

DESIGN

PRINCIPLES OF DESIGN FOR JEWELRY



Have you ever wondered why sometimes you look at a piece of jewelry and instantly don't like it or you love it?

Besides having your own personal tastes, there is more going on than you think!

Warren Feld, the Director at Jewelry Design Camp, states, *"When a viewer interacts with a piece of jewelry worn by someone else, the brain and eye perform two cognitive actions right off the bat. First, the brain/eye try to visually inspect the piece from end to end. The brain/eye wants to make a complete circle around the piece. Anything that inhibits, impedes, or distracts the brain/eye from making this complete circle ends up evoking the fear and anxiety response. If this is the case, the viewer labels the jewelry boring or ugly."*

Where does your eye go while looking at this bear pendant with a glass cabochon in its center? How does it make you feel? Do you feel confused?

Therefore, working with design principles and elements is very important while designing jewelry. In fact, this is true with all art, including graphics, industrial design, fine art, and architecture.

WHAT ARE PRINCIPLES AND ELEMENTS?

Principles are rules organizing individual elements into an aesthetic design concept.

Principles of Design Include

- Balance—Balance refers to the distribution of the visual weights of materials, colors, texture, and space in jewelry designs.
- Rhythm—A progression of how the eye moves throughout the piece.
- Movement—How the elements relate and lead the viewer's eye or attention or sometimes in jewelry how the piece moves or drapes.
- Contrast—Using elements that conflict with one another in different directions (horizontal and vertical lines) or extremely light and dark values.
- Harmony—The pleasurable arrangement of elements.
- Variety—The assortment of elements that give the design interest.
- Unity—The level of quality with the combined elements.

Elements of Design Include

- Color—Color creates emotions and moods.
- Texture—Texture is the texture you can feel and tonal texture, as seen in a finished stone.
- Line—There are three types of lines.
- Linear mark—Drawn or engraved mark.
- Boundary line—Implied by the contrast between the two shapes and relies on the shapes for its subsistence.
- Implied lines—Implied by the direction of smaller lines in the piece.
- Scale—The scale of shapes creates activity and relationships of power between them. Equal size shapes create confusion. The eye jumps from one to the other, not knowing where to rest. The eye recognizes the larger dominant shape when shapes are slightly different sizes. Large shapes overpower small shapes that create tension. The larger sized shape appears to threaten the smaller sized shape.
- Space—The area between and around objects.
- Shape—Areas defined by edges within the piece. A single shape cannot exist without generating another (negative) shape.
- Tone—Gradation can add interest and movement to a shape. A gradation from dark to light will cause the eye to move along a shape.
- Direction—Direction offers three options: horizontal, vertical, or oblique.

Note: it is not required to use all design principles and elements used in one creation.

HOW DO PRINCIPLES AND ELEMENTS WORK TOGETHER?



Let us look at how these principles and elements work together by contemplating this photograph and then later using the photograph as inspiration for jewelry design.

While observing this photograph, make a mental note of where your eyes travel.

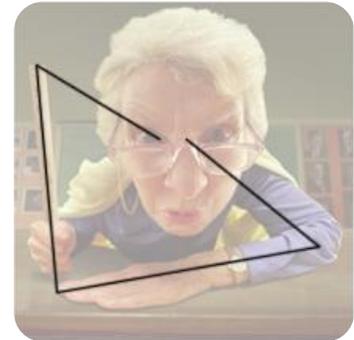
What is the first thing you see? The enormous head and yellow hair?

What is the next thing? The arm and purple sleeve or the hand?

What is next?

Your eye notices the woman's enormous head and then travels down the arm to the hand. It rests there for a moment because the hand is nearly as large as the woman's head. Then the eye travels up to the ruler (to the top of the photo) and back to the head. Subconsciously, your eye quickly traveled around the entire picture, settling back on the face, completing the subconscious circle. Here, the brain studies more details in the photo, while again circling through the photo again. This all happens in just a few seconds!

If the brain had not completed the circle, the mind would have judged the photo as confusing or boring!



The photo uses these elements

- Shape—Includes the head, arm, and ruler.
- Scale—Includes the head, glasses, and hand.
- Line—Includes the arm, hand with fingers, the ruler, and the distant lines in the background.
- Color—Complimentary colors from the color wheel, purple, and yellow.

I bet you didn't know how much this photo was planned out, did you? Notice how the eyes point inward to the center of her face! The lines in the background also point down to her as well.

UNDERSTANDING THE POWER OF COLORS AND THE COLOR WHEEL



There are different ways of combining the colors on the color wheel in a design. Each way can affect an emotion in the viewer.

