ASSOCIATION OF NOVA SCOTIA MUSEUMS

Presents:

Photography Kit Equipment Manual

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Introduction

This project was undertaken as a requirement of the Fleming College internship, implemented at the Association of Nova Scotia Museums. This project was relevant to the ANSM because they are in the process of supporting the digitization of their member site collections' for a website that will be launched in September 2012. Research was conducted at the beginning of the internship to determine what photography equipment should be purchased to support the completion of the digitization project. The assembled kit will eventually be available for the member sites to borrow and continue the digitization on their own. Once the research was completed and the equipment was purchased it became clear that a manual should be included with the photography kit. There were no instructions with the equipment about how to set everything up, and figuring out how to set it up would waste valuable photography time for the sites. It also seemed important to include information on where to start the project so that members did not become overwhelmed, some basic photography instructions, and how to position the lighting based on what material was being photographed. As the scope of the project became more defined the need for a specialized manual became more apparent.

*All of the textile related images in this manual were taken by the author. All other images are from ANSM member sites, unless otherwise stated.

Getting Started

So you are planning on working on a digitization project in your museum, that's great! There are definitely a few things that you need to consider before you can begin. This task may seem a little tedious at first, but it is entirely necessary to produce the best quality results as possible. Here is a point form list of steps to take and questions to ask before you begin:

- What objects have been photographed already?
- What format are these images in and how have they been stored?
- What quality are these images? Good enough for online viewing?
- Make sure that you have copyright over the images

Once those things have been covered it is best to prioritize your work. Here are some ways that you can break up the task and ensure that you don't get overwhelmed, and guarantee that progress is still made:

- Photograph items that you have copyright clearance for
- What items are the most iconic or important to your institution? These should be at the top of the list
- Anything that has good accompanying documentation should be priority
- New objects can be photographed as they come in. It will save you from having to go back and do more work in the future, and the less handling the better
- You could focus on special collections
- Choose natural groupings of items in the collection
- You can even just pick a shelf and start there, going through one shelf in the collection at a time

Once you have a plan of action set in place, and you know where to start, you can begin the digitization process. The next step is to learn the basics behind digital photography, which will be covered in the next section of the manual.

Photography Basics

Before you can begin taking pictures there are a few things that you need to set up. It is good to have a basic knowledge of photography principles so that the images you take will be the best possible quality. This section will cover **Quality** settings, **White Balance**, **ISO**, **Aperture**, and **Shutter Speed**.

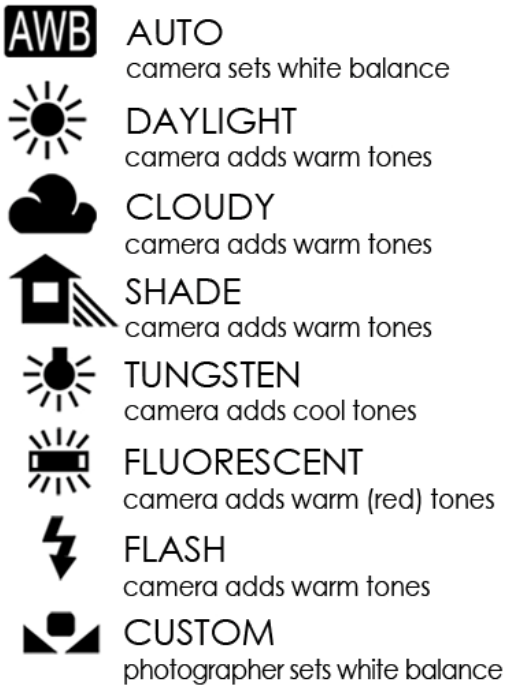
Quality

The first step is to make sure that the camera is set to take the highest quality images possible. This will produce very large images that will take up more space on your memory card, but they will a better quality so that anyone viewing the image can zoom into it and still be able to make out a lot of details. We are aiming to produce high quality, detailed images since they will be available for the public to view online. In order to make the images high quality there are three settings to look for: **Quality**, **Recording Pixels**, and **Compression**. Set all of these things to the highest level possible (for **Quality** this will most likely be 1280x720, for **Recording Pixels** it should be a large **L**, and for **Compression** it will be a). If you follow these steps then your images will be very high quality.

Quality: 1280x720 **Recording Pixels**: **L Compression**:

White Balance

The **White Balance** setting makes sure that the true colour of your surroundings will be captured. To get the correct colour the sensor in the camera is adjusted based on the lighting surrounding you. It is very important to have the camera on the right setting or else your pictures may be tinted red or yellow. Most cameras have the following list of options:



http://www.dawnconnersphotography.com

Both the **AUTO** and **CUSTOM*** (which will measure the balance in the room for you), settings work very well but if you know what type of lights you are working under it is best to choose the correct option from the list for the best accuracy. If you are using the **ANSM** photography kit then you should set the camera to the **FLUORESCENT** setting.

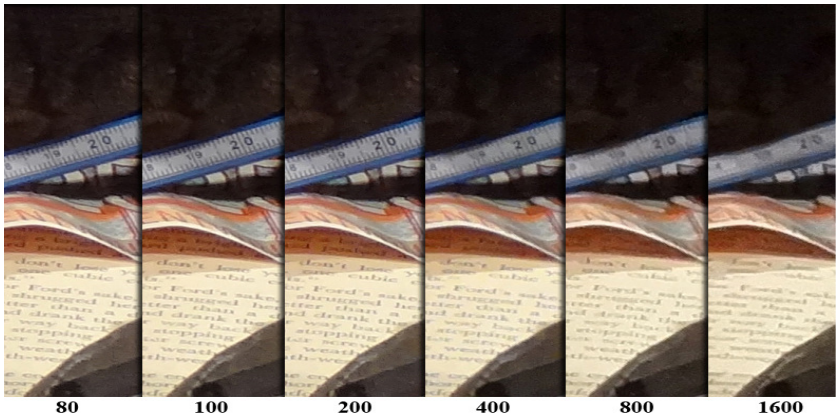
*Note: To use the **CUSTOM** setting properly, aim the camera at a white sheet of paper (under the lighting conditions you will be using) before pushing the button to adjust the balance.

