

Principles of Design

These are the standards or rules to be observed by Artists in creating works of Art; they are how to create and organize Artwork. When elements are utilized with the principles in mind, outstanding Artwork is created.



Balance

A distribution of visual weight on either side of the vertical axis. Symmetrical balance uses the same characteristics. Asymmetrical uses different but equally weighted features.



Contrast

The arrangement of opposite elements (light vs. dark, rough vs. smooth, small vs large, etc...) in a composition so as to create visual interest.



Emphasis

Used to make certain parts of an Artwork stand out. It creates the center of interest or focal point. It is the place in which an Artist draws your eye to first.



Movement

How the eye moves through the composition; leading the attention of the viewer from one aspect of the work to another. Can create the illusion of action.



Pattern

The repetition of specific visual elements such as a unit of shape or form. A method used to organize surfaces in a consistent regular manner.



Rhythm

Regular repetition of, or alternation in elements to create cohesiveness and interest.



Unity

Visually pleasing agreement among the elements in a design; It is the feeling that everything in the work of Art works together and looks like it fits.

Elements of Art

These are the basic elements that are used by Artists in creating Art; they are what you use to create an aesthetically pleasing work. When we make Art, we need to understand and apply these seven Elements of Art.



Line

A mark made by a pointed tool such as a brush, pen or stick; a moving point.



Shape

A flat, enclosed area that has two dimensions, length and width. Artists use both geometric and organic shapes.



Color

Is one of the most dominant elements. It is created by light. There are three properties of color; Hue (name,) Value (shades and tints,) and Intensity (brightness.)



Value

Degrees of lightness or darkness. The difference between values is called value contrast.



Form

Objects that are three-dimensional having length, width and height. They can be viewed from many sides. Forms take up space and volume.



Texture

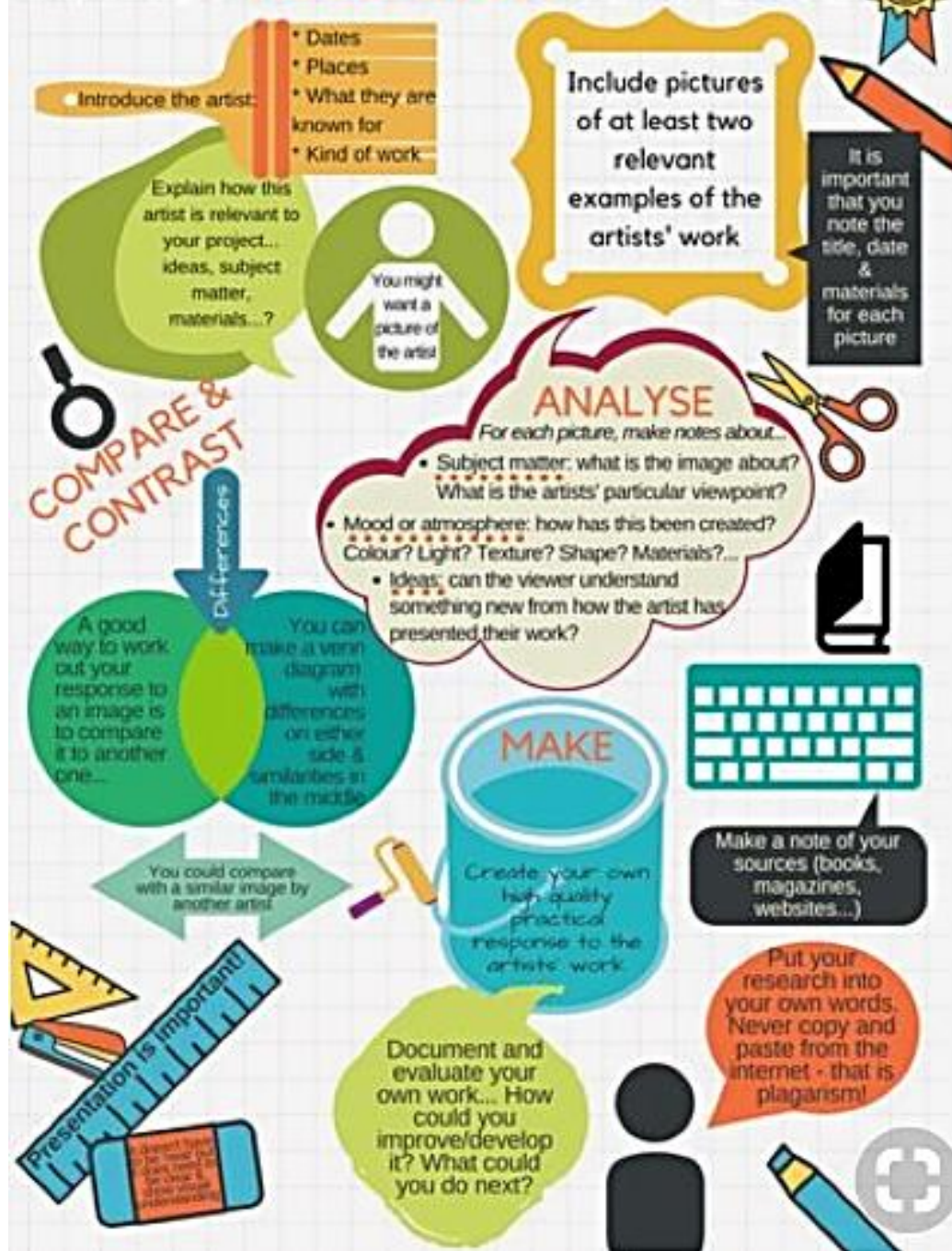
Describes the feel of an actual surface. The surface quality of an object; can be real or implied.