	<p>Primary colors are the root colors that you can combine in some prescribed amounts to arrive at any other color the primary colors are red, yellow, and blue.</p>
	<p>Secondary colors on the color wheel are orange, green, and purple. They are created by mixing the primary colors on each side of the secondary colors. They can also be Triad colors.</p>
	<p>Complementary colors are contrasting. They are directly opposite each other on the color wheel. Using complementary colors make the colors stand out more intensely.</p>
	<p>Analogous colors are any colors directly beside a given color. If you start with purple and you want its two analogous colors, you select red and blue. A color scheme that uses analogous colors provides harmony and blending of the colors, like what might be found in nature.</p>

	<p>Triad colors are any three colors that are equidistant on the color wheel. When triad colors are used in a color scheme, they present tension to the viewer, because all three colors contrast.</p>
	<p>Tertiary Colors: Yellow-orange, red-orange, red-purple, blue-purple, blue-green and yellow-green. These are the colors formed by mixing a primary and a secondary color. That's why the hue is a two-word name, such as blue-green, red-violet, and yellow-orange.</p>
	<p>Split complementary colors are made up of three colors by selecting a color, finding its complementary color on the other side of the color wheel, then using colors on each side of that complementary color.</p> <p><i>For more information about using color consult to guides on color theory.</i></p>

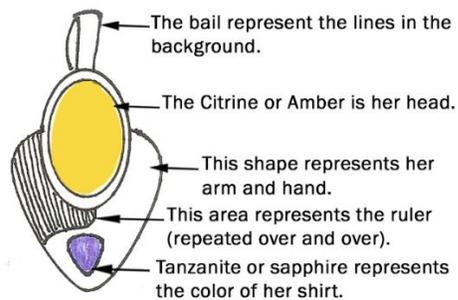
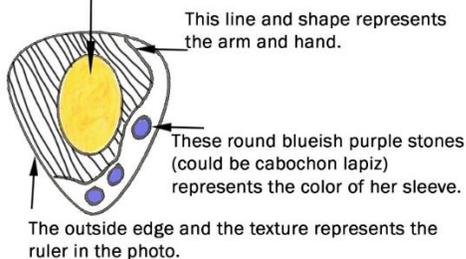


JEWELRY DESIGN INSPIRATION FROM A PHOTO

So, what does this photo have to do with jewelry? Let's take this a step further now!

Here is where the fun begins! As I mentioned earlier these design principles and their elements are used in all forms of art. I designed a couple of jewelry pendants using this photo's design principles and elements. Check them out.

The stone could be a Citrine or Amber and represents her head.



MORE ABOUT DESIGN ELEMENTS

Earlier, we discovered we can use a photo as inspiration for designing jewelry. I also gave examples of using line, shape, color, scale. I added in repetition to the elements. You all should have a good idea now of using these elements in a design.

Now let's look at this photo. It has these design elements.

- Color—It uses the primary colors and secondary colors from the color wheel.
- Texture—The texture on the bag accents the lines made by the starfish.
- Tone—The texture in the bag gives a gradation tone.
- Shape—The starfish, the round sunglasses, round handle, the rectangle towel, and the rectangles on the shoes and bag.
- Line—Lines are all over this photo! There are lines in the towel, shoes, handle, texture, and glasses. Notice the lines all extend outward from the photo's center.
- Direction—All the lines point in directions.
- Space—The hollow area in the handle.



This photo uses all the design principles. Plus, it has one other design concept, called the perfect rectangle. I will discuss this concept later. These design principles and elements all lead the eye around the photo. The starfish is the center of attraction, where the eye looks first.

Balance – The distribution of elements emphasizing a focal point. Notice how the heavier objects are spaced and balanced in the photograph.

Rhythm – A progression of how the eye moves throughout the piece. Notice how the towel, eyeglasses, and shoes all seem to point outward just like the texture on the bag.

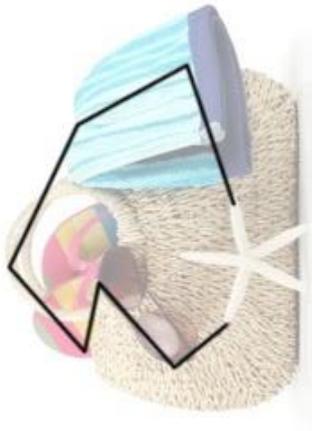
Movement –The elements relate and lead the viewer's eye or attention; they all lead the eye to a point of interest, the starfish.

Contrast – The elements relate to lead the viewer's attention.

Harmony – The pleasurable arrangement of elements.

Variety – The assortment of elements that give the design interest.

Unity – The level of quality with the combined elements.



Using this photo as inspiration, I created a jewelry design using the photo's design elements. I turned the design sideways making a pendant. The line I drew on the photo shows the direction the human eye travels around the photo.

