# Keying the Drawing
## "Tuning" the range of values.

### 1. "Keying" the Drawing

> **What Does The "Key" Mean?**
>
> • High Key: a light drawing
>
> • Low Key: a dark drawing
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> • Mid Key: a mid-tone drawing
>
> • Full Key: a contrasty drawing with a broad range of values.

The "key" of a drawing is the total value range that the drawing employs.

"Keying" the drawing means choosing what value range the drawing will occupy. I usually opt for a full key in my drawings for two reasons:

> • More contrast yields a brighter sense of illumination in the drawing. Darker darks make lights *look* lighter by contrast... and vice versa.
>
> • Having a broader range of values to work with makes it easier to describe *roundness*. Just as a broad vocabulary can allow for more nuanced writing, so can a broad value make for rounder, more subtly described form.

To key the drawing, then, we choose an area of high contrast on the model, and establish the value of the darkest dark in that area, and the value of the lightest light. This area then becomes a kind of gauge for determining values on the rest of the drawing.
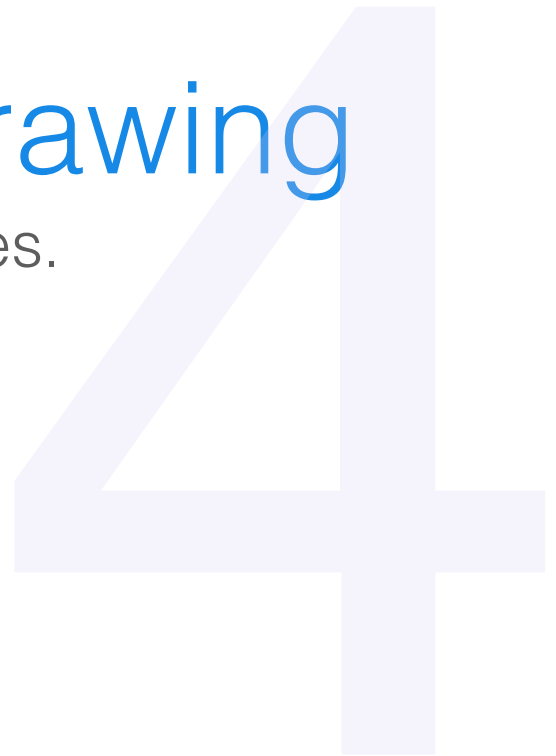
## 2. Materials Considerations
### The role of toned paper

Graphite and chalk don't mix together well. Attempts to do so yield a smudgy, inconsistent value, as well as a noticeable blue-shift in the color of the graphite. Instead, we must try to keep them separate, and use the paper itself as part of the spectrum from dark to light. This means there will be some areas of the drawing that require neither chalk nor graphite treatment because the value of the underlying paper is just right for that area.
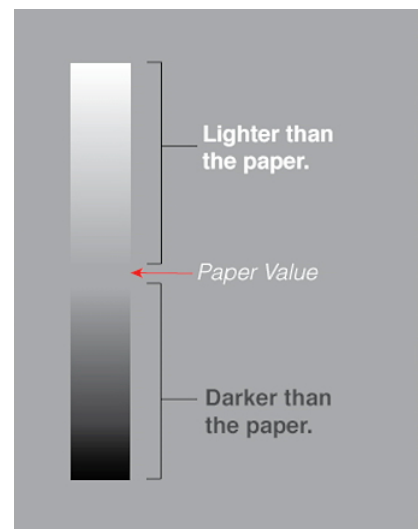
### Powdered Graphite

Drawing with the sharp point of a pencil is inherently time-consuming. Large dark areas in our drawing pose a problem because they could take a very long time indeed to develop with pencils alone. One way around this problem is to employ powdered graphite in those areas. Graphite powder is very fine-grained, and gets very deep into the tooth of the paper. It can be applied broadly with a brush, and large areas can be darkened substantially in short order. The down side is that it's messy. Be prepared to clean up a large amount of the stuff off your easel or floor when you're done!

### Staedtler 7B & 8B

The value of graphite doesn't change between H and B pencils. Instead, manufacturers add clay to the H pencils to make the leads harder. Harder leads draw more lightly, softer leads draw more darkly.

