Phone Photography

Welcome to this short course on phone photography. My name is Kathy Craig, and I am the Director of Innovation, Research and Development (Radlab). Today we'll talk a bit about how to take better photos with your phone, how to edit them afterwards, and finally what other things can be done with your phone camera. First, we'll start with some tips.

One important aspect of phone photography, or any photography, is to keep the camera steady. In the photo, she is holding the phone in a way that many of us do, but it's probably not the best way. It is a good idea to stand with your feet shoulder-width apart. When standing, hold your mobile phone with both hands and tuck your elbows into your body and aimed towards your feet. This is just a guideline and won't always work for every photo.

Hold your phone securely.

Hold the phone with both hands. Make sure your hands are not covering the lens. This means the lens may be on the lower side of the phone and to the left in this photo.

You can use your volume button to snap the shot.

Depending on your phone, the volume button may be used to snap the photo which may result in less camera shake.
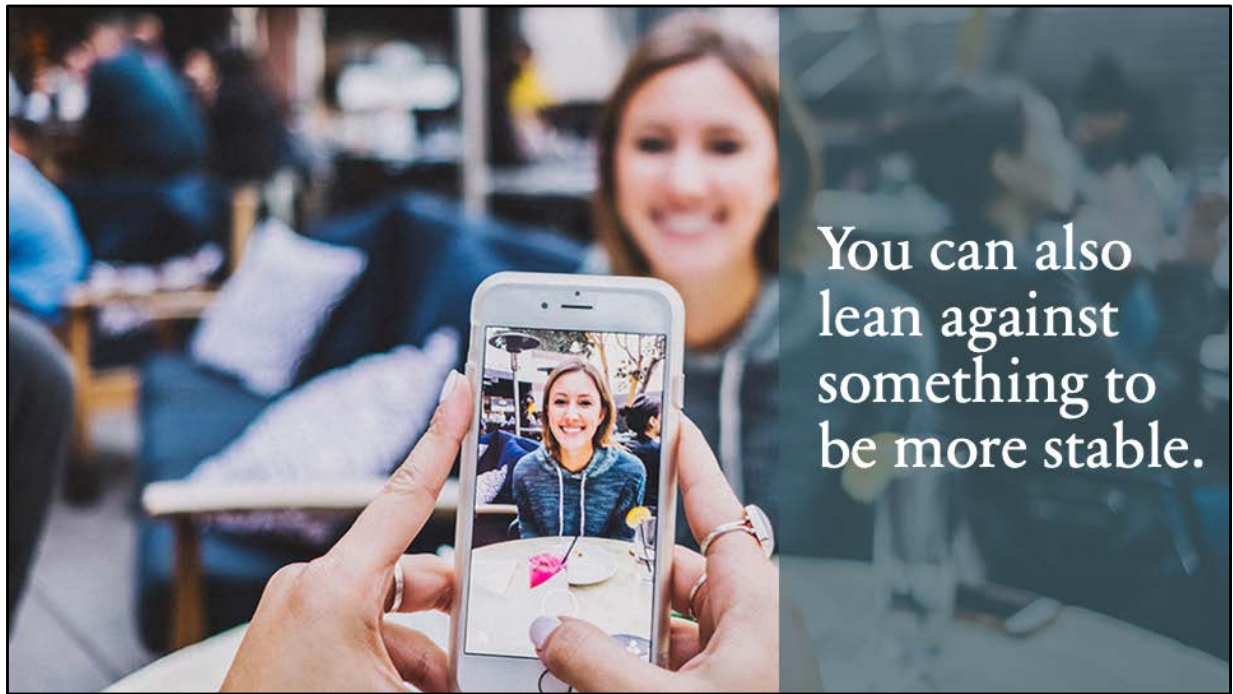
Lean against a table, building, tree, railing, rock – anything to make yourself more stable. You can even sit down and rest the phone on your knee. Keeping the phone steady is especially important in lower light conditions where camera shake will become more visible resulting in blurry photos.

A tripod is another way to make sure that your phone is study. All kinds of sizes are small from this mini to full size. You will need a phone adapter to hold your phone on the tripod. This is helpful when doing closeup photography or longer exposure shots.

Tip 2. Set your focus.

Phones generally focus on the nearest objects. That may not be where you want the focus. On many phones, you can manually set the focus by touching the spot where you would like for it to focus. On an iPhone you can also set the exposure, by moving your finger up or down to lighten or darken the scene.

Tip 3. Improve your composition

Turn on the grid.

Rule of Thirds

The grid can help you take better photos by both helping you align with the skyline or other horizontal surface and aligning objects on the thirds. You may have heard of the rule of thirds. Depending on the type of photo, some of the best are the result of placing your subject at the intersection of a horizontal line and a vertical line. The grid lines help you to do that. Generally, you do not want your subject the center of the photo. For iPhone go to Settings, scroll down to camera and select it. You will see a number of settings that can be changed. Under composition, turn on "Grid." For Android: From the camera app and tap the downward-pointing arrow at the top of the screen. From the resulting popup, tap the gear icon. Tap Grid Type and then select a grid option (such as 4 x 4) from the resulting popup, or after opening the camera app, select settings (gear icon) and turn on grid lines. 3x3 grids are good ones to use. By the way, for better photos, turn off the Live photo feature with the iPhone. This is done by simply touching the live photo icon at the top of the screen.

Leading lines guide the eye to an endpoint. This may be roads, rivers, or buildings.

Notice in this photo that the leading lines are the buildings on each side.

This canal in Venice with buildings on the sides is another example of leading lines.

Get closer.

If the image doesn't look good, try getting closer. "If the photo isn't interesting enough, you're not close enough." – war photographer Robert Capa. Think about what you want people to see in the photo and get rid of unnecessary parts of the scene. With our phones, we may have the tendency to "zoom in" by squeezing the view with our fingers. That results in an image that appears larger; however, that is a digital zoom and not an optical zoom. You lose resolution with a digital zoom. Instead, just get closer (if you can). Just be sure not to get so close that you can't focus on the subject.

