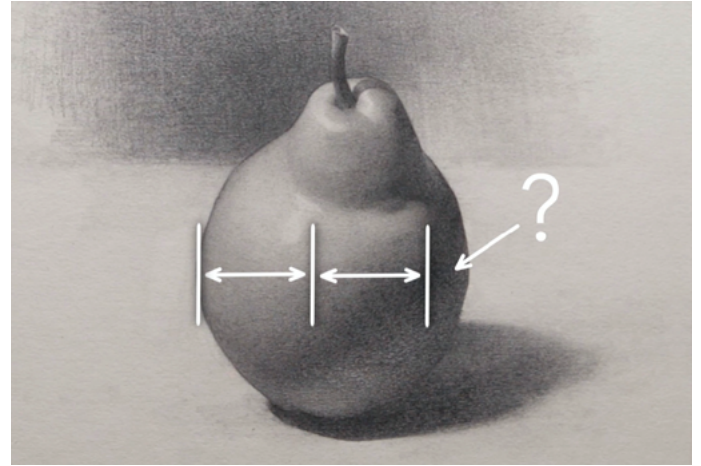
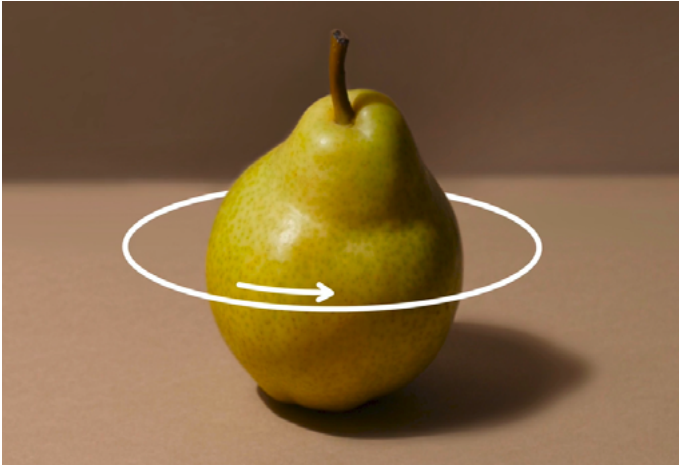


# STUDYING PROPORTIONS

## Part 1



### Proportion

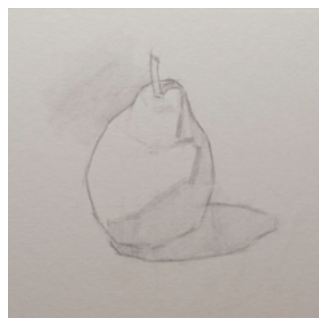
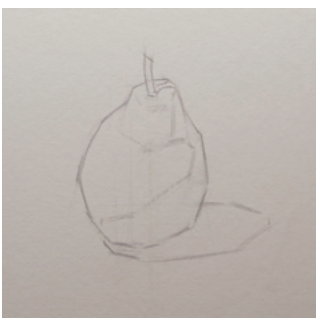
By using practical tools to study proportion, we aim to identify and represent the unique qualities of the subject. Our goal is to practice these techniques until they become a part of our thinking- inseparable from our drawing process.

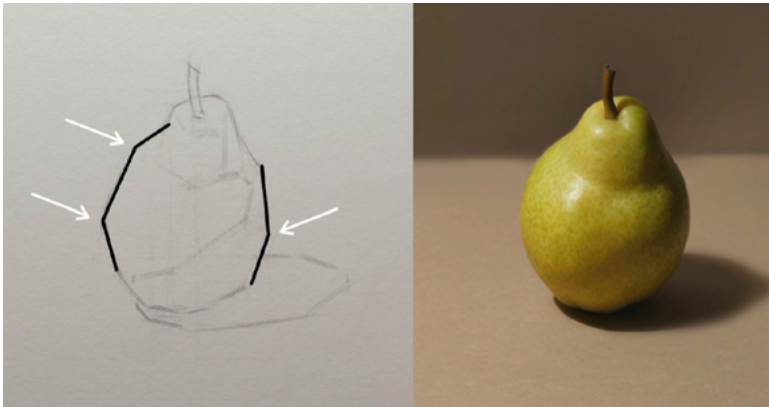
Using comparative measurements will enable us to look at the smaller interrelationships within the subject and how they relate to the whole.