ISO

Next you want to make sure that you are using the correct **ISO**. The term **ISO** comes from the days when film was still commonly used. It stands for the **International Standardization Organization** and was used to indicate the light sensitivity of the emulsion on film. How does this apply to digital photography you may ask? The **CCD**, or **Charge-Coupled Device**, is what has replaced film in digital cameras. An image is created by the **CCD** processing the data it receives when a picture is snapped and turning it into thousands of tiny cells called pixels. **ISO** is still used, and it now determines how sensitive the **CCD** is to light. Most digital cameras have an **ISO** range of 50 to about 1600. Here is a chart breakdown of when each **ISO** setting should be used:

ISO Setting	**When To Use It**
50-80	In bright light
100-200	Regular light
400	Low light
800	Very low light
1600	Extremely low lighting

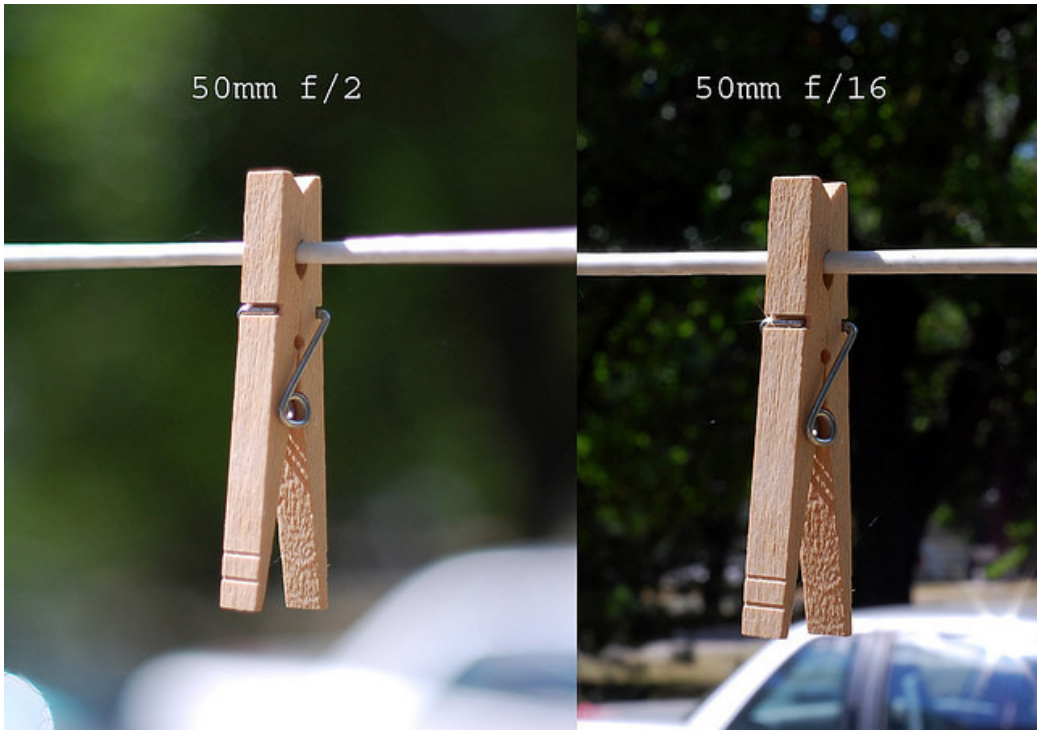
For our purposes we should be using the 100-200 range which will provide the best quality images with the least amount of 'noise.' Noise can happen when we use high **ISO** settings in low lighting and it shows up as red and green dots in our pictures. These dots (which are actually pixels) are the way that the camera copes with missing data. The picture can also become grainy (you can see the pixels) if the **ISO** is set too high.



http://reviews.cnet.com

Aperture

Just like the **ISO**, the **Aperture** is a term that has been carried over from film cameras. Unlike the **ISO**, the basics of this function have remained the same as they would have been in film cameras. The term **Aperture** refers to a diaphragm inside the lens which can be opened and closed to control how much light is entering the camera. How large the opening is also controls the **Depth of Field**, which is the amount of space that is clear in the picture. In other words, it is how far you can see before the image becomes blurry or unclear. The smaller the **Aperture**, the greater the **Depth of Field** is.



http://farm2.staticflickr.com

Aperture is also referred to as **f-stop** and looks like **f/** on the camera. This is based off of an international standard where each number is referred to as a 'stop.' The **Aperture** can be a little confusing from time to time as the larger the number is, the smaller the opening in the diaphragm is and as a result the less light there is being let in to the camera. Here is a helpful image that uses an actual lens to show what the **Aperture** looks like at several **f-stops**:

http://taylearningphotography.files.wordpress.com

Each stop lets in twice as much light as the stop above it, and half as much as the stop below it. For example **f/**5.6 will let in more light than **f/**6.3, but less than **f/**5. Here is a list of all of the possible **Apertures** you might encounter:

f/1.4, **f/**2, **f/**2.8, **f/**4, **f/**4.5, **f/**5, **f/**5.6, **f/**6.3, **f/**7.1, **f/**8, **f/**9, **f/**10, **f/**11, **f/**13, **f/**14, **f/**16, **f/**18, **f/**20, **f/**22, **f/**25, **f/**29, **f/**32