We usually shoot from a standing position, but that may not be the best perspective. Try taking the photo from the position of a child at a lower position. A low camera angle is sometimes known as a "hero shot."
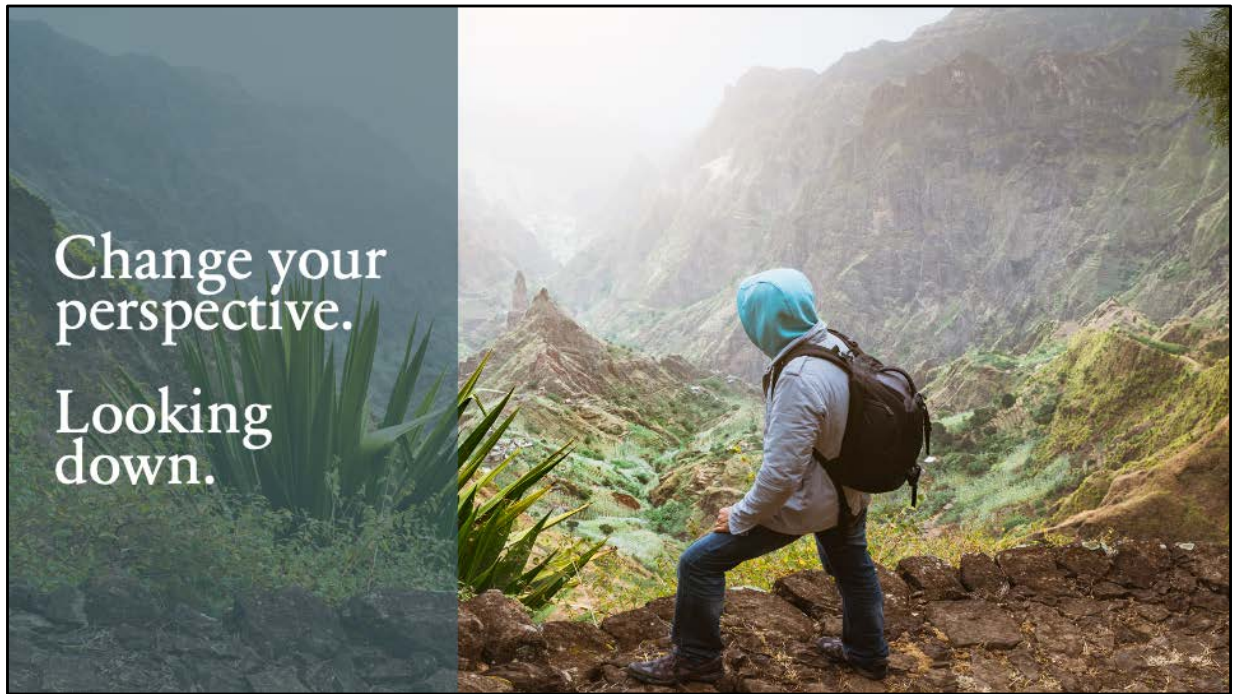
Another perspective is looking down at something. Try shooting from a higher position. Also try different angles. Try the right side or the left side. Since you are using a phone, this is easy to do.
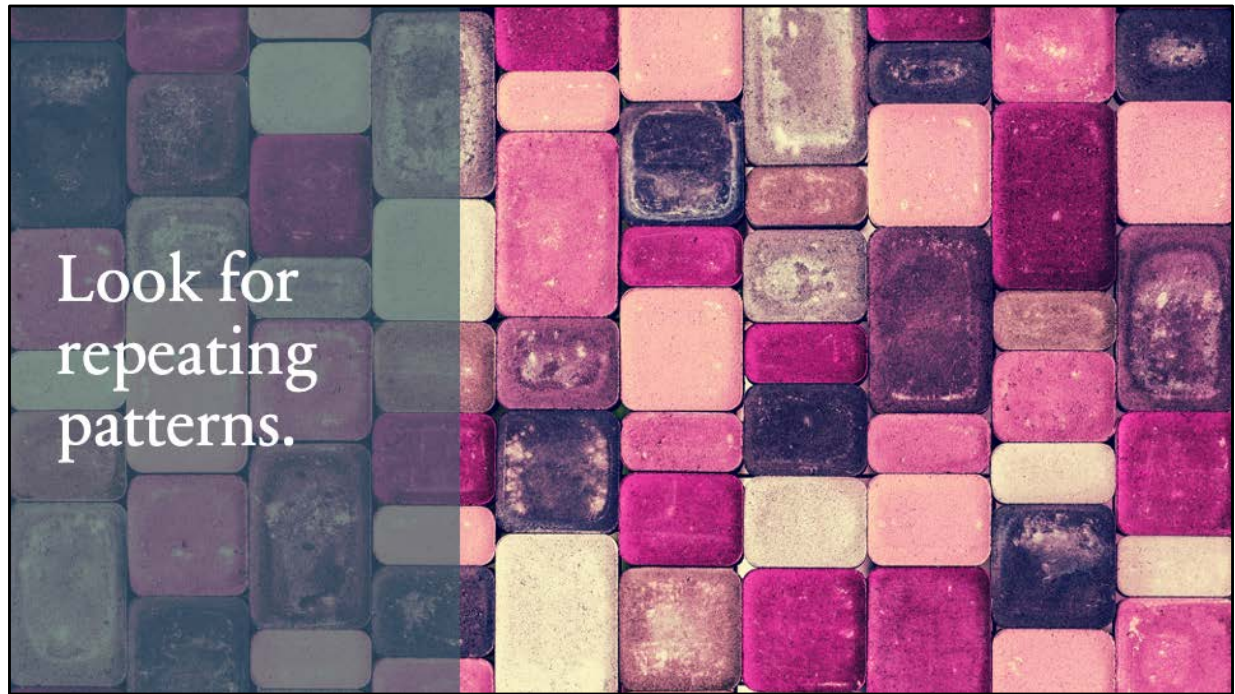
Look for repeating patterns.

Repeating patterns can provide another kind of photo. Here is an example that we would usually not consider.

Look for
repeating
patterns.

Repeating patterns can be something manmade or natural.

Look for repeating patterns.

These arches provide a pattern that creates a much more interesting view.

Scenes have areas that are dark and areas that are light. When taking a photo, the camera can't get the right settings for both at the same time. With HDR, the camera takes multiple photos, generally a "normal" one, and then photos that are for the brighter areas and ones that are for the darker areas. The photos are combined to produce a better end result. You may need to turn this feature on. For the iPhone, go to settings, camera, and scroll down and select "Smart HDR."

With HDR

Tip 4. Shoot in HDR

Tip 5.
Backlighting

Backlighting occurs when the subject is in front of a bright light, such as the sun, a window, etc. If the photo is of a person, this can result in a silhouette of that person. Sometimes that can be a good thing, such as taking a photo of a sunset with the person only being part of the scene (on the thirds, of course).

