

# Geometric relationships with art

Building Bridges Creating Steam November 7, 2015  
Workshop delivered by Vaughn Gillson

## Main objectives - participants will:

1. Examine drawings through a framework grid
2. Identify key features of a figure to act as non-typical units of measure
3. Examine linkages between geometrical frameworks and imagery.

## Learning activities are concerned with:

1. Constructing frameworks to assist in drawing;
2. Translating complex imagery to basic building blocks;
3. Improving judgment concerning proportion;
4. Work within the contextual situation.

## Activity 1: Constructing a framework

- Use a variety of images to explore the use of frameworks in drawing

### During this activity you will:

1. Construct frameworks for various drawing;
2. Establish connection points between the frameworks and drawings
3. Develop the drawing using building block rectangular shapes to represent parts.

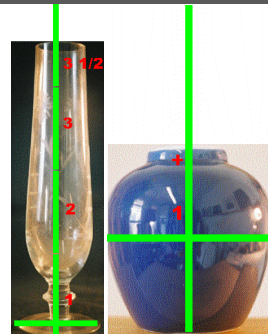
### RELATED CONCEPTS

Comparison, Context, Extremity,  
Direction, Hierarchy,  
Organization, Reference point

## 1. Constructing a framework

## Notes

- How does the framework show comparison of the height and width?



Frameworks let you set reference points to help construct a drawing. Because of their simplicity you can focus on important characteristics that will lay groundwork for their development. Construct the framework in an upright position using the widest and tallest points of the subject to define the dimensions. From out of this general space the shape will be carved.

- How does the figure sit inside the framework. (tilted?)



- Are there few or many places where the figure touches the framework.

- How closely does the shape of the figure compare to the framework.



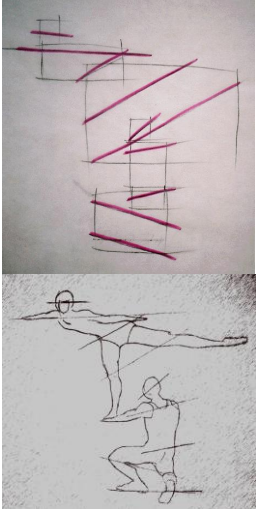
## 2. Establish connection points between framework and drawing



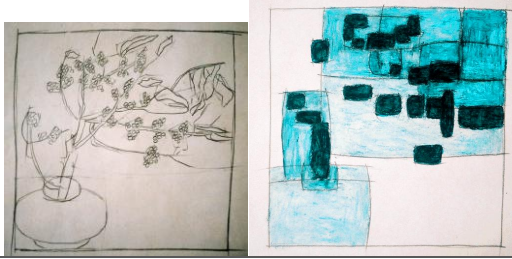
- Where does the image touch the framework?

By examining the framework dimensions for spots where the subject touches it you gain some foundational understanding of the subject. A comparison of where these points are situated on the framework shows clearly how the contour differs in relation to its opposite side. Any tilt or lean is made more obvious when seen against a straight edge. The framework may be thought of as a benchmark reference for simplicity and perpendicular orientation from which you measure deviation

Draw a simple, non-rectangular shape (triangular or trapezoidal) around the figure and compare it to the rectangle. Connect the opposing points where the figure touches the rectangle and look for the rhythm in their angles and positions. Identifying key parts begins the process of carving the figure out of the rectangular

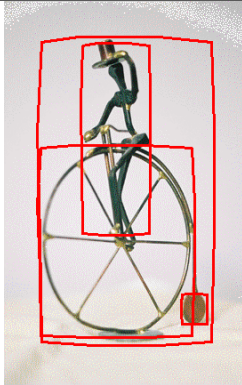
		<p>framework. Instead of jumping from a highly simplified shape to a complex figure, the key parts can first be represented using rectangular shapes, similar to the framework. It may be helpful to draw them in an upright position to easily check proportions and identify large relationship among the parts with the whole figure. Later the blocks may be tilted to show how the part it represents leans (using the preliminary upright as a framework for comparison). Continue to block in smaller parts in this way until you feel confident to try drawing the shapes freehand.</p>
<ul style="list-style-type: none"> <li>- What ratios along the framework perimeter are created where the figure touches it?</li> </ul>		
<ul style="list-style-type: none"> <li>- What does this tell you about the figure?</li> </ul>		
<ul style="list-style-type: none"> <li>- How do the ratios of opposite sides of the framework compare?</li> </ul>		
<ul style="list-style-type: none"> <li>- How does the framework let you understand the pose (gesture)?</li> </ul>		
<p><b>3. Develop the drawing using building block rectangular shapes</b></p>		

- What are some key parts to the image?