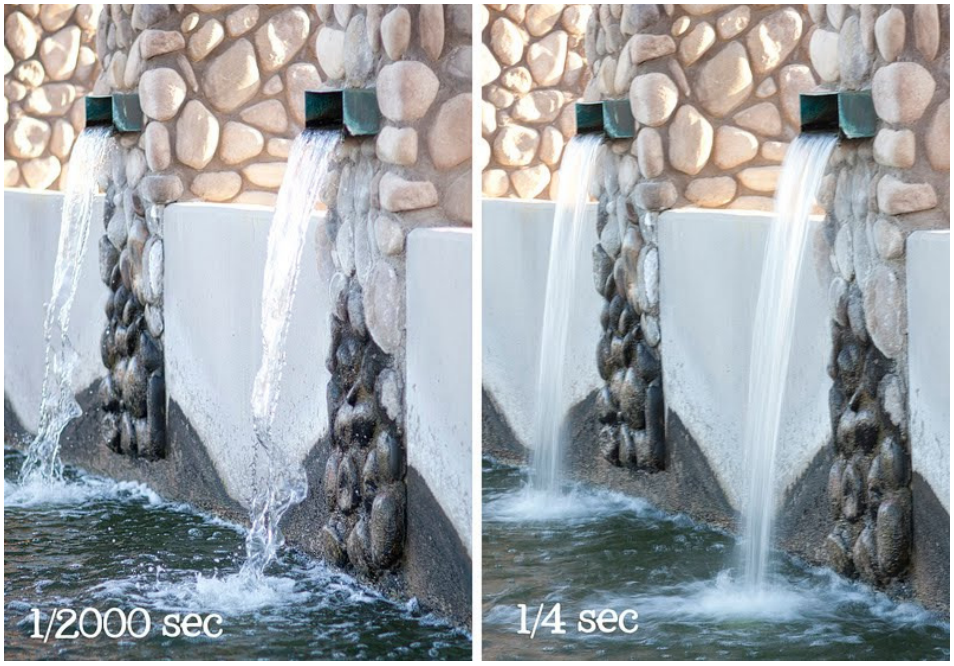
f/32 is most likely the smallest **Aperture** you will encounter, although some professional level cameras can go as small as **f/**64, **f/**96 or even **f/**177. For our purposes you will most likely be sticking between **f/**2 and **f/**8. Most of the shots you will be taking will be under regular to low light so you will need a larger **Aperture** opening. It is doubtful that you will be taking any artifact photos outside on a very bright day and require a smaller **Aperture**, but it is always good to know this information for future reference.

Shutter Speed

Just like in film cameras, digital cameras have shutters. This is what opens and closes to allow the image to be captured on the **CCD**. The **Shutter Speed** measures how fast the shutter is opening and closing and is measured in seconds. **Shutter Speed** is most often expressed in fractions of a second. Here are some numbers that you might encounter:

Between 1-15 seconds, 1/2 of a second, 1/4, 1/8, 1/15, 1/20, 1/25, 1/30, 1/40, 1/50, 1/60, 1/80, 1/100, 1/125, 1/160, 1/200, 1/250, 1/320, 1/400, 1/500, 1/640, 1/800, 1/1000, 1/1250, 1/1600, and 1/2000

Some cameras go even higher, up to 1/4000 or 1/8000 of a second. The slower the **Shutter Speed**, the more light the camera is letting in because the shutter is staying open for a longer period of time. This means that the faster the **Shutter Speed**, the less light is being let into the camera. For our purposes we will most likely be using a speed between 1/4 of a second up to 1/60 of a second. These speeds will be optimal in our regular to low light settings and provide the best quality images.



http://shabbyblogsblog.blogspot.ca

The Trick: Combining ISO, Aperture and Shutter Speed

Now that we have covered the basics, we have to find the best possible combination of the **ISO**, **Aperture**, and **Shutter Speed** for our lighting situation. Make sure that you have selected the right lighting setting from the **White Balance** options. Check that your **ISO** is set as recommended, between 100-200. Now it is time to find a complimentary combination of **Aperture** and **Shutter Speed**. Generally speaking, the faster the **Shutter Speed**, the larger the **Aperture** you want to compensate for loss of light. The same works going to opposite way, the slower the **Shutter Speed** the smaller the **Aperture**. Here is a basic chart to follow:

Aperture	**f/**2	**f/**2.8	**f/**4	**f/**4.5	**f/**5	**f/**5.6	**f/**6.3	**f/**7.1	**f/**8
Shutter Speed	1/60	1/30	1/15	1/15	1/8	1/8	1/8	1/4	1/4

Remember that these are just guidelines and that they may not always be the best options for you. For example, you may find that and **Aperture** of **f/**3.1 and a **Shutter Speed** of 1/15 work best for you. It all depends on how your lights are set up and any ambient light in the area. It is always a good idea to experiment with the settings to see what works the best for you.

It is advisable to bracket your photographs. This is done by taking one photo on the setting that the light meter on the camera advises (the meter measures how much light is coming into the camera). The meter is usually located on the right side of the camera screen. When you adjust the shutter speed the indicator will move up or down. When it moves up it means that the camera is letting in more light, and when it moves down it means that the camera is letting in less light. Adjust the settings and take one in the middle range. Next take a photograph at one setting above what the light meter recommends, and one below. In some cases the outer two brackets turn out better than the recommended setting.

Now that you know the basics of digital cameras you can move on to setting up the equipment in your photography designated area. In the next section you will find a list of equipment that comes in the photography kit and instructions on how to set it all up.

Equipment List:

1. Camera (your site's camera or the ANSM's)
2. Tripod

www.henrys.com

3. Backdrop Stand

www.henrys.com

4. Paper (white x 1, grey x 1)

http://www.colinharbut.com/paper/Pacon-Easel-Paper-Rolls.jpg

5. Light stands x 2
6. Lights x 2
7. Umbrellas x 2

www.henrys.com

Equipment Set Up:

Please note that the equipment can be set up in whatever order you desire, but for safety reasons make sure that stands, cords, etc. are out of the way while you are still setting up. You don't want anyone tripping and injuring themselves, breaking an artifact, or damaging expensive equipment.

If you are going to be using the same set up frequently it is a good idea to mark the position of the lamps, backdrop stand, and tripod with tape on the floor.

