

Recently I had the pleasure of entertaining my friends’ 11-year-old son for an evening. I’ve become known for creating unorthodox entertainment for kids in my charge since I don’t particularly enjoy sports and games. For example, once I had my 12-year-old niece and her two cousins over for a few days. One of those days we spent creating and printing business cards for each of them that included their individual waist-up likeness which they lit and shot in my front room under my guidance – they absolutely loved it and it appealed to my bizarre sense of humour!

For my 11-year-old charge I thought the perfect distraction would be a tabletop photo-shoot revolving around his two favourite things, popcorn and movies. Having some idea of what we might get up to, I had brought over my camera, meter, tripod, and laptop, but nothing else. To create the image you see in Image 001 we had to use our imaginations to magically turn available household items into lighting equipment.

After arranging our subjects on top of a little chess-board table, we fiddled around with framing, subject height and positioning, which took forever – everyone’s an art director – then set off about the house looking for things to light our scene. The first piece of equipment on our list would be something to produce light. During our search I found a 60-watt desktop lamp which would have served well, but my photo partner went one better – out in the garage he found a 500-watt work-light which would provide much more power than the desk lamp allowing us to use shorter shutter speeds! How exciting!

Using a utility clamp, we affixed this impromptu light to the back of a kitchen chair, thus promoting this lowly kitchen object into a majestic light stand (see object 1 in Image 003)! One of my favourite methods for creating depth in an image is back-lighting. To this end we placed the kitchen chair lighting rig behind and to the camera-left-side of the bowls of popcorn and TV remote. The result of this lighting can be seen in frame 1 (Image 001). Notice how it creates lots of back-lit depth to the objects but of course leaves the fronts really dark. Since we only had one light to work with and that one light was already used up for the back-lighting, I would need to use reflectors to catch some of that light and redirect it onto the fronts of the subjects. This would be easy to do with anything white like a white cloth or white cardboard, but the problem would be that the light hitting the backs of the subjects would be really strong and the reflected light from the front would be comparatively weak. If we set the camera exposure for the brightness on the fronts of the subjects from the frontal reflectors, this would result in highly over-exposed subject back edges. In other words, the lighting contrast would be way too high. Even if you swapped out the white reflectors with some aluminium foil you would still find the contrast too much. But – what if we could reduce the light striking the subject backs without affecting the light striking the subject fronts from the frontal reflectors? To that end we reduced the light hitting the subject backs by filtering the raw light from the work-light through a white cloth found in the linen closet. This white fabric was placed between the subjects and the work-light so that the light striking the subject backs had to filter through the fabric. This dropped the brightness on the subject by three stops! The result of this lighting can be seen in frame 2 (Image 001). So that one of us would not have to hold the white fabric in place for the next half hour or so, a broom handle was horizontally secured to a coat stand with twine; this created a great little boom arm to drape the white

cloth over (see object 2 in Image 003). Before tying the broom handle to the coat-stand, we raised and lowered the cloth and handle until we found the perfect height that allowed lots of unfettered raw light from the work-light to spill over the top of the fabric while making all light headed to the backs of the subjects filter through the cloth. Absolutely brilliant!

To light the fronts of the subjects, a little trip to the recycle bin was in order and rewarded us with a nice white square piece of white cardboard torn from a Fed-Ex™ box. This white reflector card was affixed with utility clamps (tape would work nicely too) to the back of another chair which was placed in front and to the camera-right-side of the subjects (see object 3 in Image 003). This reflector caught some of that raw light from the work-light that was spilling over the top of the white fabric and reflected it back onto the fronts of the subjects. Due to the reflector’s frontal position, it created rather flat lighting on the subjects. Very boring! We quickly decided that this wasn’t suitable for the dramatic mood we were looking for and so, not wanting to give up on this fine piece of white card-board, we thought to give it a second chance knowing that its flat lighting would be fine for a low-level fill light to bring up shadow detail. To change this white reflector from main-source to fill-source, we simply kept increasing its distance to the popcorn and TV remote until its brightness on them dropped to a dramatic looking 3.5 stops below the camera setting. The result of this lighting can be seen in frame 3 (Image 001). Amazing!