Proportion is *"...the quantitative relation of the parts to each other and to the whole.."*

-Harold Speed

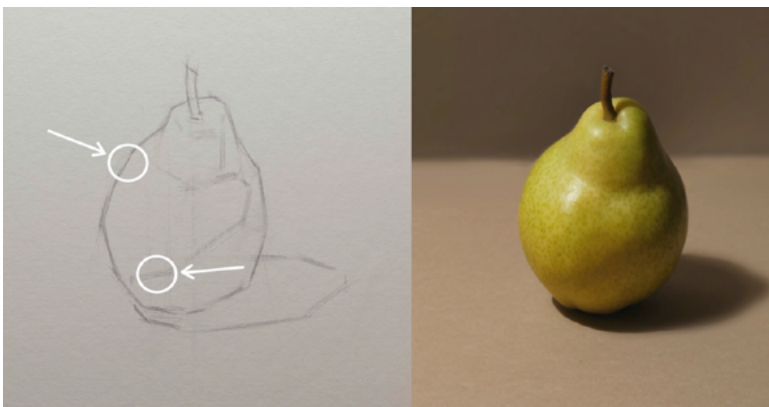
- **Conceptual Tools**  
Angle Breaks, Line Quality, Triangulation
- **Using Values**  
Using Values, Mass drawing, Unified Values
- **Comparative Measurement**  
Initial Distance, Measurement to the whole, Eyeball & Approximate
- **Shadow Shape**  
Shadow Shape, Light Shape, Form & Cast Shadow





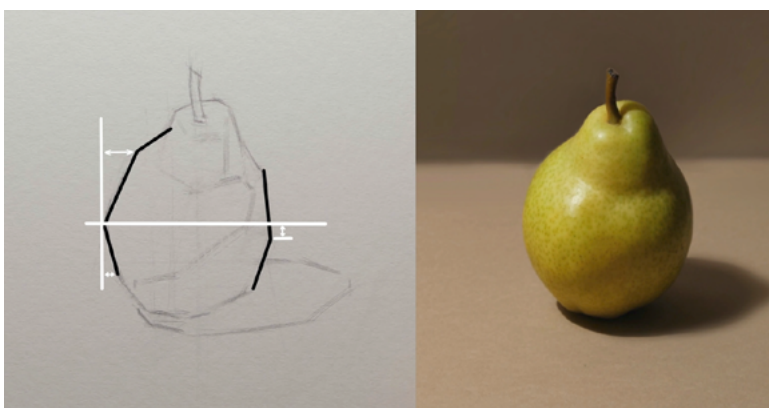
## Angle Breaks

- Line segments and angle breaks are the building blocks used to accountably study the gesture and structure of our subject.
- Angle breaks will be used to simplify the curves and variation that are within the subject.
- Remember that nature rarely presents us with perfect geometrical and symmetrical shapes. Simplify your subject and pay close attention to the asymmetrical design you find there.



## Line Quality

- A variety of line quality will be used throughout our study.
- We use different kinds of line to describe features such as the contour, internal forms, and the boundary between shadow and light.
- Take the shadow line for example, the line that you use to describe a segment of form shadow should be used also for all of the other form shadow edges.

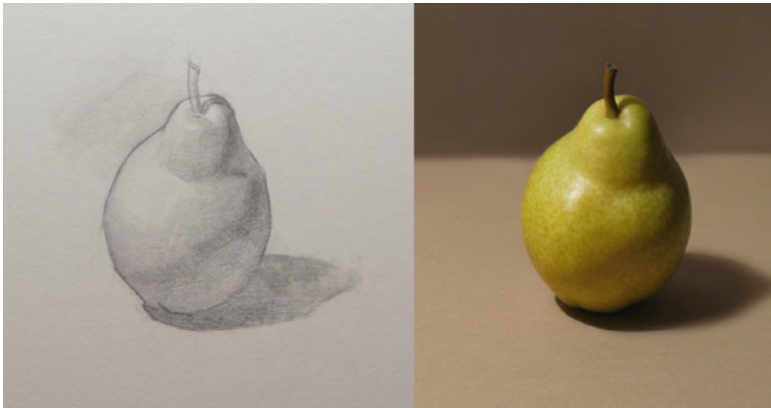


## Triangulation

- Triangulation is the process of comparing the angle breaks in the drawing to one another. The goal in doing this is to create accurate positional relationships between these points on a flat surface.
- Triangulation is used to look up, down and across a subject. These comparisons can be made using the edge of a pencil or any straight edge you have at hand.