Tripod

1. Release the catch at the top of the tripod and remove the base that has the metal screw in it. This piece is called a shoe.
2. Look at the base of your camera, there should be a slot to screw the shoe into the camera. Once you have located this, place the screw into the slot and twist it into place with the tab at the bottom of the shoe.
3. Replace the shoe with the camera attached back onto the tripod and push the catch back into place. The camera should now be secure on top of the tripod.
4. To adjust the height of the tripod simply release the catches at the joints of the legs and lengthen or shorten as desired/required.
5. You can also adjust the height of the pole section that the camera is sitting on. To do so unscrew the wheel at the base of the section where the camera is sitting. Adjust the pole as desired and then tighten the wheel.
6. To flip the camera to a vertical position loosen the handle on the pole that is extending out from the tripod, adjust as desired.
7. You can angle the camera if it is sitting horizontally on the tripod by loosening the screw on the base of the section where the camera is.
8. To adjust the angle of the camera when it is sitting vertically, simply turn it back or forth on the tripod shoe.
9. You will need to adjust the tripod throughout your work in order to get the right height/angle etc. for you pictures.

Backdrop Stand

1. Unzip the bag and remove the two stand pieces that resemble tripods, and the two metal bars that have small rectangular slots on one end.
2. Open up the legs of the two stands and place them across from each other on the floor.
3. Attach the two bars together by pushing the silver end of the bar with the pin into the end of the other bar (not the end with the rectangular slot), letting the pin click into place. You may have to push the pin down slightly before it will fit into the other bar. Following these instructions will provide you with the smallest stand width. If you desire a larger backdrop, you can attach one or two more bars together then attach those to the slotted end bars.
4. Choose a colour of back drop paper and slide the tube onto the pole (to learn more about which colour will be more appropriate for your work see the section **Setting Up the Backdrop Paper**). Keep the roll of paper tied shut until the stand has been set up in its entirety.
5. Once the bar has been assembled, unscrew the washers that are on top of either stand and set them aside (do not misplace them as they will be required in a moment). Place the slots at either end of the bars onto the screws on top of the stands. Replace the washers that you removed at the beginning of this step and screw them into place.
6. The next step is to adjust the height of the backdrop. There should be two sets of knobs on either stand piece. You can choose to release one or both knobs depending on how tall you wish your backdrop to be (to learn more about this see the section **Setting Up the Backdrop Paper**). It is advisable that two people aid in the height adjustment of the stand as it is rather tricky and potentially dangerous to do with one person as the stand could fall over.

Lights

1. Loosen the knob in the middle of the stand, open out the legs (they are a little stiff so you might have to use some muscle) and then tighten the knob again.
2. Release the catches to make the stands taller, for most purposes you will only need to extend the lowest section to full height and the next section about halfway.
3. At the base of the lights there is an opening. Unscrew the metal screw that is positioned there.
4. Place the opening at the base of the light on the top of the light stand and tighten the screw.
5. Open the umbrellas and place each of the poles into the holes in the metal rim of the lights and through the whole in the plastic part of the light head. Adjust the distance of the umbrella from the light as desired, and tighten the screw to make sure they are secure.
6. Adjust the head of the light so that the umbrellas poles are level with the ground then tighten the knob so that the heads are secure. Position the lights as desired (for more information on set up see the section **Positioning the Lights** for the **Basic Set Up** or **Appendix B** for more specific guidelines) and plug them into the wall.
7. Once the lights have been positioned correctly, place some sand snakes (or something to weigh down the stands) around the legs to make sure they cannot be knocked over.

Setting Up the Backdrop Paper

- In order to choose which colour of paper (Grey or White) is best for you, you must know what items you will be photographing during that session
- The White is best suited for items that are darker shades like black, or rich colours such as reds or dark blues
- The Grey is best suited for lighter objects that are shades of white, or colours that might get washed out on the White like pink or light blue
- If you have any doubts about which colour of paper to use, try holding up the object in front of the different choices and seeing which looks best **(For examples see Appendix A)**
- Once the backdrop stand has been set up and placed in the correct position, and the lights have been put into place you will want to untie the paper and unroll it
- The paper should be laying on the floor in such a way that there is enough room to place a mannequin, an artifact, a stand, etc. (whatever you will need to take your pictures) on it without creating a fold in the paper
- Also make sure that the backdrop is tall enough for whatever you are photographing
- Make sure there are weights in the corners of the paper so that is stays laying flat and does not roll up
- You may need to put something inside the paper tube to make it tight against backdrop stand so that it does not unroll (plastic bags seem to work)
- Try taking a few practice pictures with the paper set up to make sure that there are no creases appearing in your shots
- This would also be a good time to test the **White Balance** before you start taking your artifact photos

Setting Up the Picture

Basic*

- Make sure you have a scale placed in the lower left corner of the image, close enough to the object that it is in the shot, but far enough out that you can crop it out if required without cutting off any of the artifact
- A scale is not required for detail shots
- **Always** use a tripod
- Position the tripod so that the backdrop fits in the screen of the camera with a little as possible peeking around the edges of the backdrop
- Depending on what you are photographing you may want to move the tripod closer so that the object fills more of the frame, you do not want to have too much blank space surrounding the artifacts
- **Always** use the self-timer for your pictures, even when using a tripod. This will prevent blurry images from being created. Setting it for 2 seconds works well for our purposes. The timer self-timer button will look like this:

- Consider how hot the lights are going to be and try to be as efficient as possible so as not to expose your artifacts to them for too long. Also make sure to turn off the lights and other equipment when it is not in use

