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Design, Photography



9/20/2011 11H | Rashad C. Collie | The Pinhole Camera | The Pinhole Camera | How to build a pinhole camera

Materials needed: 1. Ruler 2. Sturdy cardboard box 3. Black tape 4. Black paper 5. Black paint 6. No. 10 sewing needle 7. Craft knife 8. Aluminum foil 9. Film or photographic paper

Instructions: 1. Make sure your container is light-proof and allows no light leaks. Cover up any holes, cracks or crevices with black tape, but leave an opening such as a flap to insert and remove film. Boxes should be made of durable cardboard or stiff paper, and lids and flaps should close securely. 2. Black out your camera. Line the inside of the box with black paper to prevent reflections and to protect against unwanted light filtering through. Preventing light seepage is important, as the light you do allow in to the camera should be very controlled. 3. Cut a $\frac{1}{4}$ -inch hole opposite the box opening with a craft knife. Make the pinhole by puncturing a number 10 sewing needle through a small square of aluminum foil measuring about 3-by-2 inches, rotating the needle as you push it through. Stop pushing the needle through when it is halfway in. Tape the foil over the $\frac{1}{4}$ -inch hole on the inside of the box. Kodak recommends positioning the pinhole 3 to 6 inches from where the film will be placed. 4. Make the shutter by taping a piece of opaque black paper over the pinhole. You can make a shutter from wood or plastic by screwing it onto the body so that it covers the pinhole completely when not in use. 5. Load the film into the box in a completely darkened room. Use a small square of photographic paper or sheet film like Kodak Tri-X Pan Professional Film. A typical box larger than 3-by-4 inches will need film or paper that measures about $2\frac{1}{4}$ -by- $3\frac{1}{4}$ inches; simply cut to size. Load the film so that the shiny (emulsion) side faces the pinhole. Tape the

film or paper down at the corners so that it does not come loose. 6. Exposure refers to the amount of time that film or paper is exposed to light when taking the picture. Keep your camera as steady as possible when taking the picture; you may need to set it down on a flat surface. The exposure time varies from 2 to 8 minutes for photographic paper and from 1 to 8 seconds for film. Choose the lower end of the spectrum for bright light conditions and the higher end for a cloudy day or dim lighting. Develop as normal. How does a pinhole camera work? A pinhole camera is a simple camera without lens and has a small hole to let light in called an aperture. A pinhole camera is an effectively light-proof with a small hole in one side. Light passes through the aperture and projects an upside-down image on the opposite side of the box. The smaller the hole the smaller and sharper the image will be that is projected.