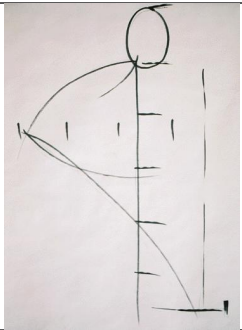
- How do their sizes compare?

- Which one would make a suitable unit to use to measure the rest of the figure and establish proportions?

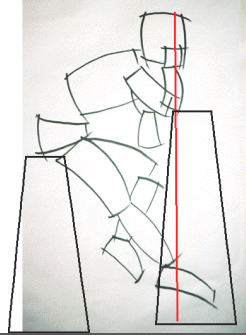


- How do the parts line up within the framework (lean, turn) and align with each other?

- Can you draw a simple gesture of the whole figure inside the framework and place the parts on it?



- What would overlapping rectangular parts tell us about the figure?



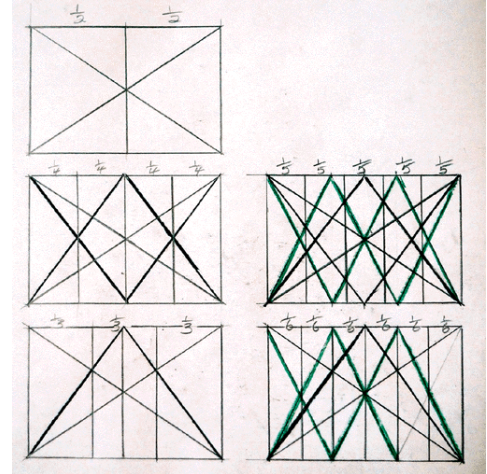
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### Activity 2: Construct a basic armature

➤ Explore frameworks for linking imagery to the page area.

During this activity you will:

1. Draw basic rectangular armature frameworks
2. Consider spatial organization of the drawing area
3. Examine ways the armature can link subject with the drawing area.



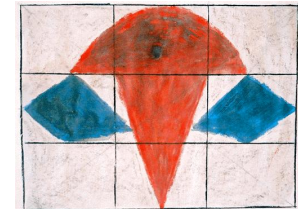
#### 1. Construct basic armatures

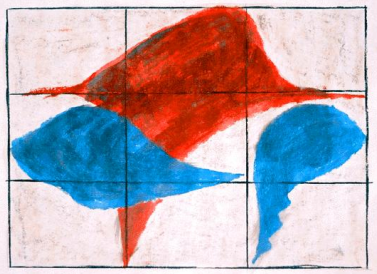
- How can you divide the picture area geometrically?  
- How do the armature intersections act as an organizing grid?  
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#### RELATED CONCEPTS

Notes

**Adaptation, Cohesion, Configuration, Exchange, Interpretation, Limitation, Organization, Representation, Synthesis, Transformation, Unity**  
By using the geometry inherent within the picture's rectangle you can strengthen the links between subject and its surrounding space, even controlling balance and focus.  
The rectangle may be partitioned using diagonal lines that run from corner to corner. The first pair connects opposing corners and their intersection marks the middle of the rectangle. The two halves may in



-	turn be partitioned the same way, dividing the rectangle into quarters.	
-	The points where the diagonals of the whole rectangle intersect those	
-	of the halves occurs one third of the way across, allowing you to divide	
	<p>the space into three or five equal areas. Further subdivisions of these generates six or ten equal areas.</p> <p>The partitions are created when lines are drawn through the intersections perpendicular to the perimeter and may be used to guide or organize the picture parts. Important areas of the subject may be placed near the intersections as these are deep-rooted focal points associated with each particular armature.</p> <p>Armature can range from the basic one described above to more complex frameworks based on the golden mean, complementary rectangles within the main framework and those based on the square of the shorter side, and even musical ratios. These would create irregular divisions throughout the picture rectangle, but their purpose of forming a bond between the rectangle, positive subject and negative surrounding space and shapes applies to all of them.</p>	
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