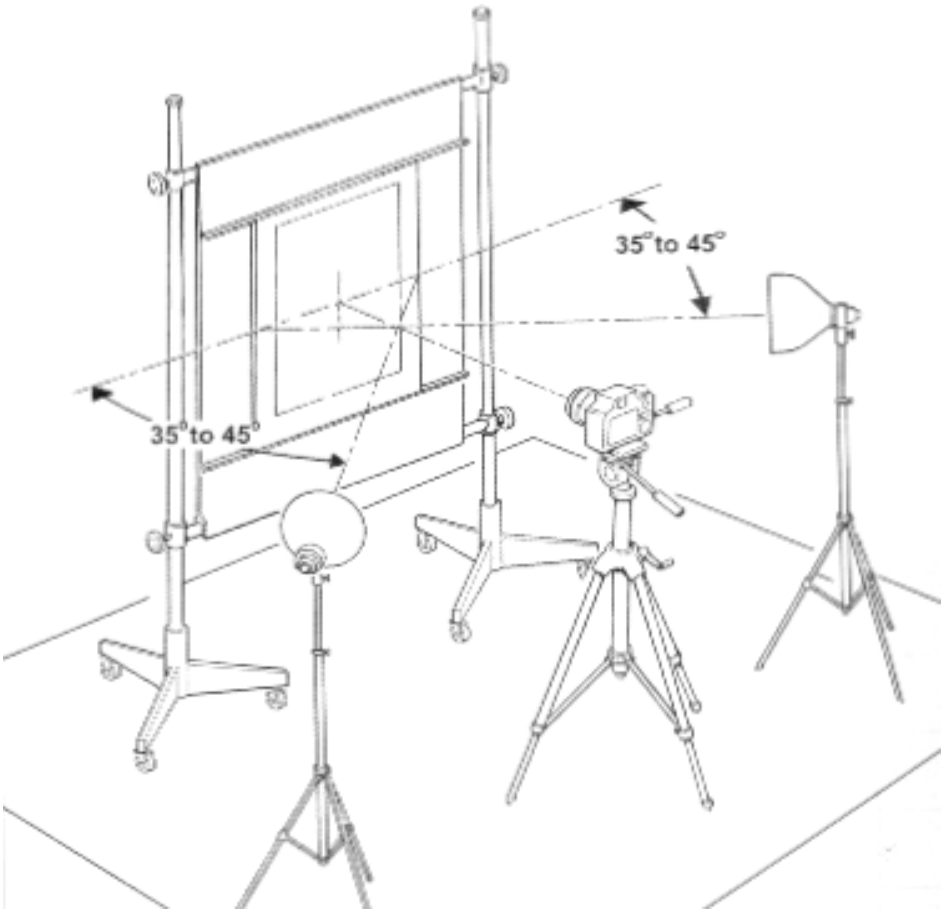
*For more specific information about set up (based on object type) please see **Appendix A**.

Positioning the Lights

Basic Set Up*

This set up will work best for: paintings, flat textiles (e.g. quilts, samplers, etc.), frames, feathers, porcupine quill panels, lithics, sculptures, furniture, masks, wooden instruments, and archaeological pieces. Remember to **not** use the umbrellas for this particular set up as they are not required.

- Position the lights on either side of the camera, equidistant from the tripod
- Make sure each light is the same height as the camera



Lighting Methods for Photographing Museum Objects

*For more information about specific lighting set ups please see **Appendix B**.

Conclusion

Following the completion of this manual it will be available on the ANSM website at www.ansm.ns.ca under the **Resources** tab. Members will be able to download their own copy to review as needed. There will also be a printed copy available with the photography kit for anyone who is borrowing it for use at their site.

Appendix A: Setting Up the Picture Tip Sheets

Large Objects

- Always be careful when working with heavy or awkward objects, if it is too heavy to move then **do not** attempt to do so as you could injure yourself or harm the object
- Shoot the picture looking down at the object from a slight angle
- Make sure the camera is stable, if the tripod can reach up high enough use that, otherwise use a ladder or scaffolding (if possible)
- Make sure the item fits onto the backdrop. If it is spilling over the edge of the paper than you will be able to see this in the final image. You may have to find an alternative method of photographing the artifact if it is larger than the backdrop. If it just fits, you may be able to crop the photo to make it work
- Large furniture pieces etc. should not be put on the photo paper. They can be photographed where they are **after** removing extraneous objects etc. Depending on the wall & area, you may be able to hang a fabric sheet behind the object

Small Objects

- If you are not using a Digital SLR and do not have a macro lens, make sure the camera is set on the macro setting (it will look like this:)
- Have the tripod and camera as close to the artifact as possible
- Angle the camera down towards the artifact in order to show the dimensions
- To eliminate shadows you can choose to raise the artifact app. 20cm off the ground/table (you could use a clear showcase or artifact mount)
- All small artifact photos should be taken using the backdrop fabric from your site's kit, which can be lifted over a table to allow for easier photographing
- Have the lights (without umbrellas) facing the showcase/artifact at a 45° angle

Textiles

- Place the artifact on the mannequin carefully
- Make sure the mannequin is going to fit the garment and that the mannequin won't be too big for it, we don't want to force it to fit and as a result damage the artifact
- If the mannequin is too small you can fix this by padding it to size with cotton batting and poly-fill (both available in the ANSM's kit). Shape comes first, then size
- If you are photographing period pieces, make sure to use the correct undergarments where possible to provide the garment with the correct foundation and shape. There is nothing worse than a garment being photographed with inadequate or incorrect foundation pieces
- If you do not have the correct undergarments, pad out the mannequin as best as you can to be the right shape. To pad out the bottom half you can place a skirt on the mannequin and apply the padding to the skirt. Try to photograph multiple pieces of the same shape at the same time*
- Be sure to take a slightly angled front view (so you can see the depth of the object), and a slightly angled back view, as well as any detail shots that you think are necessary e.g. buttons, badges, embroidery, etc. **(See pg. 26-28)**
- If the object fits on only the top half of the mannequin, like a **bodice** or **jacket**, then fill the frame with the top half of the mannequin only. You will not need to use a scale for this style of picture **(See pg. 29-31)**
- It is similar with **children's clothing** as they will be on a small mannequin, fill the frame with this and do not use a scale **(See pg. 32-34)**
- The same rules apply to undergarments like **corsets** and **bustles** **(See pg. 35-36)**
- For items that are on the bottom half of the mannequin, like **skirts** and **pants**, fill the frame with the bottom half of the mannequin. You can place

the scale in the lower left corner of these shots as per usual **(See pg. 37-39)**