Graphite itself, however, will only go so dark – around a Munsell 3 or 3.5. If we want to go darker than that, we must employ something else. The Staedtler Mars Lumograph 7B and 8B pencils have something added to them besides graphite – some form of charcoal or pigment with a binder* – that makes them actually darker than graphite, and so will allow for darker values than graphite alone. When trying to establish the darkest darks in a drawing, it makes sense to default to those pencils instead of trying to "push" graphite darker than it will go.
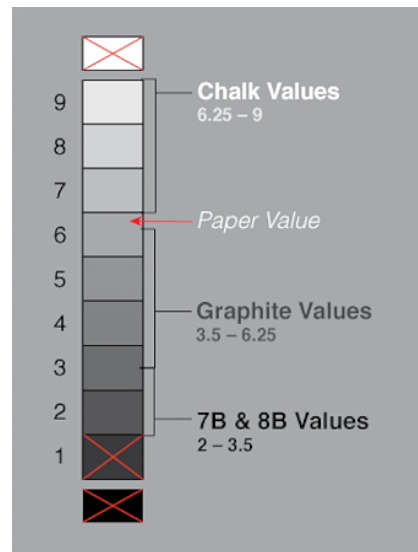
*I asked the folks at Staedtler what the extra ingredient is, but they wouldn't tell me – it's a "trade secret".*

### Pencil Selection – Learn to "Listen to Your Pencils"

A common question from students is, "What pencil should I use where?" It's an understandable question since there's such a broad range to choose from, but there's no specific answer. The only answer I can give is, "It depends". Rather like choosing a gear on a bicycle, there is no "correct" pencil to use at any given time. Instead, choose a pencil that seems to deliver your desired value most easily. If you're trying to get a darker value, and pressing harder and harder to achieve it, put that pencil down and pick up a softer one. If on the other hand, you're struggling to draw lightly enough, switch to a harder pencil and you'll find it much easier.

The pencils themselves will tell you if you're asking them to do something they won't do easily. Learn to listen to them, and pencil selection will cease to be a mystery.

### Blending Stumps

Use blending stumps primarily in the shadows to unify and "de-grain" the values. Keep separate stumps available for the chalk, graphite and 7B/8B passages. Since we want to keep those materials separate, each requires its own dedicated blending tool. The same goes for brushes.

### Shading vs. Modeling Form

I think of "shading" as an approach to developing values that is exclusively optical – it involves little more than observing lights and darks on the model and trying to match them on the page. The trouble with shading is that such an approach has little to say about how we navigate the transitions from one value to the next.

"Modeling" on the other hand incorporates the conceptual grasp of form as it interacts with the flow of light. When we "model" form, we still make optical observations, but interpret them through a set of assumptions: that the model's skin is relatively uniform in its local value, that fluctuations of light and dark are therefore caused by turning of 3-dimensional form, and that as the surface of form rolls away from the light source, it must get darker in our drawing – even if it doesn't appear to on the model.

Think of modeling as a kind of "virtual sculpting". We're not merely trying to describe what the model looks like. Rather, we're trying to describe the 3-dimensional structure of the model as we would in clay. We use values to describe changes in the orientation of the surface relative to the incoming light.

### Establish the Darks

Choose an area where the perceived value is robustly dark. In the demo, I start with the eye region. There are light lights nearby on the nose and brow ridge, and very dark darks in the pupil of the eye and flexion folds of the upper lid.
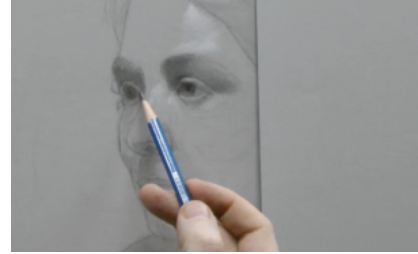
Be assertive! Use the 8B pencil with confidence. It may feel difficult to push those dark values down dark enough because they'll look so dark compared to everything else on the drawing, but do it anyway. Even if those dark values scream at you at first, they'll soon fall into place as you darken surrounding areas to compensate.

## Establish the Lights

### The Chalk Pencil

The chalk pencil has quite a different "feel" than a graphite pencil. The chalk has a grainier, more powdery consistency and each stroke feels scratchy on the page. It takes some getting used to if you're new to it. The best advice I can give is to keep it sharp. The chalk pencil can be a clumsy implement if it gets too dull.

Like graphite, the chalk can be "stumped" into the surface of the page to make for a smoother, more consistent tone, then worked on top of to increase opacity and brightness.

### The "Shape" of the lights

As you apply chalk to the light masses, try to observe the specific "shape" of the form as you draw. The structures of the face and head are very specific. Every part of Nicole's face that seems particularly bright looks that way because it is part of a form that is turned up toward the light. That form, like all of them, has a specific silhouette or outer boundary. It's not always easy to see, but if you look carefully, you should be able to discern the specific shape of any given form you may be drawing. Doing so will help you organize your values more carefully, and avoid an overly soft and generalized look to your drawing – like the department store mannequin version of Nicole.