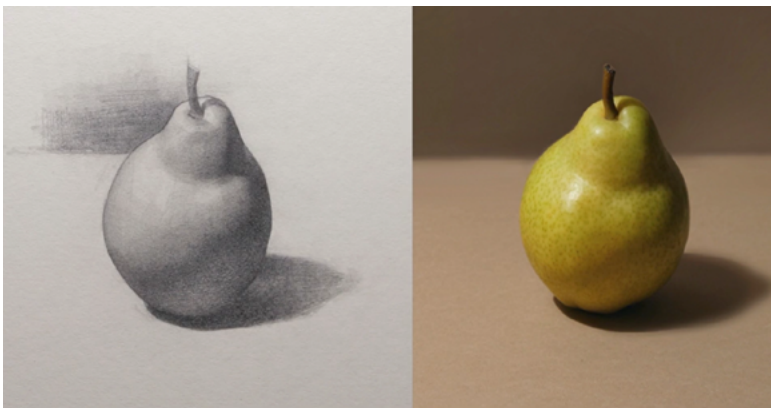
# STUDYING PROPORTIONS

# USING VALUES



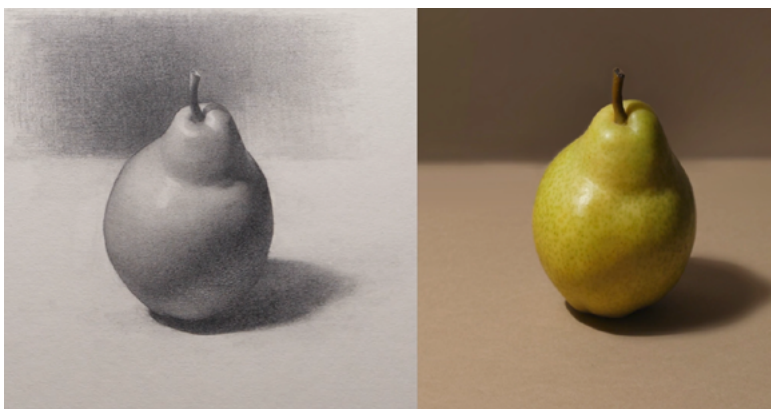
## Using Values

- Line quality becomes edge quality. By adding value to our subject, we are better able to evaluate the accuracy of our drawing by comparing the impression created by the value shapes.
- Our concentration or dispersion of graphite and the grade of graphite used will dictate the lightness and darkness of the values and their relationships to each other.



## Mass Drawing

- At a certain point in the drawing process we make a transition from line drawing into mass drawing.
- Mass drawing is essentially when we take our lines and turn them into a meeting between two values.
- We accomplish this by filling in the shadow shapes with unified values and blocking in the major half tone planes.

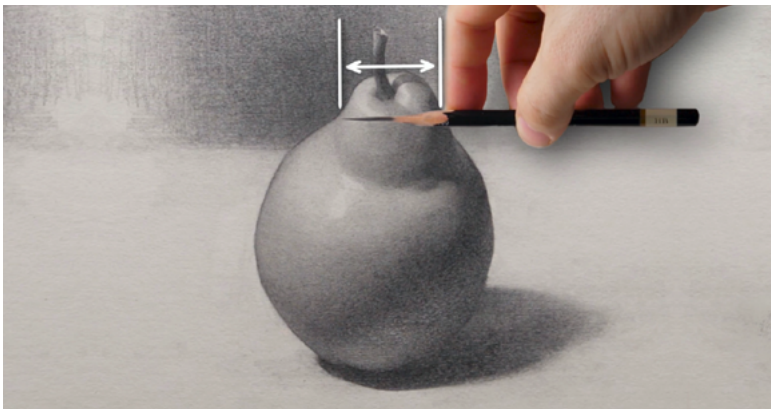


## Unified Values

- When building mass, we want to start with unified values. Unity is used here to describe a relatively flat value. It is important to note that it does not refer to a completely flat value.
- By limiting the variety of values, we can maintain a sense of clarity in our drawing, and build toward more complexity as we become confident in our design.