- When taking pictures of **hats**, make sure you are using a head form. A male and female will be available in the kit so use the correct gender for the hat
- Remember that you are trying to showcase the hat, not the head form's face, so angle the camera in such a way that the hat is emphasized (have the camera angled downwards, not level with the object)
- As with the other textiles have a set of (slightly angled) front and back shots, and any detail shots that you think are important **(See pg. 40-43)**

* For even more information on padding mannequins see *Museum Mannequins* ed. Margot Brunn and Joanne White

Full Length Shots

Front

Back

Detail

Top Only

Front

Back

Detail

Children's Clothing

Front

Back

Detail

Undergarments

Front

Back

Bottom Only

Front

Back

Detail

Hats

Front

Back

Side

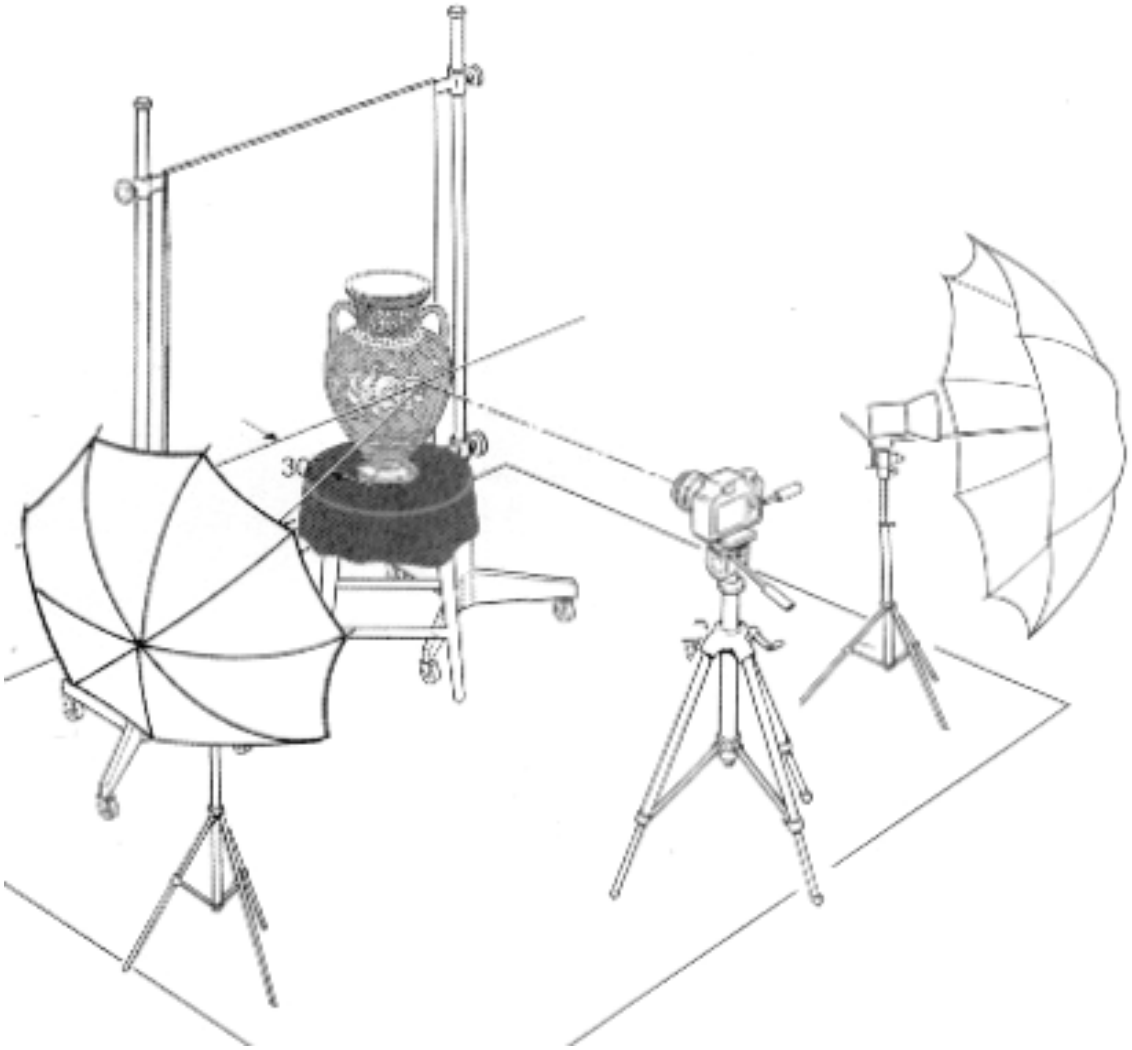
Detail

Appendix B: Positioning the Lights Tip Sheets

Lighting With Umbrellas

This set up can be used for: flat textiles (e.g. quilts, samplers, etc.), frames, carvings, wooden objects, earthenware, bas relief, decorative frieze (plaster, wood, metal), framed mirrors, argillite sculptures, polychrome sculptures, furniture, masks, musical instruments (wooden), gilded objects, costumes, and archaeological pieces.