To finish off our lighting adventure, we decided that to stay true with the pop-corn movie theme, we must keep with the theatrical look created with the heavy backlighting, and to build upon that. To make this happen we thought that our third and final light-source, the main-source, should be a spotlight. Since we didn’t have an actual spotlight and knowing that a spotlight focuses light energy, we determined that a silver reflective surface would be the ticket since it too could focus the light into a nice spot on the popcorn and bowl! To accomplish this, a quick rooting about in the refrigerator rewarded us with a circular silver-card scrounged from a pastry box – pastries are often set upon rigid silver/gold cards and these make excellent reflectors on small sets. With the silver side oriented to the subjects, the card was clamped and taped to the back of yet another chair then placed to the camera-right-side of the subjects (see object 4 in Image 003). This reflector caught direct light from the work-light and rerouted it onto the subjects’ fronts. Since the card was silver rather than white and since it was positioned closer to the subjects, it reflected a much higher volume of light onto them than did the white card-board fill-source. A series of 1” spot meter readings, taken off a very small piece of grey card, were taken at various points against the popcorn bowl. Why the grey card? Well, because this area was too tight to effectively get an incident meter into and take accurate readings. The readings ranged from equal to the camera setting up to 1½ stops brighter – these cards create lovely, uneven, painterly lighting effects! By changing the distance of the silver card and chair, we were able to fine-tune the exposure on the front of the bowl and popcorn. Also some of this light skimmed over the top of the TV remote giving it just enough exposure to be visible but not compete with the bowl and popcorn. We also positioned this main-source reflector to the side of the set to help create more dimension giving us the opposite of flat-lighting. The addition of this main-source reflector can be seen in frame 4 (Image 002) and in Image 001. Popcorn has never before looked so noble, so delicious!



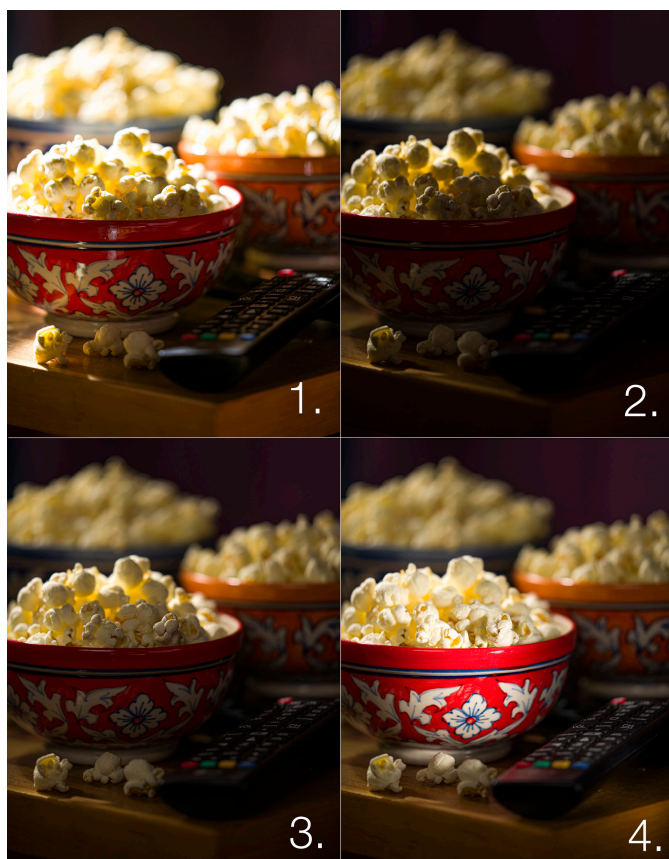
**Bio**  
Dave Montizambert lectures internationally on lighting, digital photography and Adobe Photoshop. He is also a published author having written two books on lighting and digital photography ([www.montizambert.com](http://www.montizambert.com)) plus numerous magazine articles on these topics in North America, Europe, Russia and Asia. Dave also creates lighting and Photoshop tutorial DVDs for [www.software-cinema.com](http://www.software-cinema.com) & [www.PhotoshopCAFE.com/video](http://www.PhotoshopCAFE.com/video) and authors’ Dave On Demand’ ([www.montizambert.com](http://www.montizambert.com)) lighting tutorial based photo-training. Dave is available for lectures and workshops in your area and can be reached through [www.montizambert.com](http://www.montizambert.com).