Space

Is used to create the illusion of depth. Space can be two-dimensional, three-dimensional, negative and/or positive.

ARTIST RESEARCH TEMPLATE



NUMERACY IN ART & DESIGN

SYMMETRY

A LINE OF SYMMETRY IS A LINE WHICH DIVIDES A PICTURE INTO TWO PARTS, EACH OF WHICH IS THE MIRROR IMAGE OF THE OTHER.

PICTURES MAY HAVE MORE THAN ONE LINE OF SYMMETRY.



THE NUMBER OF POSITIONS A FIGURE CAN BE ROTATED TO, WITHOUT BRINGING IN ANY CHANGES TO THE WAY IT LOOKS ORIGINALLY, IS CALLED THE ORDER OF ROTATIONAL SYMMETRY.



TESSELLATION

TESSELLATION IS THE PROCESS OF CREATING A TWO-DIMENSIONAL PLANE USING THE REPETITION OF A GEOMETRIC SHAPE WITH NO OVERLAPS AND NO GAPS.

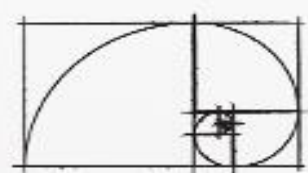


ESCHER WAS FAMOUS FOR CREATING DETAILED DRAWINGS USING DIFFERENT TESSELLATIONS.



RATIO

A RATIO TELLS YOU HOW MUCH YOU HAVE OF ONE PART COMPARED TO ANOTHER PART. IT IS USEFUL IF YOU ARE TRYING TO MIX PAINTS ACCURATELY.



MANY ARTISTS AND ARCHITECTS HAVE PROPORTIONED THEIR WORKS TO APPROXIMATE THE GOLDEN RATIO BELIEVING THE PROPORTION TO BE AESTHETICALLY PLEASING.

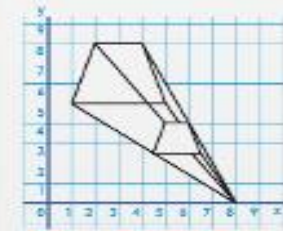
THE GOLDEN RATIO IS GIVEN BY THE GREEK LETTER PHI (ϕ) WHERE:
 $\phi = 1 + \sqrt{5} = 1.6180339887... 2$



PERSPECTIVE, ENLARGEMENT & SCALE FACTOR

PERSPECTIVE IN ART AND DESIGN IS AN APPROXIMATE REPRESENTATION, ON A FLAT SURFACE, OF AN IMAGE AS IT IS SEEN BY THE EYE.

LINES RADIATING FROM A VANISHING POINT ARE USED TO DRAW IN DETAIL ON THE PICTURE.



IN MATHS WE USE A CENTRE OF ENLARGEMENT (8,0) IN THE CASE AND A SCALE FACTOR (2) IN THIS CASE TO CARRY OUT ENLARGEMENTS.



CAN YOU SEE THE SIMILARITIES AND DIFFERENCES IN THE PROCESSES INVOLVED?

CONSTRUCTIONS

CONSTRUCTION METHODS IN ART ARE ORGANISED (CIRCLES, SYSTEMS, LOGICAL PROCEDURES, PLANNING AND DESIGN IN THE CREATION OF STRUCTURE).

THERE IS ALSO A BRANCH OF ART CALLED CONSTRUCTIVISM THAT ORIGINATED IN RUSSIA IN 1919 AND SAW ART AS A PRACTICE FOR SOCIAL PURPOSES.



NO MEASUREMENT OF LENGTHS OR ANGLES IS ALLOWED. TYPICAL CONSTRUCTIONS INCLUDE DRAWING THE PERPENDICULAR BISECTOR OF A LINE, CREATING A 60 ANGLE AND BISECTING AN ANGLE.

COULD YOU USE GEOMETRICAL CONSTRUCTIONS IN ART LESSONS TO SUPPORT YOUR DESIGNS? WHAT WOULD BE THE ADVANTAGES AND DISADVANTAGES OF DOING THIS?



CUBISM

CUBISM IS AN EARLY 20TH CENTURY AVANT-GARDE ART MOVEMENT. IN CUBISM ARTWORK, OBJECTS ARE ANALYSED, BROKEN UP AND REASSEMBLED IN AN ABSTRACT FORM - INSTEAD OF DEPICTING OBJECTS FROM ONE VIEWPOINT, ARTIST DEPICTS THE SUBJECT FROM A MULTITUDE OF VIEWPOINTS TO REPRESENT THE SUBJECT IN A GREATER CONTEXT.



IN MATHS WE ALSO DRAW OBJECTS FROM DIFFERENT VIEWPOINTS USING PLANS, ELEVATIONS OR ISOMETRIC DRAWING. THERE ARE OFTEN COMPARED ON THE SAME PAGE IN ORDER TO GIVE A FULL UNDERSTANDING OF WHAT THE 3D SHAPE LOOKS LIKE.



HOW DO MATHEMATICAL TECHNIQUES COMPARE WITH THE ARTISTIC ONES USED IN CUBISM?