A WORKSHOP TAUGHT BY:

Mike Driscoll & Ashley Koehler

In this interactive workshop you will learn about a variety of technologies (both old and new) that can be assistive in both learning to draw and refining your work. This includes iPad apps and styluses, Wacom tablets, camera lucida variations, “Vermeer’s” painting optics, and more. This hand-out will act as a document that outlines everything that we will cover (and more) so that you can refer back to it as a reference later on.

During the workshop participants will be broken into two groups, one group will focus on technologies that assist in drawing and painting with traditional media and the other will be learning about how to integrate digital drawing practices into their artistic practices.
Illustrator LINE
Vector drawing with brushes that have a hand rendered look. Positives include a virtual ruler/stencils, and a variety of awesome grids/perspective guides. Negatives are a lack of layers and colors that are limited to 5 swatches (kuler). Needs work.

Illustrator DRAW
Another Vector drawing app, this one replacing the Adobe Ideas App. Positives are ease of use, layers, full color picker, and ruler/shape stencils. The only downside I can see is a limited set of brushes. Both vector apps come with tutorials for use and the ability to import images to work from. Makes beginners look like pros.

Photoshop TOUCH
Replacing Photoshop Express this is the only adobe app that costs ($9.99) and rightfully so as it has most of the essential parts of the full Photoshop program. You can select, isolate, stock layers, adjust colors, add effects & text, etc. You can also paint, but it doesn’t do this well. Use it for advanced editing on the fly.

Photoshop SKETCH
This app has potential, but thus far has fallen very short compared to other drawing and painting apps. It lacks layers, a full color picker or even the ability to change stroke sizes beyond the default brushes. For now avoid it and hope that they add more functionality.

BRUSH
Brush is kind of a cheesy one note app that allows you to turn photographs that your phone takes into brushes to use with Photoshop or illustrator. Easy to use and learn.

COLOR
Color is an app that runs adobe Kuler (their Online color scheme library) on your mobile device. What’s so special about it is you can get colors from any image you take!
Mobile Drawing & Painting

$5.99 - HIGHLY RECOMMENDED
A full featured drawing app, with a lot of versatility and options for creating a variety of strokes, layers, effects, etc. Easy to manipulate and navigate around. Be careful not to exit to the gallery if you went to undo something.

FREE ($3.99 w/ Pro Tools) - RECOMMENDED
Easy to use, includes layers, a full color picker, the ability to rotate canvas, some selection functions and it's easy to jump between functions. My main qualm is a lack of brush customization without the addition of a pressure sensitive stylus.

$4.99 - HIGHLY RECOMMENDED
This app does a remarkable job at simulating the traditional painting process. Lifelike blending, texture and work flow. Very easy to use!

FREE
Designed with makers and product design in mind, this app acts as a way to get your ideas down, to scale and ready to show. Some innovative selection methods and great grids to work on.

FREE - NOTE: no currently working with the latest mobil OS
Used by some notable artists, this app simulates painting quite well including brush sensitivity and a variety of textures. It is compatible with a brush stylus and is streamlined for extreme ease of use.

FREE - RECOMMENDED
This app has really been pared down to the essentials, not much customizability, but for getting an idea down or doing simple illustration it works seamlessly. Feels like working in a sketchbook.

FREE ($4.99 with extras) - RECOMMENDED
Truthfully I haven't used this app much yet, but it seems to have a lot of cool features. I especially like the circle as an area to add texture feature for

Other Apps to consider include - ***ASTROPAQ***, Inspire Pro, Forge, Paper, ZenBrush & A Sketch.
**Stylus Options**

**INTUOS CREATIVE STYLUS 2 - $78**
The second version of this pen has a finer and harder tip for more precision. It is also $15 cheaper, rechargeable, has palm suppression and is supported by many apps. The Wacom Bamboo Stylus is also highly liked.

**Adonit's Jot Pro - $30 RECOMMENDED**
The best deal and highest rated stylus currently available that works with the iPad Air 2, and most pressure sensitive drawing apps. Any line skipping issues are easily fixed with a little aluminum foil.

**HEX3 JAJA - $60**
Precision and variety in line weight. It's tip allows you to see the line you are drawing, but can also miss lines at some angles or scratch your screen if it is dirty. Hard tip makes a clicking sounds on screen.

**POGO CONNECT - $50**
Palm rejection, quiet tip, app support some pressure sensitivity issues, tip may not be very durable.

**Apple iStylus - ??**
There are some pretty heavy rumors that Apple may come out with a stylus in 2015, so if you're not in a hurry, you may want to wait till after the new Mac product announcements this winter.