Here is another beautiful example of using backlighting for a silhouette.
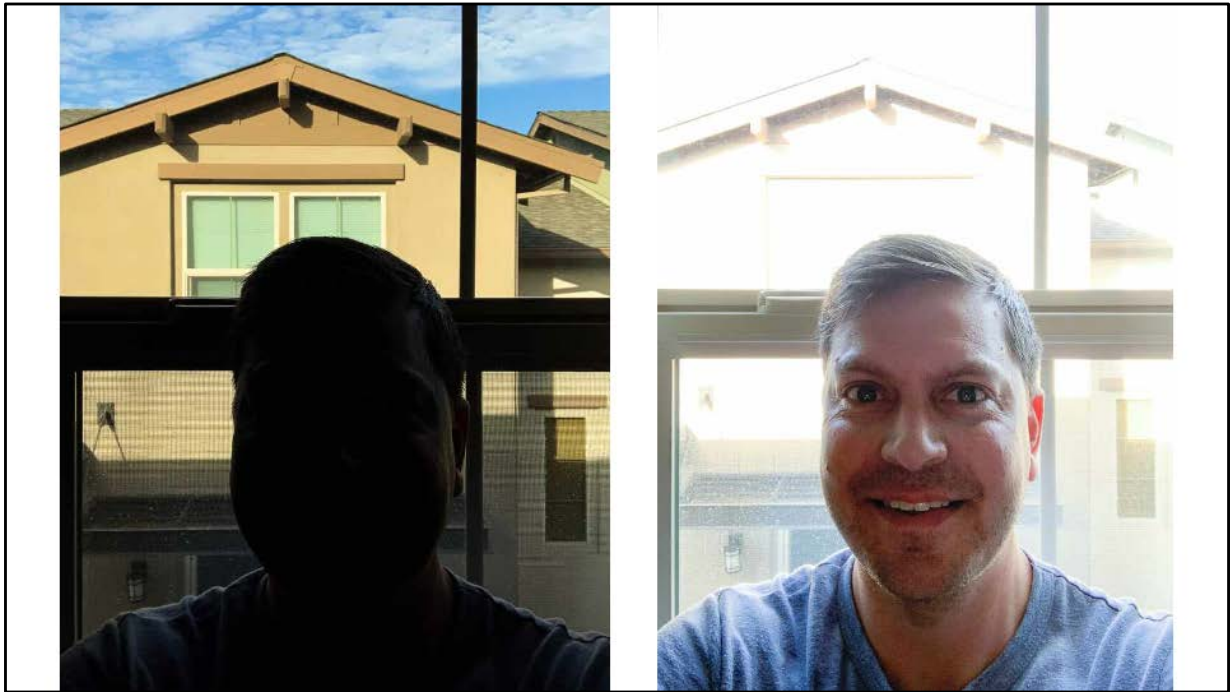
However, if you want to be able to see the features of the person, then backlighting can be a problem. Even if you try to fix it in editing, the result is not great. You can move the subject or yourself to change the angle of the light.

You are using your phone camera, so take some extra photos to find out what angle is the best. You can also add a light that may help compensate for the backlighting. The HDR setting may also help. Give it a try.

Tip 6. Try burst mode.
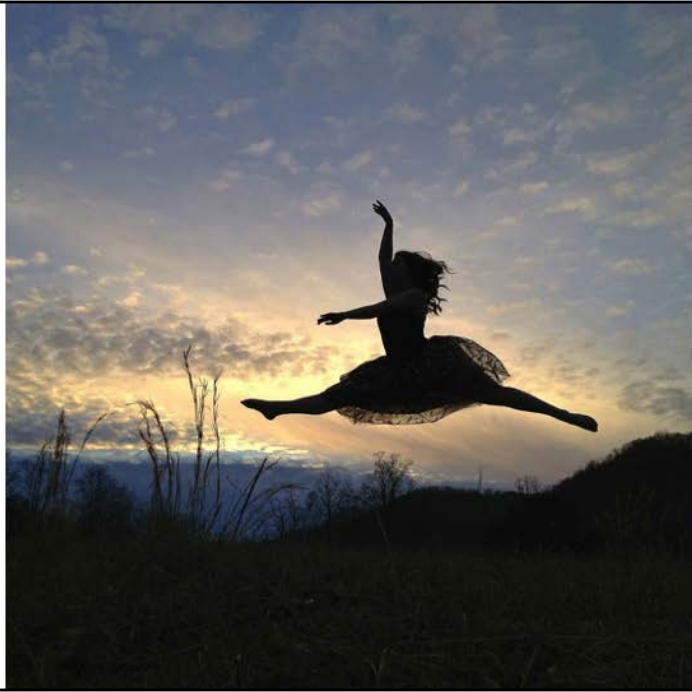
Burst mode allows you to take a series of shots in rapid succession. You may or may not have this capability on your phone. From Settings in the iPhone, go to camera settings and turn on "Use Volume Up for Burst"

Uses for burst mode include

Action shots to freeze motion
Portraits to get eyes open and smiles on
Children
Animals

So where do we carry our phones? Pocket? Hands? Backpack? How many times do we accidentally touch the lenses? Something we often fail to do is clean those lenses. You can have a fantastic shot that is ruined by the dirt and grime on your lenses. Use a clean and dry microfiber or lens cloth. This is something you can carry with you when using your phone for photography. Fold the fabric into a sharp corner and gently rub to remove dust, dirt, and smudges. One exception to this is if you have been around sand. Blow the sand off first or you may scratch your lens. If the lens is really dirty, you may need to use a screen cleaning fluid. Avoid any ammonia-based cleaners that are meant for glasses rather than cameras. This might cause permanent damage to your lens. Put a few drops of the appropriate cleaner on your cloth and then use the cloth on your lens. You can also use a Q-tip with distilled water. Disposable wipes that are made for lens cleaning may be used. Another option is a lens pen that allows you to brush off debris from one end of the pen with a chamois tip for cleaning off fingerprints at the other end.

Now that you have your photos, you may decide that you need to do some editing. We will look at some free and low-cost options. One of the best for general photo editing is SnapSeed from Google. This is a free app with lots of editing options.

Before

So maybe you have a photo you *almost* like, but it has some things you don't like. Let's take a look at this first one. This was a photo of a cruise ship taken from a kayak. Under such circumstances, it is difficult to hold the camera still. This photo looks like one to throw away, but with SnapSeed, you can straighten it.

After

In SnapSeed, you can use the perspective tool to straighten the ship (and water) so that it no longer looks like it is defying gravity. This photo also used a touch of the HDR tool to brighten it a bit.

Before

Here's another example – a photo of kayakers taken from another kayak. Again, there is a problem with the horizon being off.

After

Horizon and kayak straightened. The photo cropped to get the kayak on the thirds, and a touch of the HDR tool to brighten things, a bit.

Before

Here is a photo of the Oregon coast. It looks okay, but maybe we would like to have it look a bit more dramatic. SnapSeed has a tool for that.

After

. . . And here is the result.

This photo was taken by a drone at Branson, Missouri. Nice scene, but it didn't really reflect how pretty it was.

Same photo. HDR added along with a little drama.

Before

This is a cute photo, but there are a lot of distractions.

After

Using SnapSeed tools you can blur the background, add detail to the subjects, and add a vignette to further focus on the subjects.

Before

This is a photo taken in Eureka, California. Eureka is known for its Victorian homes. This grandiose one was converted into a club – golf, I believe. The photo was taken on a rainy day from the inside of a car. With this one, I decided to apply a number of effects to it including perspective to straighten it, details to better pull out the features, tonal contrast, crop, glamour glow, noir, grunge, frames, and text. Let's see what all of that can look like.