### Value compression and "squinting"

Drawing from life or from a backlit computer screen presents a problem: The range of values we see on the subject is much broader than it can be in a drawing. This is because our subject is essentially light – the bright electric light of the display screen. The drawing, on the other hand, is just pencil and paper and can't compete
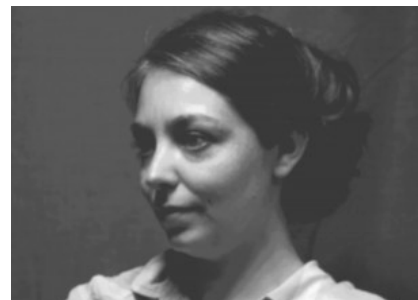
with the brightness of actual light. When developing light and shade on the page, therefore, we must "compress" the range of values we see into a range we can achieve on the page.  Drawings will inevitably be less contrasty than the real-world subject.

Squinting can help with this because with your eyes scrunched up, your eyelashes filter out much of the light from the display screen (bouncing off the model if you're working from life), essentially dimming what we see – reducing the brightness, and therefore the contrast range on the model – to better match what we can actually achieve on the page.

### Adding notes to the "chord"

Once you've established your darkest darks and lightest lights in your chosen area, in this case the eye region, it's time to begin adding additional values. For example, the shadow in the eye socket presents a value that is well darker than the lights on the nose, but significantly lighter than the pupil of the eye. Arriving at just the right value for this shadow is an act of tuning, not unlike tuning the strings of a guitar: each string must be in tune relative to all the others if any chord of notes is to sound correct. As you develop the eye region, look for additional "notes" to add to the "chord" of values in that part of the drawing.

## Adjusting the "Tuning"

### Adding "dark lights"

Although we're using chalk and graphite for values that are lighter and darker than the paper respectively, this doesn't simply mean that chalk is for the light side and graphite is for the shadow side of the form. It's probably true that chalk would be rarely (if ever) deployed in the shadows, the light masses have a broad range of values, and given the mid-value paper, will likely receive plenty of chalk and graphite treatment between highlight and shadow edge.

The areas of the light mass that hover near the shadow edge are sometimes called the "halftone", or more generically, "dark light". This part of the form is hugely important for achieving a full sense of roundness and illumination in our drawings, and the tendency is to underestimate how dark they need to go. Because the "dark lights" are still part of the light mass, we tend to make them too light, using values that "group" with those higher up on the light mass. The result "flattens" the forms, and makes for a transition into shadow that appears too abrupt.

Squinting is your best tool for gauging the correct value of the dark lights. Squint at Nicole. Then squint at your drawing. If the shadow edge appears sharper and more clearly defined on your drawing than it does on Nicole, then your dark light values aren't dark enough. You'll be surprised how dark they need to be!

### Keeping the graphite and chalk separated

It's important to remember that graphite and chalk don't mix well. This means we have to use the value of the underlying page to make adjustments to the values in the drawing. If a chalk passage has become too light, don't add graphite but rather lift some of the chalk with a kneaded eraser. If a graphite passage has become too dark, don't add chalk but rather lift some of the graphite, again with a kneaded eraser. This procedure will become second nature as you get used to it.

### Hard Pencils Can Be Used As Blending Tools

Blending tools like stumps and brushes can be useful for softening edges and unifying values, but they're also clumsy. Sometimes a more surgical tool is required, and it's one you're already familiar with: a pencil. Passing over a previously drawn area with a very hard, very sharp pencil can do a lot to smooth out grainy or blotchy graphite passages. The point of the pencil can fit into gaps in the fabric of pencil strokes and fill them effectively both by depositing new graphite, and by moving around the graphite already on the page. Give it a try. Just don't press too hard – a sharp, hard pencil can scratch the paper easily if you're not careful!

### Deploying the Key

With an area of high contrast developed – in this case, the eye region – it's time to seek out other areas where robust lights and darks are present and begin developing those too. Compare what you see to the eye region already established. Are the darks as dark? Are the lights as light? Make adjustments as appropriate. The goal here is to deploy the key of the drawing globally throughout the portrait. Lights will likely get dimmer as we move away from the nose and forehead, but the darks will be more universal. Nostrils, the part of the lips, shadows in the ear and on the hair mass are likely to be significantly dark.