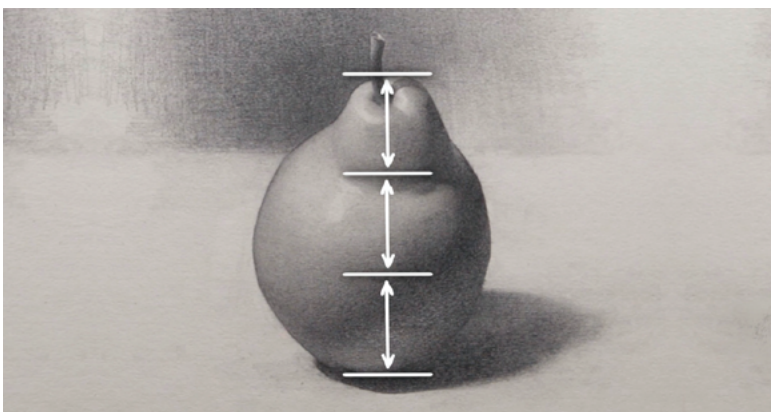
# STUDYING PROPORTIONS

## COMPARATIVE MEASUREMENT



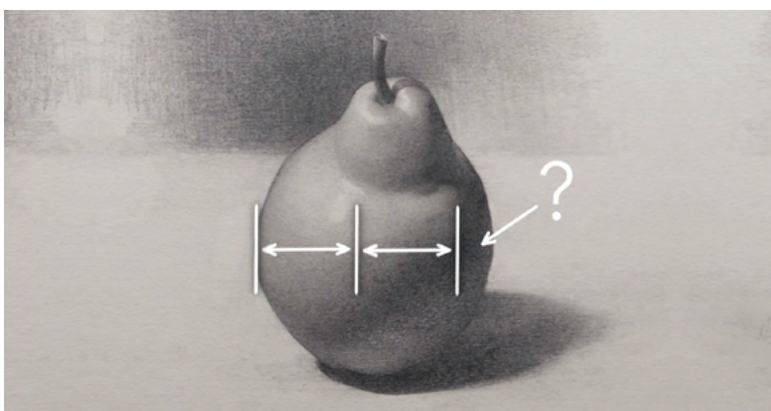
### Initial Distance

- In finding an initial distance, we now have a unit of measurement to check proportions.
- When choosing an initial distance, ask yourself: How many of those units will go into the height overall?
- Our goal is to establish a relationship of the initial measurement to the distance we are comparing it to.



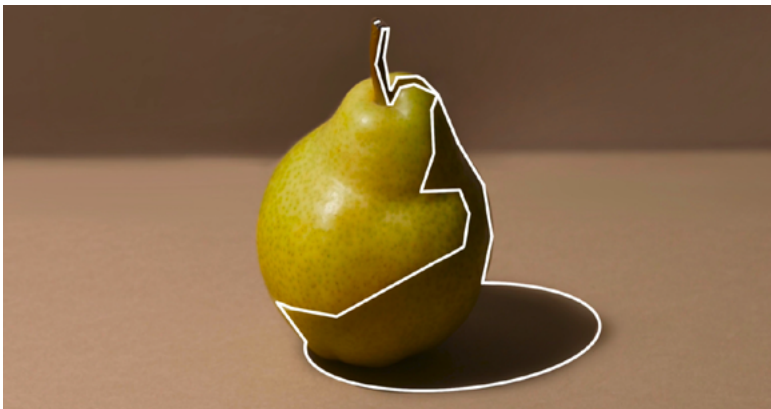
### Measurement to the Whole

- Once the initial distance is found, we take it and establish its relationship to the whole of our subject.
- This is a basic mechanic of measurement that can be used broadly.
- If you can make a measurement of it, it can be used as a unit to compare other distances.