After

Here is the result.

TouchRetouch is an app that allows you to remove objects and lines from a photo as well as the ability to clone areas. It is a very easy to use app and currently costs $1.99.

This photo was taken on the Oregon coast. Pretty nice photo, except for the photographer's shadow! With TouchRetouch, you can remove unwanted parts of a photo.

Shadow is gone, much better photo. How well this app works depends on what you are trying to do. If the area where the object is removed is complicated, the results may not be what you would like. Where the background is fairly simple, like the sand in this photo, it works very well.

PhotoScan is another free Google App. Sometimes you just want to convert a photo print to digital, especially with older photos. PhotoScan is an easy way to do that.

Convert to digital.
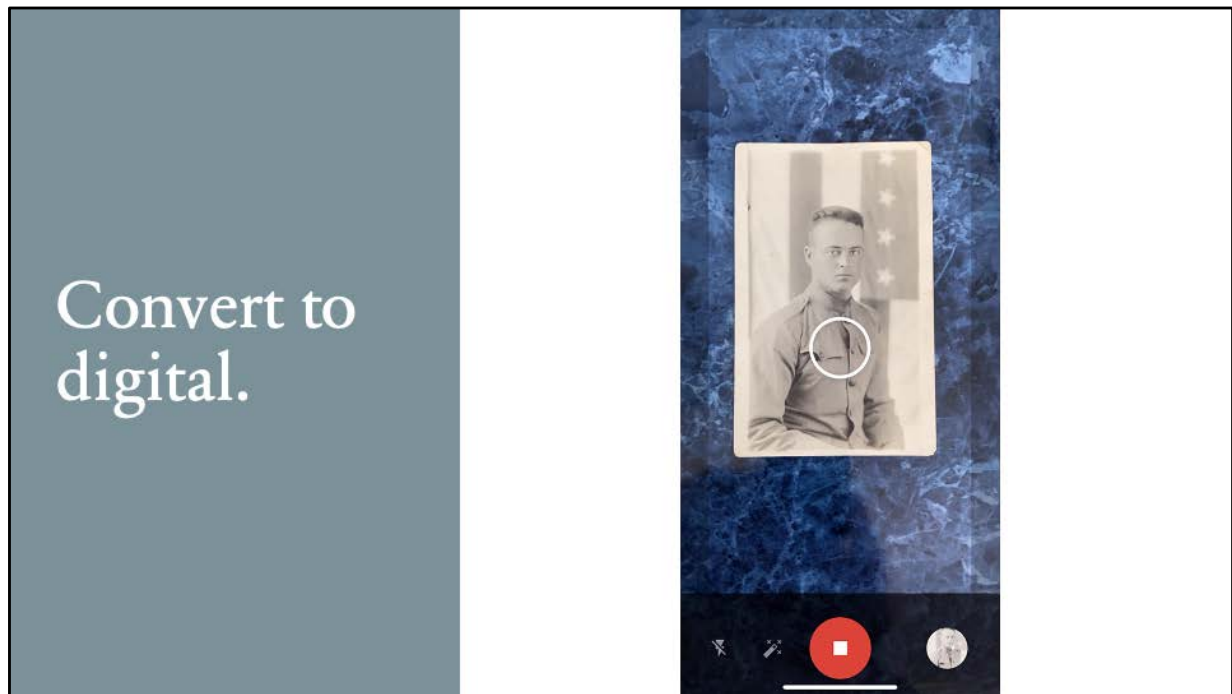
The first step is to hover over the photo to be scanned. Make sure there is some contrast between the background and the photo. Once it is fairly well centered, take a picture of it.

Convert to digital.
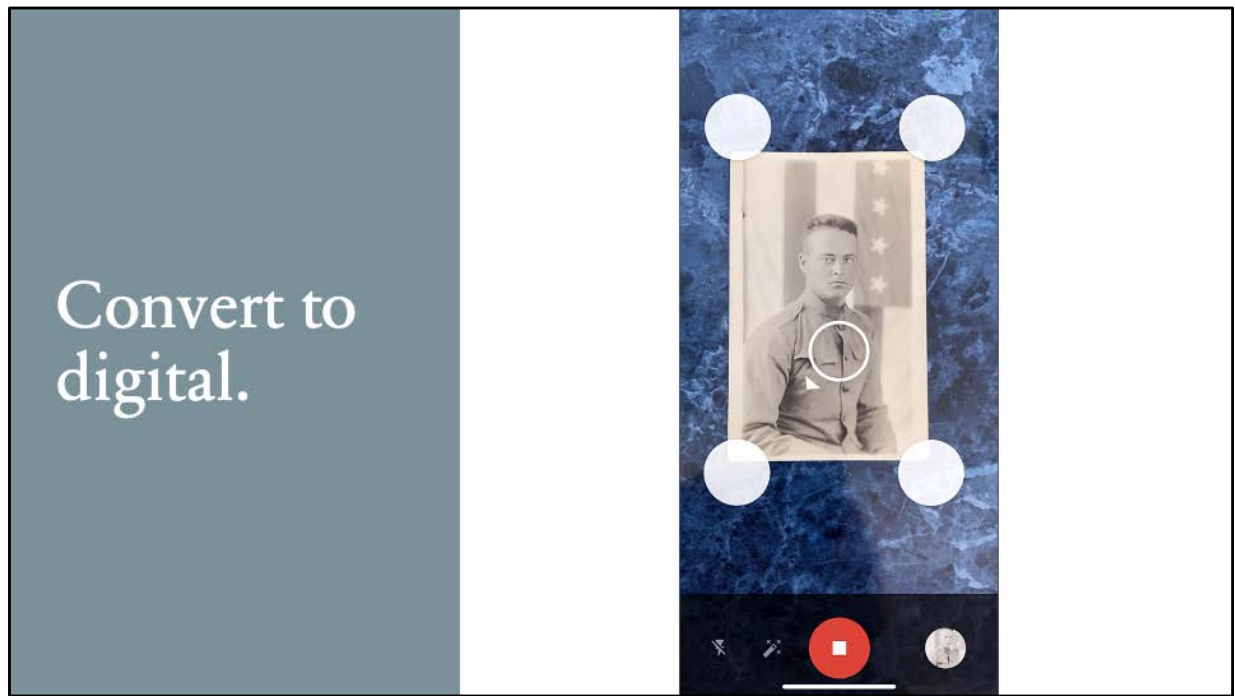
Once you have taken the photo, four dots appear in the corners.

