

Making a Pumpkin Pinhole Camera

Materials Needed:

- Small/medium pumpkin
- Aluminum foil (two squares for shutter/lens and extra for top of pumpkin)
- Knife
- Photo paper
- Black spray paint
- Rice spoon
- Thumbtack or needle
- Tape
- Darkroom access

Instructions:

- 1) Cut the top of the pumpkin to make a lid. Make sure the edges fit well!!
- 2) Clean out the pumpkin well. Scoop out the seeds/guts with a rice spoon. Blow dry the inside to keep the photo paper semi-dry (optional).
- 3) Cut a fairly big window in the front to make the edges smooth.
- 4) Paint the entire pumpkin – inside AND out- with black spray paint. Make this a thick layer or use multiple coats! Pumpkins are permeable, so they are very prone to letting light in.
- 5) Put one sheet of foil over the carved window – secure it to the pumpkin with tape.
- 6) Poke a TINY hole in the foil with a thumbtack or needle. Keep it small!!
- 7) Place another sheet of foil over the first, and tape it down. Tape the bottom edge slightly lower than the first sheet of foil so you don't tear the bottom piece of foil when lifting the top piece of foil. This is your shutter and the tiny hole in the first sheet is your lens. You've made a camera!
- 8) Go into the darkroom and under safety lights place photo paper on the back wall inside the pumpkin, so it sits opposite the carved window or "lens". Make sure the photo sensitive side of your paper is facing the "lens".
- 9) While in the darkroom, place foil around the top of the pumpkin and secure with black tape. This will help insure light won't leak through the lid.
- 10) Go outside and take a picture! (see calculations below for determining exposure time)

Exposure Calculations:

Focal length (length between the lens and the paper) divided by the diameter of the hole (from the thumbtack or needle) = f/stop

Meter your subject with a light meter, plug in the f/stop at <http://mrpinhole.com/exposure.php>, this will give you a chart with exposure times.