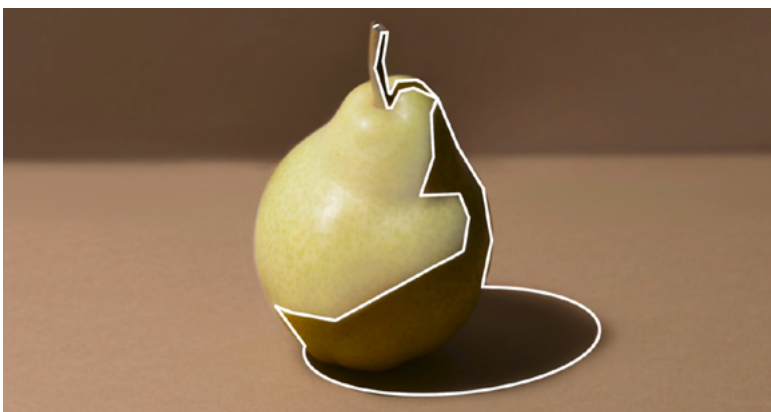
### Eyeball & Approximate

- We must understand that not everything will divide equally and completely with comparisons.
- If measurements don't compare exactly, we must be willing to eyeball and approximate the rest of the distance in our drawing.



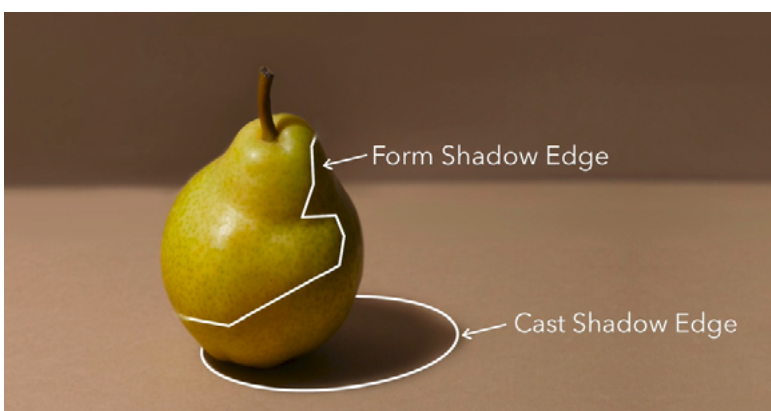
## Shadow Shape

- The shadow shape is any part of the subject hidden from the primary light source.
- We want to give a particular focus on the edges shadow shapes. The character of these transitional spaces helps to describe the form that the shadow rests upon.
- Values in the shadow shape will be unified, with little variation inside. Variations in value can be added to show reflected light and ambient occlusion.



## Light Shape

- The light shape is the yin to the yang of shadow shape. It contains the half-tones, center light, and specular highlights (where applicable).
- We use it as another tool to judge proportion.
- Compare how much of our subject is contained in light shape versus the shadow shape.

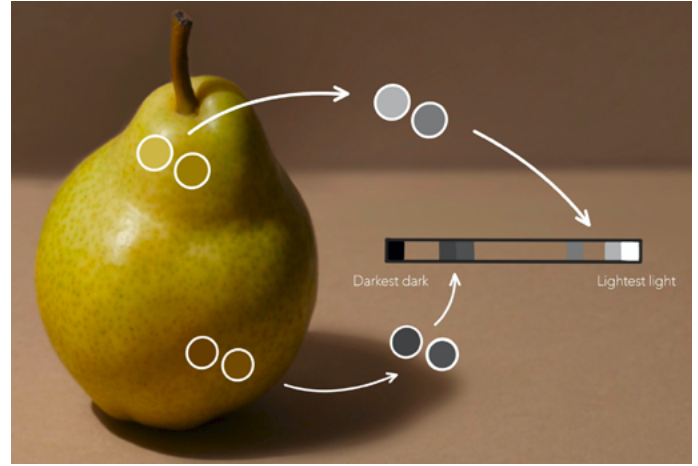
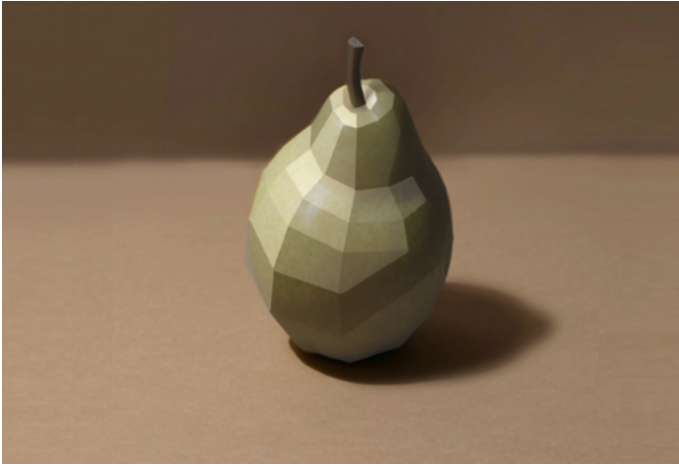


## Form & Cast Shadow

- The direction of light creates two types of shadow edges:
  - **Form shadow edge**--where the form of the pear eclipses the light source.
  - **Cast shadow edge**-- the shadow cast by subject on the plane that the form is resting on.
- The further a cast shadow edge is from the form that is casting it, the softer the edges of it become.