Convert to digital.
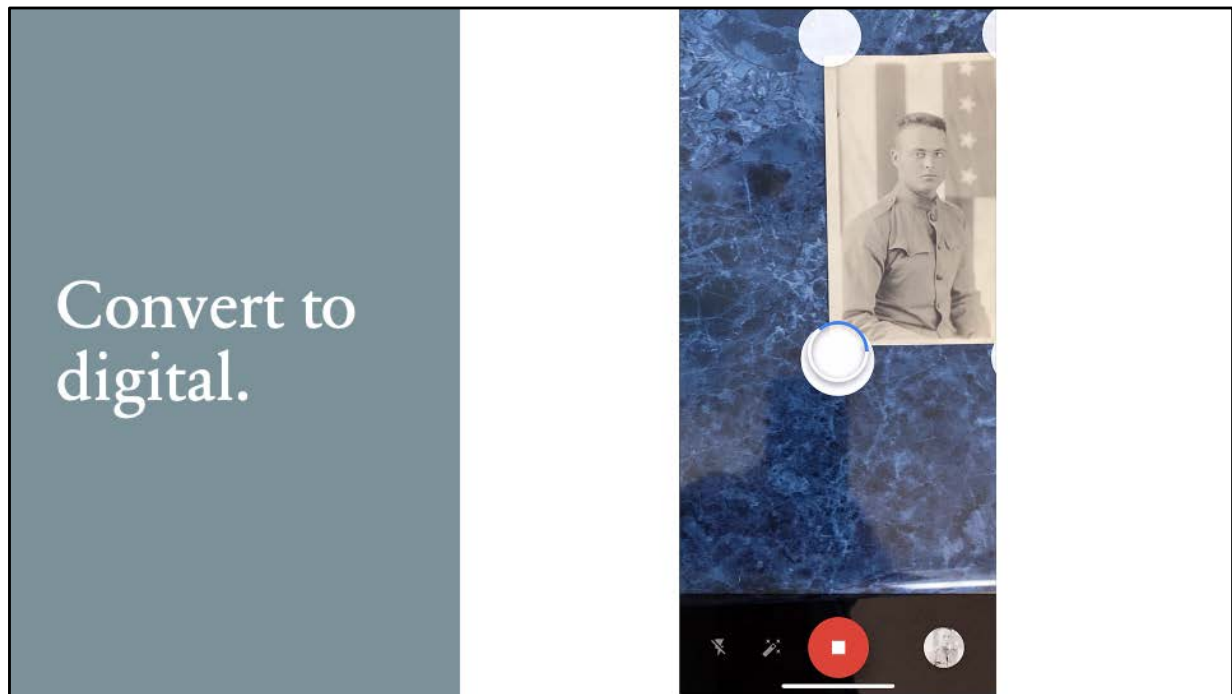
Move your phone camera to each of these four dots, one at a time. PhotoScan will automatically take a photo at each corner.

Convert to digital.
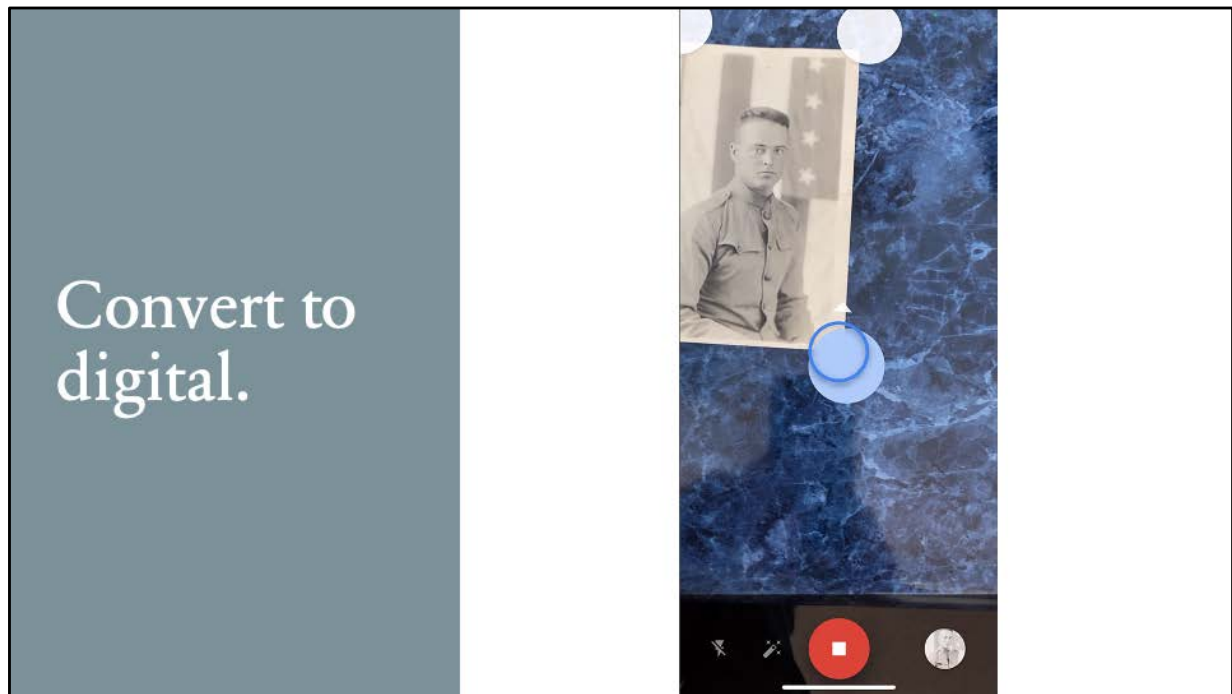
The app will show the progress for the photo at each corner. Once the blue circle is complete and the dot disappears, you can move to the next corner.