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# Popcorn Movie Night



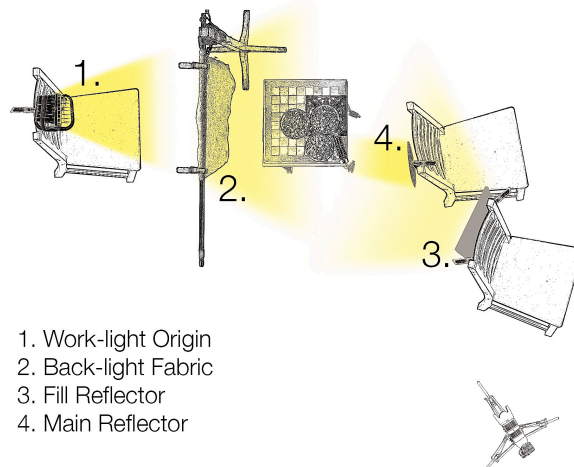
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So, a little recap...we started off by covering the whole set with photons from our single light origin, then blocked, filtered, and redirected those photons. Also use your imagination when scrounging for make-shift gear: if you don't have a free-standing coat rack for a light stand, then look around for what else that is tall and vertical, maybe tying the broom handle to a step ladder will work; don't have a work-light, then use a house lamp and a longer shutter-speed or a higher ISO – be adaptive!

Kind of cool what you can do with a bit of household junk! The drawback is time; it easily takes four times longer to get the job done compared to owning 'real' lighting gear. Also try showing up on a job with chairs, work-lights, broom sticks, and linens – they won't know if you are the cleaning crew or the moving company, certainly not the photographer they just hired – not good for professional credibility. But if you want to try your hand at some simple table-top photography like this popcorn movie image, this is a good way to start, then if it appeals to you and you are planning on doing it regularly or professionally, then buy the real stuff!

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1. Work-light Origin
2. Back-light Fabric
3. Fill Reflector
4. Main Reflector

## Shoot Notes

- Camera: Mirrorless with full frame sensor.
- Camera Settings: f2.8 at 1/20th at 100 ISO.
- Camera Distance: 150cm/57 inches from subject to imaging sensor.
- Camera Height: 135cm/53 inches from floor to sensor.
- Camera Angle: 10° forward tilt.
- Lens: 70–200mm f2.8 lens set to 178mm.
- Subject Height: Floor to tabletop surface – 96cm/38inches.
- Light Origin Distance: Work-light placed 152cm/60 inches behind subject.
- Light Origin Height: Floor to work-light bulb – 170cm/67 inches.
- Light Origin Ratio\*: Plus 3 stops metered incident at back of subjects.
- Back Light-Source Fabric Size: 79cm/31 inches by 61cm/24 inches.
- Back Light-Source Fabric Distance: Fabric to back of subjects – 76cm/30 inches.
- Back Light-Source Fabric Height: Floor to top of fabric – 145cm/57 inches.
- Back Light-Source Fabric Ratio: 0 stop incident metered at back of subjects (brightness striking subject equals camera exposure).
- Fill Card Size: 35cm/14 inches square.
- Fill Card Distance: Card to subject – 111cm/44 inches.
- Fill Card Height: Floor to middle of card – 115cm/45 inches.
- Fill Card Ratio: Minus 3.5 stops incident metered at front of subjects.
- Main Reflector Size: Diameter 13cm/5inch.
- Main Reflector Distance: Reflector to subject – 59cm/23 inches.
- Main Reflector Height: Floor to middle of reflector – 112cm/44 inches.
- Main Reflector Ratio: 0 to plus 1 1/3 stops reflective meter off miniature grey card at front of subjects.

\*Ratio means the brightness difference between the source in question and the camera setting. Camera setting always equals middle grey.

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