# STUDYING PROPORTIONS

## Part 2



### Proportion and Value

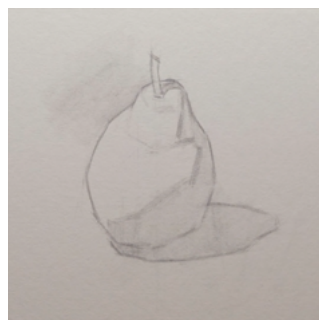
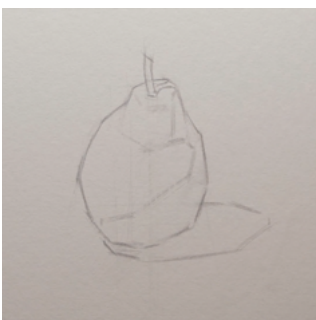
Moving forward, we hope to refine our proportions in terms of both size and value. As our drawing gains in complexity, we can stress our use of proportion and comparison to gain more nuance in our outcome.

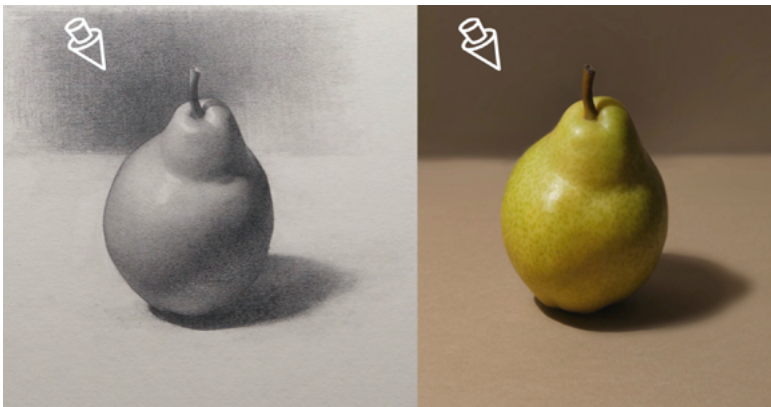
By breaking down our value relationships into planes, we will be able to see past the complexity in nature. To better understand our subject in its most simplified form.

- **Value and Form**  
Light Source  
Planes  
Simplified Value Shapes
- **Unity and Variety in Value**  
Value rganization  
Rendering  
Outcome

*"...a picture is out of value ...when some of the values are darker or lighter than our sense of harmony feels they should be..."*

