NEWFIELDS

Build Your Own Infrared Camera

What you need:

A "Night Vision" Webcam	$5-80	Available on Ebay. Need to be sure it has "night vision" capability and that it works with the OS of your computer. One with an adjustable focus works well.
Software	free	There are tons of freeware programs out there for webcams. Again, make sure it will work with your computer's OS. I use Astra Image available at http://www.tucows.com/preview/504585
A Light Blocking Filter	$16	You want a plastic sheet that is equivalent to a Wratten 87C filter. I got a polyester Lee filter Part # 87C-P3, which is 3"x3", available at B&H Photo. This is big enough to make maybe 30 cameras! Just cut it with an X-acto knife or scissors to size. https://www.bhphotovideo.com/c/product/292664-REG/LEE_Filters_87CP3_3_x_3_Infrared.html
Infrared light source	free	Sunlight works great. Otherwise, you need an old style incandescent 40W light bulb. Keep in mind that CFL and LED lightbulbs do not have infrared radiation! For even sharper imaging through thin materials, try moving the light behind the object and do transmission imaging!
Art Supplies	N/A	You probably have these. A wide range of materials is useful for experimenting. Graphitic materials will absorb the IR and show up (graphite pencil, charcoal, carbon black paints) while most paints will be transparent and see through. Fabric dyes are also often transparent.

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