**Adobe Ink & Slide (by adonit) - $124**
This stylus has come down in price from $200 last year due to lackluster sales. It seems expensive for what you get since a limited version of the slide is already available in the Adobe apps, but if you find yourself using Adobe mobile tech a lot it might be worth the extra bucks.

**NOMAD BRUSHES - $17-to-$30**
This company offers a variety of brush stylus options. Some have more pointed tips while others are more broad. Bristols are fairly soft, and retractable or varying lengths as well.

**SENSU BRUSHES - $17-to-$40**
This company also produces various brushes and appears to be the crowd favorite. Its brushes have slightly firmer bristles and some brushes come with a dual regular stylus.
Similar to a traditional Camera Lucida, this app places a transparent photograph on your screen while the camera remains "live". You then simply trace the image out.

How to Make a Camera Lucida

1. Cut card & plastic, glue together with hot glue as below. Look through the hole & you will see a reflection of the floor superimposed on the view ahead.
2. To use a lucida for drawing, it must be rigidly mounted above the paper (see right). It is not easy to draw without David Hockney recommends simply marking important points on the drawing and joining them up freehand.

DIY Camera Lucida/Obscura

http://www.anchoroptics.com/documents/
http://www.pinholephotography.org/camera%20obscurer.htm
http://brightbytes.com/cosite/portable_plans.html

http://www.davidbordwell.net/blog/2014/02/03/i-am-a-camera-sometimes-tims-vermeer/

http://boingboing.net/2014/07/03/the-tools-tim-jenison-used-to.html

https://medium.com/@maiiclue1/5-tips-to-recreate-the-first-tool-of-tims-vermeer-6e59598d8195
Draw items with accurate proportions up to 11x17 in size. Visibility of subject depends highly on ambient and direct lighting. Takes practice and concentration to use effectively, can be hard to see details. Moving in different directions can distort image accuracy. Acceptable for rough draft sketches that you work into from observation.

2 STARS
More accurate then drawing through observation alone, difficult to use, Costly $$$

LUCID-ART
LUCY

Another option that is currently in production is the LUCID-ART Camera Lucida. It claims to have solved the problems of the camera lucidas of the past. Less portable than the NeoLucida, but with a more contrasting image (thanks to filters and construction) that is less difficult to see. It can be used to draw from life, but also includes a positionable arm for photos or digital screens. It also allows you to work much bigger up to 20x37in.

A STAND
Easier to use, more versatile, Unfortunately More Costly $$$$ $1950-$2150 (or $10 for the Maker Kit)
Linear Perspective
Linear Perspective, or perspective, is the technique or process of representing the true relationships of objects, depth, and distance as they appear to the eye onto a flat surface.

Proportion
Proportion is the comparative measurement or size relationship between objects or parts of an object. It is the relationship between the various parts of a whole.

Framing
Framing is the effect that occurs when the edge of a picture frame cuts the edges of a picture. It is often used to create a sense of depth or to emphasize certain elements of a picture.

Alignment
Alignment is the arrangement of objects in a way that they are positioned in a way that is visually harmonious. This can be achieved by placing objects on a grid, using symmetry, or by following a rule of thirds.

Gesture
Gesture is the way a line or shape is drawn, which can convey a sense of movement or energy. It can be used to create a sense of dynamism in a composition.

Line Slope or Tilt
Line Slope or Tilt refers to the angle of a line in relation to the horizontal or vertical. It can be used to create a sense of movement or to create a sense of balance in a composition.

Symmetry
Symmetry is the arrangement of objects in an equal and balanced manner. This can be achieved by placing objects on a grid, using reflection, or by following a rule of thirds.
How it works

**CAPTURE AN IMAGE**  **APPLY VISUAL GUIDES**  **CHECK FOR ACCURACY THROUGH DEVICE CAMERA**

Create perspective guides, planar shapes, a grid, or free draw on top of a photograph of your subject.

Then, turn off the photograph layer and use the remaining visual guides to create a rough sketch. Use the App to check:
- perspective
- angles
- proportion
- distance
- etc.

**4 STARS**
Will help you create more accurate drawings.

The view frame is a physical version of the digital app. It is limited to only creating straight lines, using metal rods held in place by powerful magnets. This still allows for help with perspective, enveloping and other visual relationships.

The company has had some issues with the magnets pulling out and not staying secure, but has released video tutorials on their blog for how to fix this (and is also currently adjusting how the product is constructed)

**3 STARS**
Still helpful, but bulkier, more expensive, less convenient and more $$$