I used all design principles and these elements.

- Color
- Texture
- Tone
- Line
- Space
- Shape



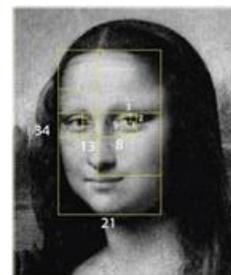
The bail is the handle on the purse.

The stone is the blue color in the towel and the star fish.

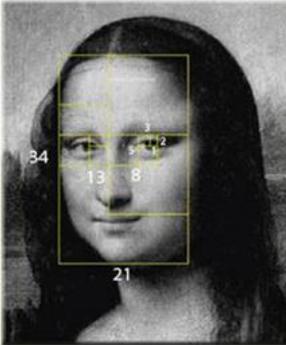
The vine mimics the direction made by all the items in the photo.

The background texture mimics bag's texture.

In the next section, I discuss how much shape influences us! It is a less known fact that is used in our lives every day. See if you can figure out what these three items have in common!

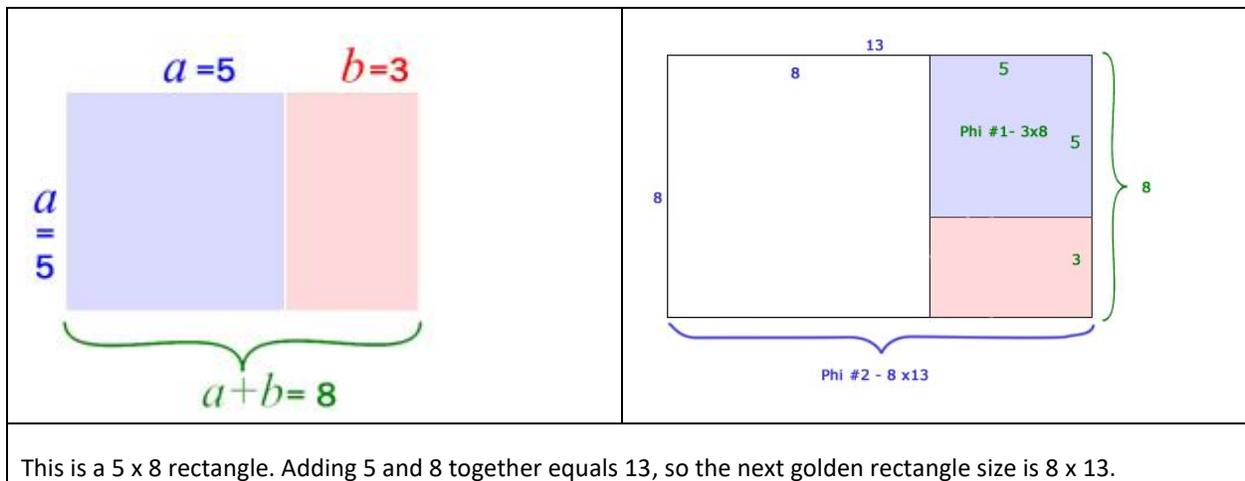


THE GOLDEN RECTANGLE



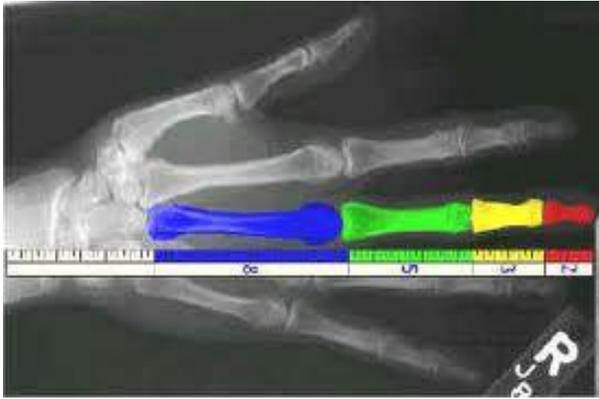
The Golden Rectangle, a shape frequently found in art and architecture for over 2,400 years, has a gratifying shape that seems appealing to the eye. Its ratio of height to width is 1.618. The ancient Greeks used it in their architecture and Leonardo da Vinci also incorporated the golden ratio in his paintings.

Visually it the golden rectangle looks like this.



Examples sizes are 2 X 1, 3 X 2, 5 X 3, 8 X 5, 13 x 8, 21 X 13 and on and on. The sum of the two numbers (a+b) creates the square portion of the next larger rectangle, and the (a) alone creates the next (b) portion.

It even exists in nature!