- Make sure that the umbrellas have been attached to the lights securely as per the **Equipment Set Up** instructions
- Place one light on the left of the camera, at a 30-45° angle from the object, with the umbrella and light facing away from the object. This will be the key light
- Observe where the light falls on the object with the camera (you may want to take a few shots as the light often appears differently in an actual photograph)
- Reposition the light as required to reduce shadows and glare
- Place the other light on the left side of the camera. This light will act as the fill light (illuminating places the key light does not reach)
- Reposition the light on the right (with the umbrella and light facing away from the object) based on what you see on the camera screen and in the test shots. This is intended to minimize the shadows and reduce glare



Lighting Methods for Photographing Museum Objects

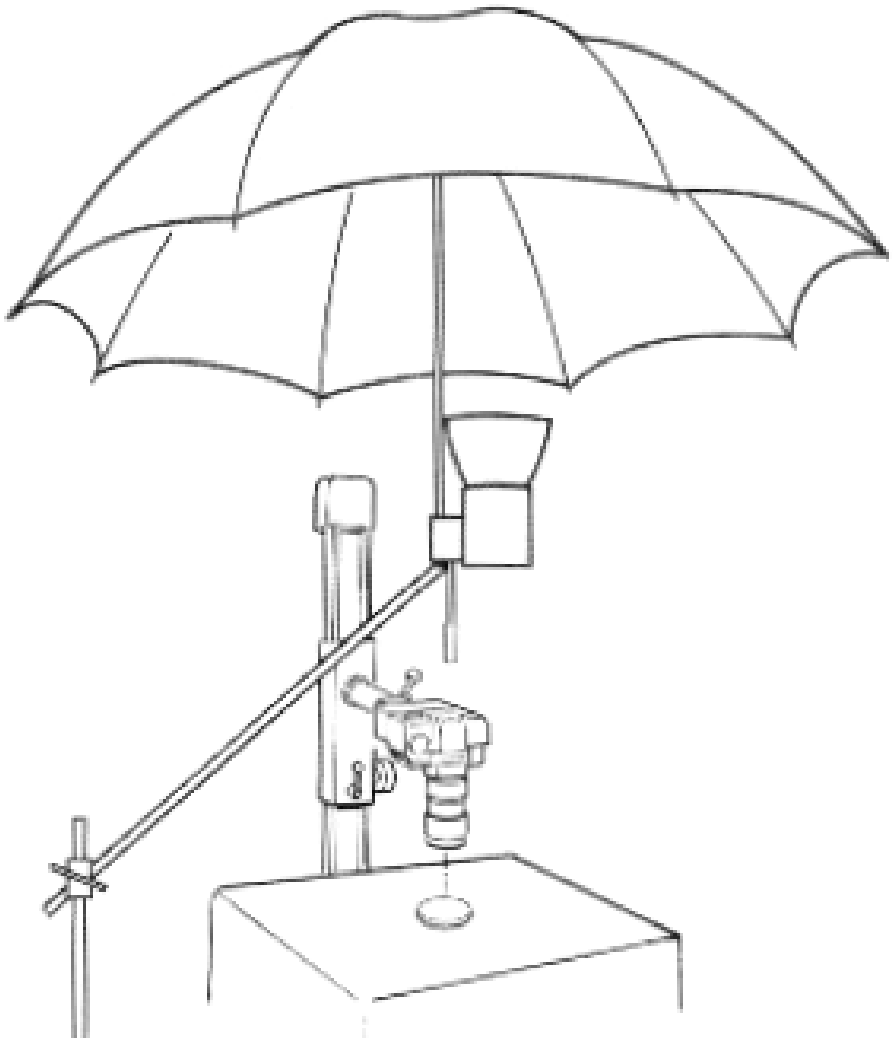
Lighting Reflective Objects

Reflective surfaces are probably the most difficult items in museum and archival collections to capture in photographs. There are basically three different methods that can be used to try and capture the best possible image:

Axial Lighting

This method is used to photograph artifacts with flat metallic surfaces like coins and medals.

- To prevent unwanted reflections appearing on the object you can cut a whole in a piece of black matt board and attach it over the camera lens
- Use the fabric backdrops from your site's kit for this task. Have the fabric hung on the wall or a doorframe (whatever works best for hanging) and over a table to position the object on
- Once the artifact is in place, position the camera so that you can see the surface of the object, but still get a sense of its depth
- Position the light with the umbrella attached (following the instructions in the **Equipment Set Up** section on attaching umbrellas) above the camera. Have the light and umbrella facing away from the artifact (aimed towards the ceiling). Be sure to leave enough room to work with
- This will diffuse the light and cause the surface of the object to be less reflective
- Make sure that the camera is set on the macro setting, see the **Small Objects** section for more information on how to do this



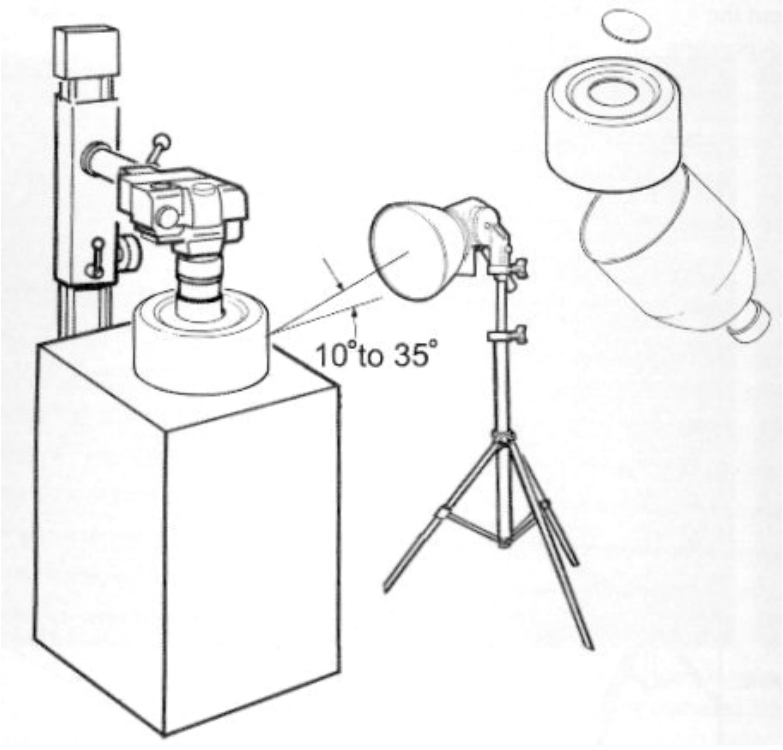
Lighting Methods for Photographing Museum Objects

Lighting With Cone Diffusers

This method works best with: illuminated manuscripts, coins (highly polished or more dull), medals, polychrome sculptures, metal masks, metal musical instruments, silverware (flatware), wet or waterlogged archaeological artifacts.