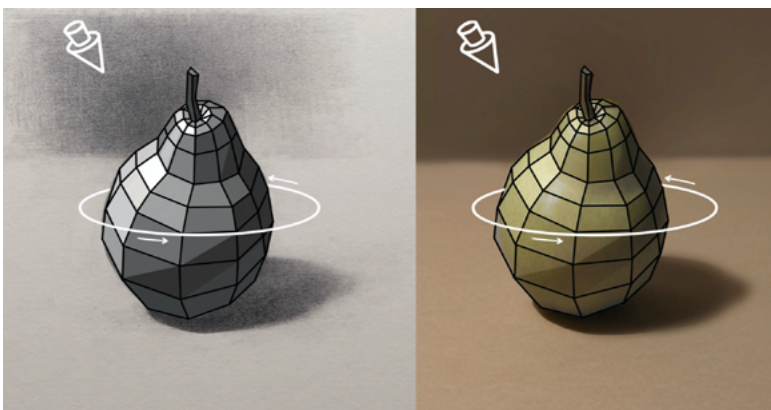
-Harold Speed





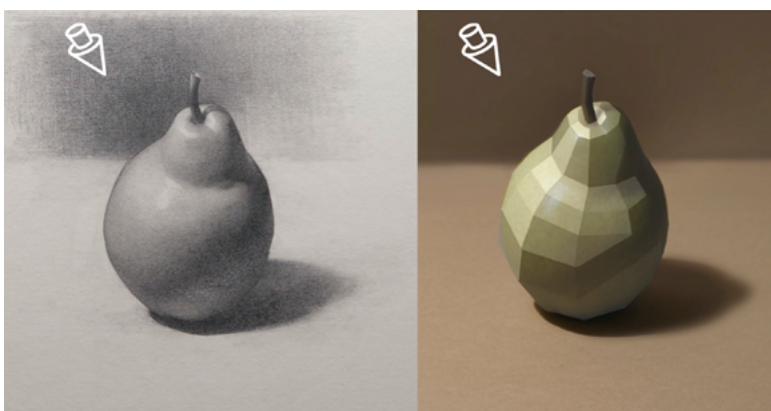
## Light Source

- Understanding the direction of the light source is fundamental to how we see the planes of the subject.
- Planes are a simplification of the form and make up the basis for accurate value relationships.



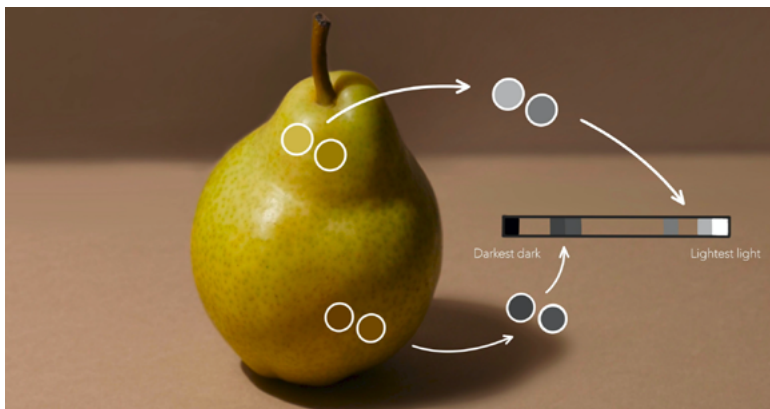
## Planes

- Adding value to the wire frame will make a clear relationship between the direction a plane is facing and value we should apply to it.
- By adding value, we can begin to mimic the light effect and thus create the impression of form.



## Simplified Value Shapes

- By removing the linear aspect of the diagram, we are left with a crystallised vision of our values.
- The simplified plane shapes, if well chosen, will correlate visually with complex arrangement found in nature.



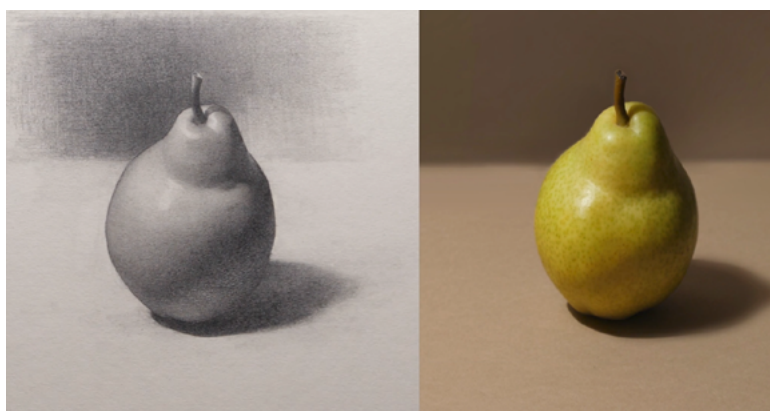
## Value Organization

- Throughout the drawing continue to ask, "does the big picture work, value wise?"
- Assess the values as the form turns away from the light source. Make sure the individual value relationships maintain an appropriate proportion to the whole.



## Rendering

- Keep the values inside the light shape uniformly soft, false accents will break up the fall of light. Refrain from making too many of these stoppages between contours.
- When applying values, lightly gradate values into each other by adding value with a pencil. Remember that paper stumps are easy to overuse. Identify the distinct variation from one side to another. The goal is to manifest a complete impression of volume.



## Outcome

- The outcome will be dependent on the choices of proportion and value that made in the earliest stages of the drawing. Remember that a drawing is not often much better than the quality of the block in.
- This is why the basics matter. Remain true to the impression. The intent is to represent it in a wholistic sense. By observing well the proportions and value relationships we can unlock the mystery of nature.