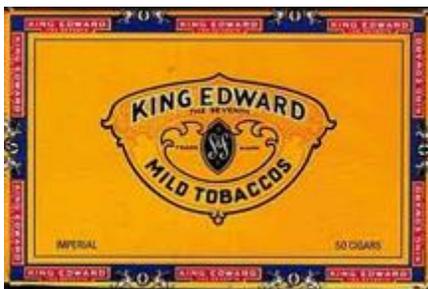
It is also worthwhile to mention that we have 8 fingers in total, 5 digits on each hand, 3 bones in each finger, 2 bones in 1 thumb, and 1 thumb on each hand.

The ratio between the forearm and the hand is, you guessed it, the Golden Ratio!

Coincidence? You decide.

 A photograph of a human forearm and hand, palm facing up. A horizontal bar is positioned above the arm, divided into two segments by a vertical line. The left segment is colored cyan and corresponds to the length of the forearm. The right segment is white and corresponds to the length of the hand. Vertical lines connect the ends of the bar to the corresponding points on the arm.

It's been said that we humans are drawn to golden rectangles. We find them pleasing. Here are some examples of the golden rectangle in our lives.





The shape doesn't have to be a complete rectangle, it only should suggest the Phi Ratio. Here are some jewelry examples.



Janet Alexander



Janet Alexander



Janet Alexander



Beth Rosengard



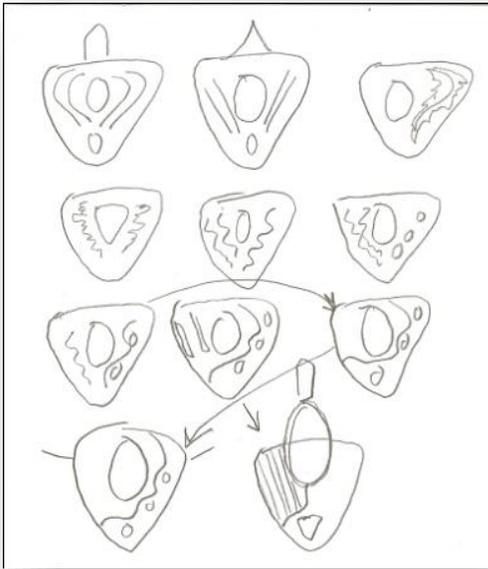
Suzanne Williams



John Biagiotti

So the point here is when you create a piece of jewelry, designing it with the Phi ratio gives you a subliminal advantage of pleasing customers. Just keep in mind it doesn't have to be a rectangle, it just needs to be the same ratio.

The Design Process



Now that we have studied design principles, elements, and concepts, let's look at ways to come up with a design.

Sometimes I start design by drawing a design around a stone. The stone "speaks to me." It may have lines and textures in it I like to replicate in the design.

I start with the product in mind. For example, if I have a specific piece in mind, like a pendant, I may start designing by choosing a shape.

Then I create 15 second thumb-nail sketches one after another until I see something I like in one. Then I draw 15 second sketches of variables of that sketch.

I sometimes draw on tracing paper so I can retrace the portion I liked and then incorporate it into my next sketch. If I need the piece to be symmetrical, I can draw one side, fold the paper in half, and then draw the other side by tracing over the first side. The last two rows of sketches in this example inspired the finished sketches in this tutorial.

Once I'm happy with my basic design, I think about its construction. I ask myself these questions.

- What portion is higher than other areas, cut out, or set back?
- If it is a pendant, how does the bail attach?
- If it is a ring, how high will it sit on my finger?
- Is the piece wearable; will it catch on things?
- If its earrings, will the design be too heavy or catch in hair?
- How are the stones mounted, bezel, prongs, or a mixture of both?
- What will the back look like?
- Does it need to be flexible?
- If so, what type of hinges will I use?
- What type of clasp do I need if it's a pendant?
- What will the pendant hang on, chain, beads, leather, and hammered wire?

Sometimes I construct a preliminary piece out of aluminum foil, paper, or cardboard to see how it looks in 3D and figure out any construction problems that may occur.

After I have most of my questions answered I work on the item in metal. I hope this series in design has helped you to understand the unspoken rules in design.

ABOUT JANET ALEXANDER



Bio: Janet is an accomplished metal artist and a Finalist Winner of the Saul Bell Jewelry Design Award. Additionally, she won Award of Merritt at the 2004 Craft Houston show and her work shown in museums across Texas.

Her tutorials and jewelry are published in *Lapidary Journal Jewelry Artist Magazine* (March 2018 issue), *Metal Clay in Color*, *American Craft Magazine*, *Metal clay Artist Magazine*, and in *New Directions: Powder Metallurgy in a Sheet Metal World*.

Janet has a BFA in Metals from the University of North Texas and has studied metal working with several Master Jewelers. She has GIA certification in diamond grading and stone setting.