Convert to
digital.
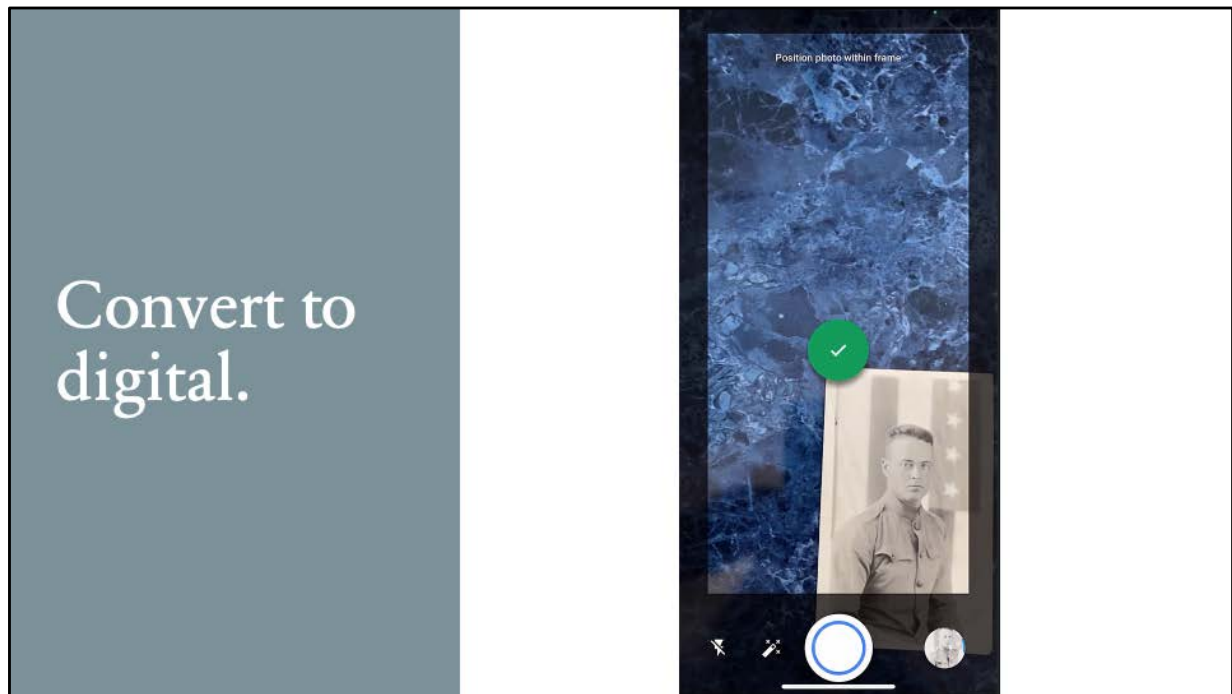
When all four corners are complete, the dot will turn green with a checkmark in it.
Your scan is complete.
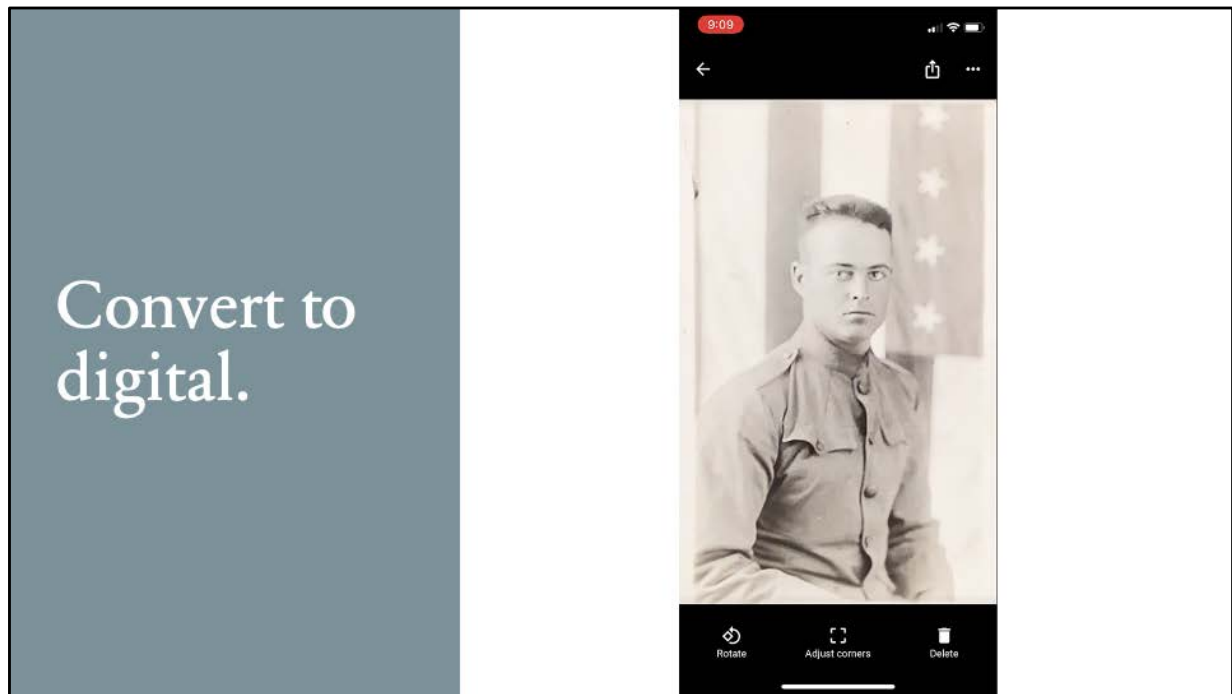
By taking photos at the four corners and combining them into one photo, PhotoScan is able to reduce the glare and improve the resulting digital photo. This means that you could even convert a photo that cannot be removed from its frame. Still, you need to watch the glare and reduce it as much as possible before trying this out.

What else can you do with your phone camera?
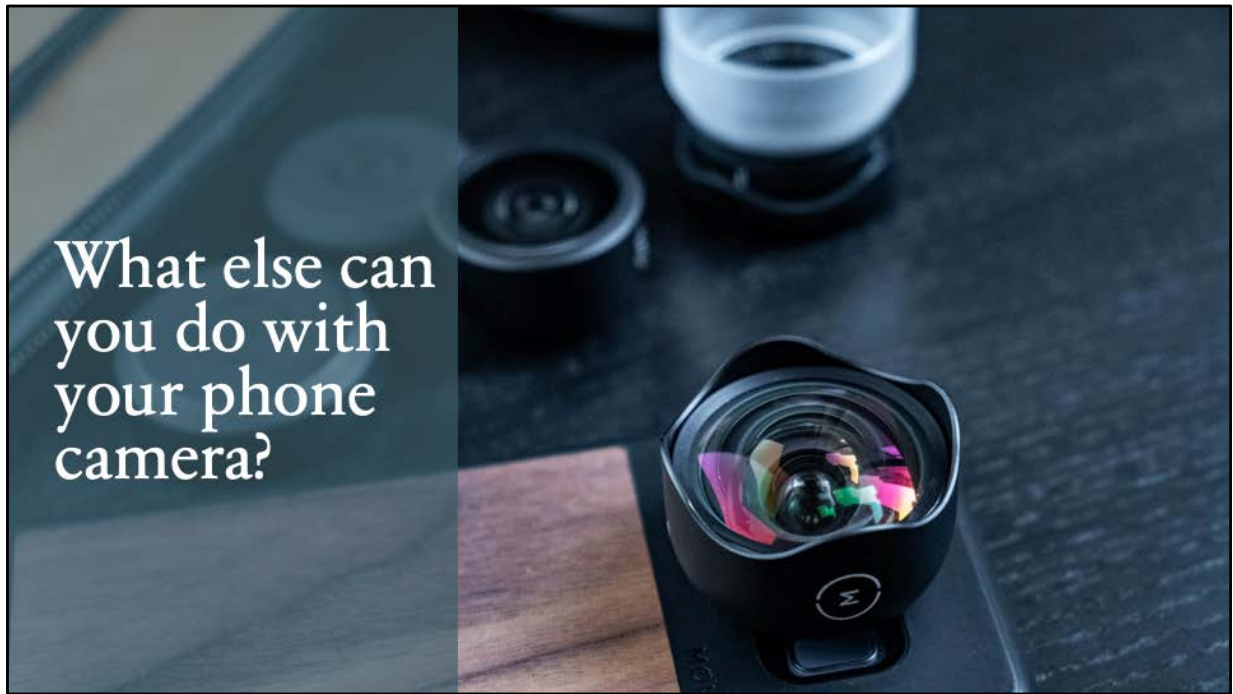
There are a variety of lenses that can be used with your cameras. Moment lenses are a higher end type that include macro, telephoto, and wide-angle lenses. Moment has a case available that you can use to add lenses over your camera lens. You can even use camera filters with these lenses with a special adapter. Less expensive ones from other manufacturers are also available. If you consider any of these lenses, be sure to read the reviews.

