. WHAT COLOURS ARE USED? HOW ARE THEY ARRANGED? WHY CAN YOU SEE OTHER COLOURS WHEN YOU STEP BACK?

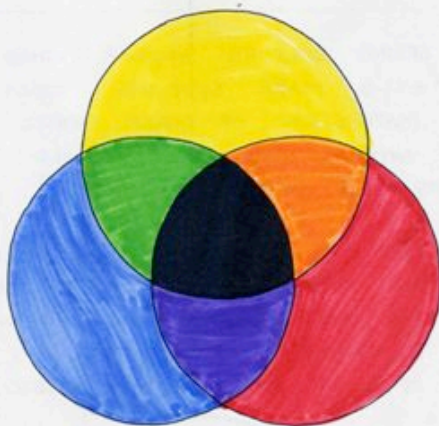


ADDITIVE MIXING BY ADDING LIGHT.

TRY MAKING PAINTINGS USING ONLY SMALL COLOURED DOTS AND SEE WHAT NEW COLOURS YOU CAN MAKE.

LOOK AT THE PAINTINGS OF THE FRENCH PAINTER SEURAT.

2



SUBTRACTIVE MIXING BY ABSORBING LIGHT.

TRY MIXING PAINTS TO GET OTHER COLOURS.

WHICH BLUE WITH WHICH YELLOW MAKES THE BEST GREEN?

USING ONLY RED, BLUE AND YELLOW CAN YOU GET A TRUE BLACK?

PRIMARY COLOURS ARE UNIQUE BECAUSE THEY CANNOT BE MADE BY MIXING. TWO PRIMARY COLOURS MIXED TOGETHER MAKE A SECONDARY COLOUR.

SCIENTISTS, WORKING WITH LIGHT, CALL RED, BLUE AND GREEN PRIMARIES. THE MIXTURES THEY CALL SECONDARIES ARE:-
 $RED + BLUE = MAGENTA$. $BLUE + GREEN = CYAN$. $GREEN + RED = YELLOW$.

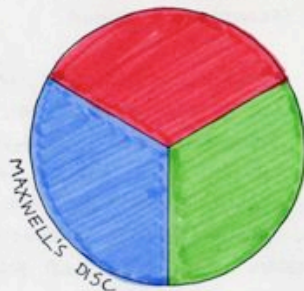
ARTISTS, WORKING WITH PAINT, CALL RED, BLUE AND YELLOW PRIMARIES. THE MIXTURES THEY CALL SECONDARIES ARE:-
 $RED + BLUE = PURPLE$. $BLUE + YELLOW = GREEN$. $YELLOW + RED = ORANGE$.
 THIS IS BECAUSE NAMES OF COLOURS ARE GENERAL. THE REDS AND BLUES OF LIGHT AND PAINT ARE ACTUALLY DIFFERENT COLOURS.

3

COLOUR WHEELS. ONE WAY OF SEEING COLOURS APPEAR AND DISAPPEAR IS TO MAKE COLOUR WHEELS. MAKE SPINNING DISCS USING CIRCLES OF CARD WITH A MATCHSTICK OR SHARP PENCIL PUSHED THROUGH THE CENTRE [OR USE ANYTHING THAT SPINS - AN OLD RECORD PLAYER, HAND DRILL OR SPINNING TOP WITH PAPER DISCS ADDED].

DIVIDE THE FIRST DISC INTO THREE EQUAL SEGMENTS AND COLOUR THEM RED, BLUE AND GREEN. SPIN AS FAST AS POSSIBLE. WHAT HAPPENS TO THE COLOURS?

CAN YOU GET COLOUR FROM BLACK AND WHITE? MAKE A DISC LIKE THE ONE SHOWN BELOW AND SPIN IT. WHAT CAN YOU SEE? SPIN IT AT DIFFERENT SPEEDS.

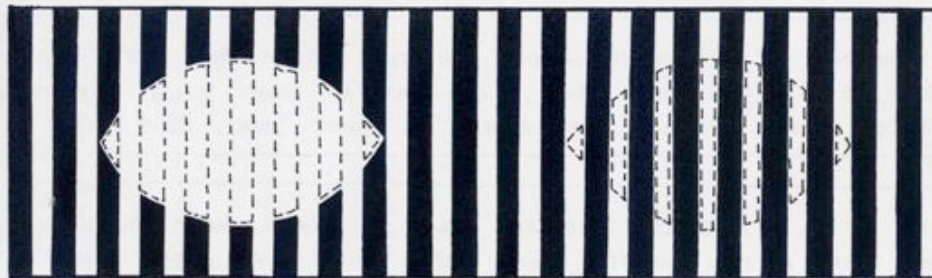


EXPERIMENT WITH DIFFERENT PATTERNS, COLOURS AND SHAPES.

4

ANOTHER CONTRAST EXPERIMENT -

MAKE SOME BLACK STRIPES ON A WHITE PIECE OF PAPER. ON IT DRAW THE SAME SHAPE TWICE. CUT OUT AND REMOVE THE BLACK STRIPES ON ONE SHAPE AND ON THE OTHER REMOVE THE WHITE STRIPES. PLACE OVER A SHEET OF COLOURED PAPER.



DO BOTH SHAPES LOOK THE SAME COLOUR? WHY?

EXPERIMENT WITH DIFFERENT SHAPES AND COLOURS. DOES THE THICKNESS OR DIRECTION OF THE STRIPES MAKE ANY DIFFERENCE?

7