What else can you do with your phone cameras?

Here is a photo taken with the phone of a page of star labels. No extra lens was attached.

What else can you do with your phone cameras?

Let's concentrate on this little purple star.
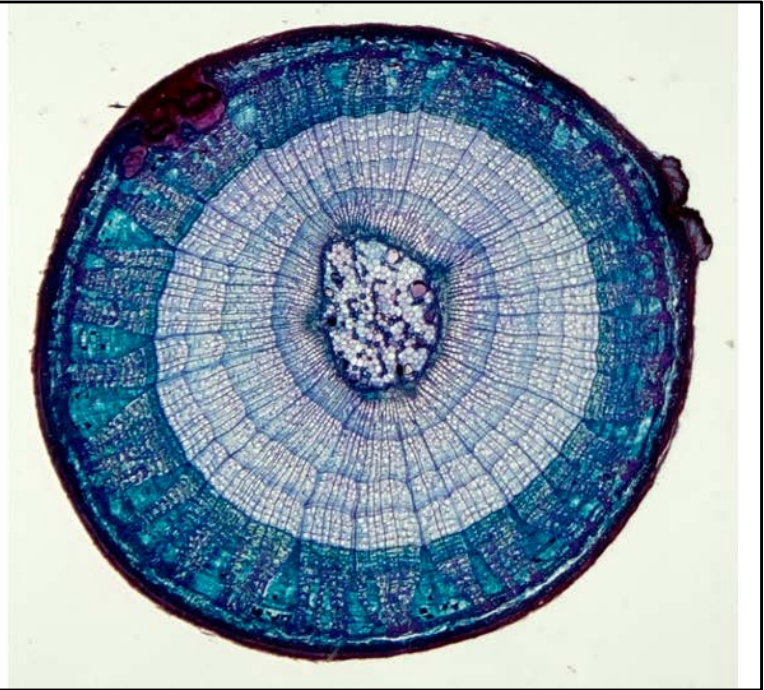
Macro lens on phone telephoto lens

This is that same star with the Moment macro lens attached to the telephoto lens of an iPhone 11 Pro.

Macro lens on phone telephoto lens

This is a photo of a microscope slide. This was done with the slide on a small light board. This is part of a fern.

Macro lens on phone telephoto lens

This is a microscope slide of a *Tilia* stem also taken with the light board.

Macro lens on phone telephoto lens

Here are photos taken using the macro lens on plants. That's a moss on the right, a small plant on the left, and a leaf in the middle.

Regular wide angle on iPhone 11 Pro

Here is a photo of a framed picture on the wall of my work-at-home area. This was taken with what would be considered the "standard" lens on the iPhone – a slightly wide-angle lens.

Here is the same image taken with the iPhone telephoto lens.

Moment telephoto on telephoto lens of iPhone 11 Pro

And this image was taken with the Moment telephoto lens on the iPhone telephoto lens.

Use it as a microscope.

Fingertip Microscope

Lenses are available for you to use your phone as a microscope. This is one of the available lenses. It's called an iMicro. You stick it over your camera lens.
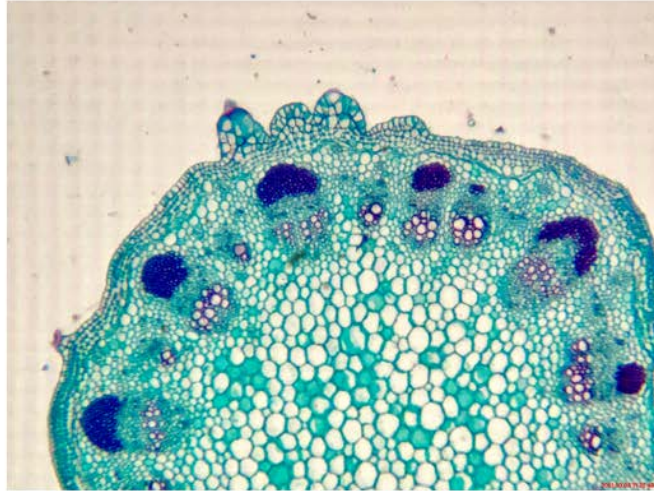
Original microscope slide
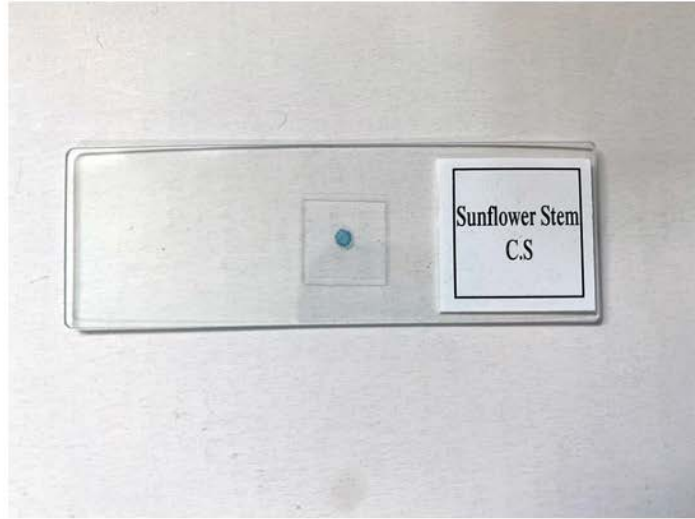
Here is a photo of the slide that will be used with the microscope lens. This is a sunflower stem cross-section.

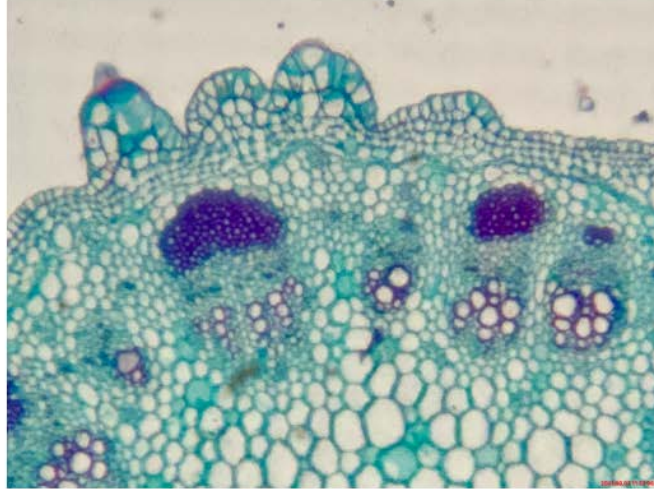i-Seeing microscope lens with iPhone telephoto

48x

The iMicro lens has an app that goes with it that allows you to take photos at different magnifications. These include 48x, 96x, 144x, and 240x. This photo was taken at 48x.

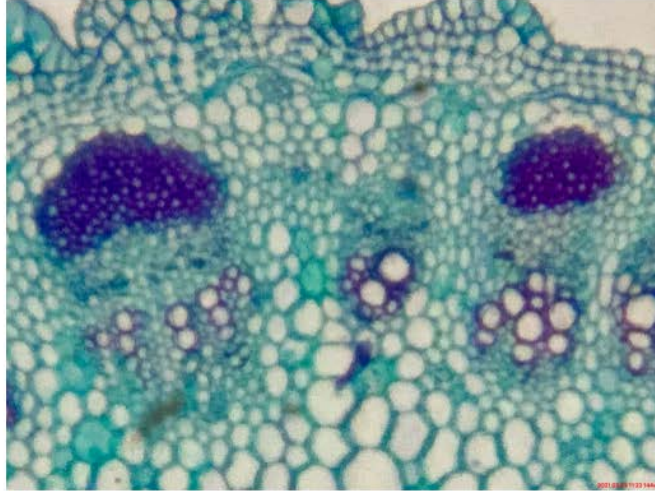i-Seeing microscope lens with iPhone telephoto
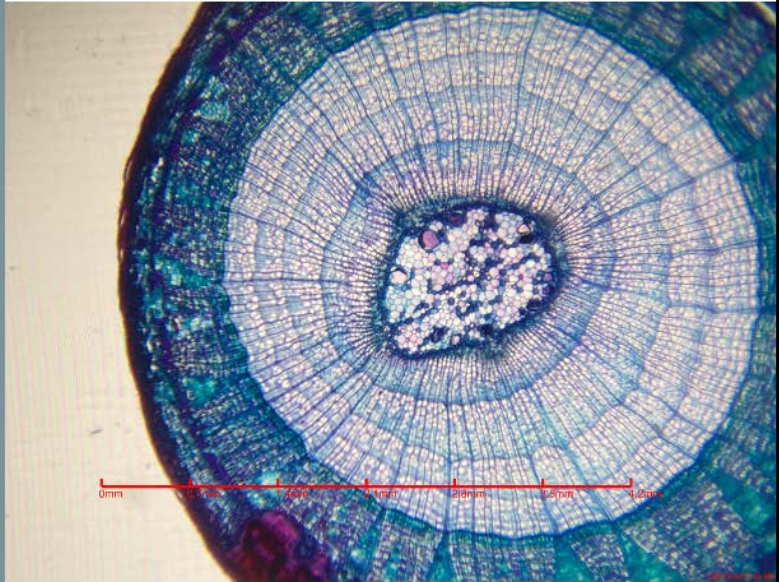
96x

Here it is at 96x.

144x

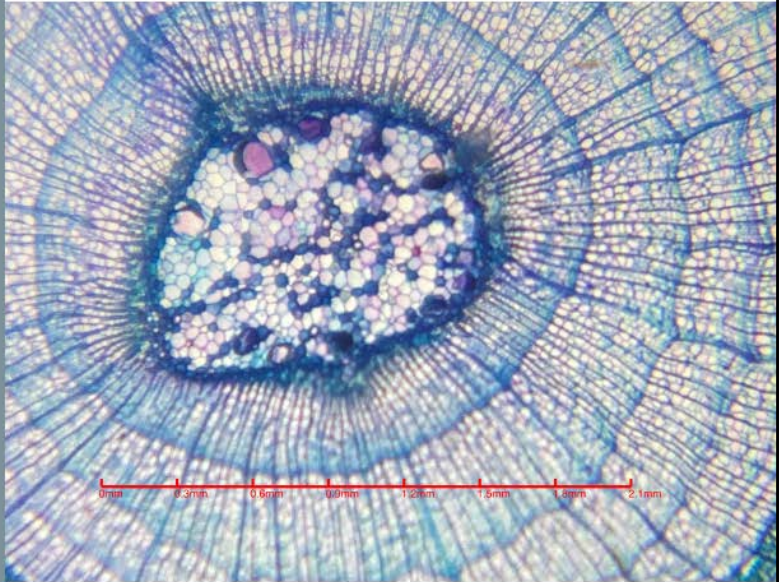## i-Seeing microscope lens with iPhone telephoto

And this is at 144x. Please note that as you increase magnification, the app uses digital instead of optical magnification. That is how you get reduced resolution.

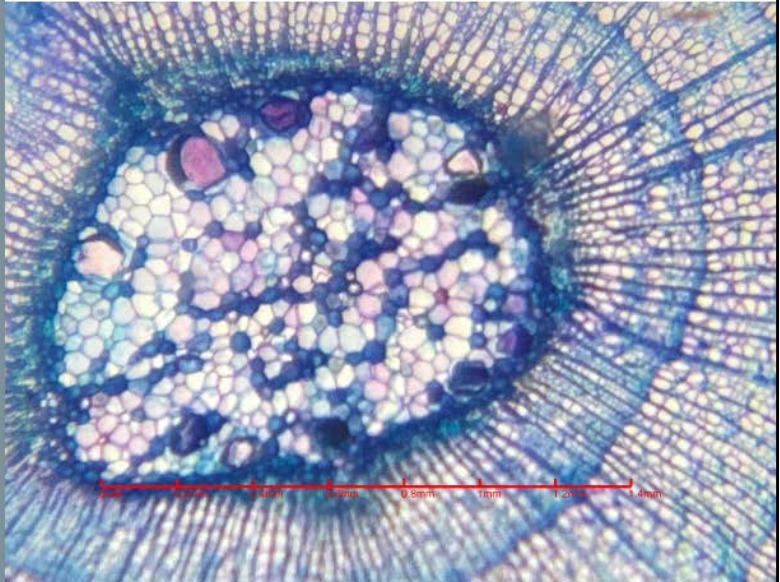i-Seeing microscope lens with iPhone telephoto

Here is another slide of a woody plant stem. This is at 48x. This is a *Tilia* stem cross-section. Tilia is a family of trees that include linden and basswood.

i-Seeing
microscope
lens with
iPhone
telephoto

Here it is at 96X.

i-Seeing microscope lens with iPhone telephoto

144X. For a $31 lens – not bad.

Questions?