- Have the artifact set up on a table as in the **Axial Lighting** set up
- Create a cone diffuser to fit over the camera lens and extend down to fit over the artifact. This can be done with a white translucent 4-litre bottle, a lampshade, or mylar. Make sure that the cone does not cast any colour by inspecting it under a light source first
- Place one light at a 10-35° angle beside the set up. You can use an umbrella and have the light face away from the cone to further diffuse the light
- If this is still too bright, you can use a second light set up the same way on the other side of the artifact
- Make sure that the camera is set on the macro setting, see the **Small Objects** section for more information on how to do this

Method 1 *Lighting Methods for Photographing Museum Objects*

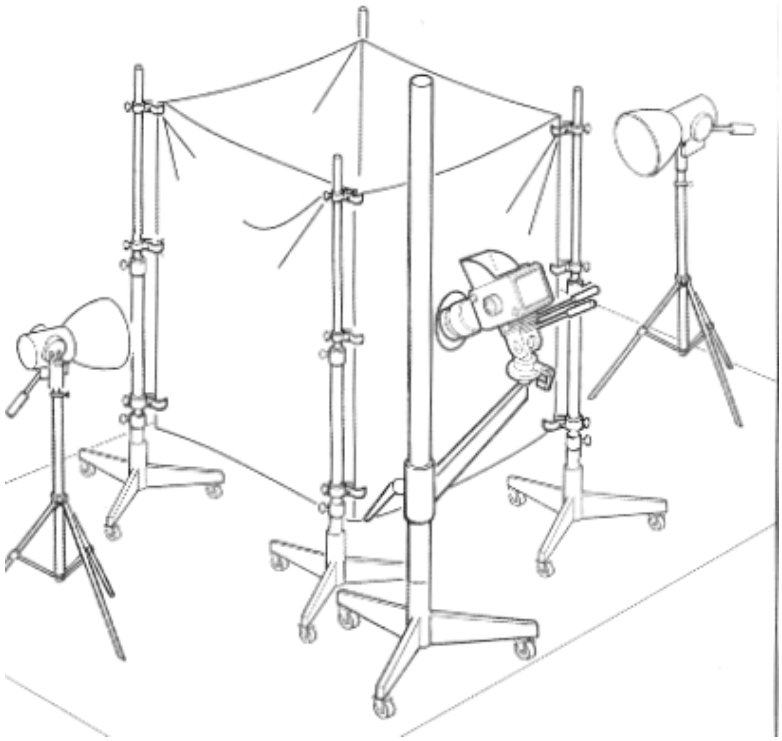


Method 2 *Lighting Methods for Photographing Museum Objects*

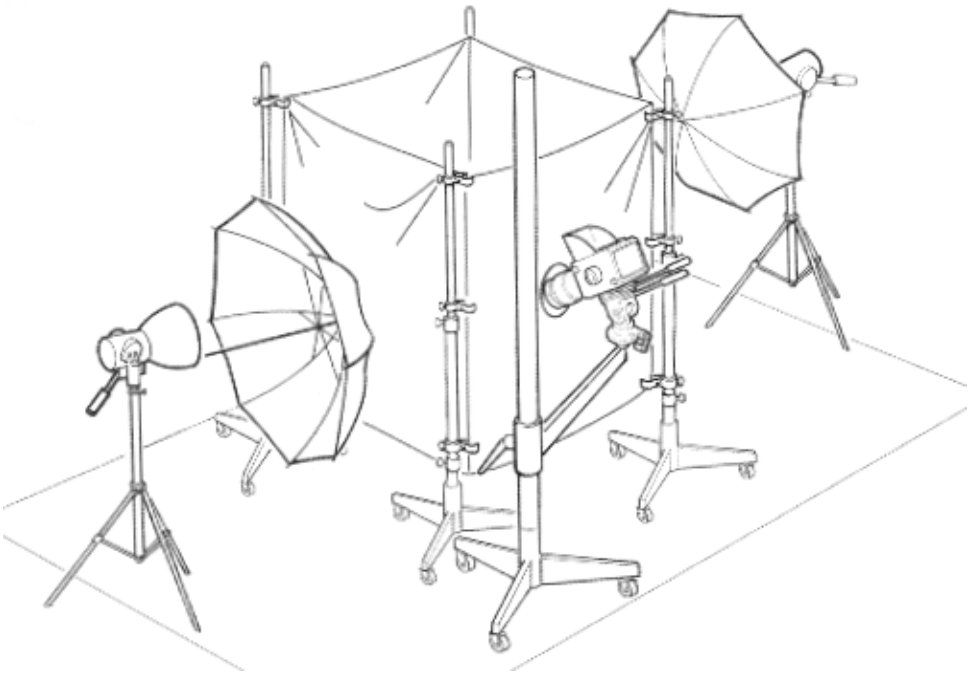
Tent Lighting

This method is best used for photographing highly reflective 3D objects such as jewellery, silverware, and glassware. The light is directed through fabric which softens and evens it, and causes the reflections on the object to be drastically reduced. This method is not suitable for matt objects because any detail on their surface will be lost in the image.

- This is the most difficult method to execute out of the three reflective surface lighting options because it requires a fait amount of set up, but the results are well worth the effort
- Have a small table set up covered in fabric, and place the object on top of this
- Set up white cotton or polyester fabric to hang on all sides of the table, cutting a hole in one piece for the lens of the camera to fit through
- Set up one light (without an umbrella) outside of the fabric
- Have the light facing the tent
- Position the light so that it is slightly above the height of the object
- If it is too dark or does not provide even lighting, set up the other light on the opposite side of the table
- If the lights are too reflective you may add umbrellas to further diffuse it



Method 1 *Lighting Methods for Photographing Museum Objects*

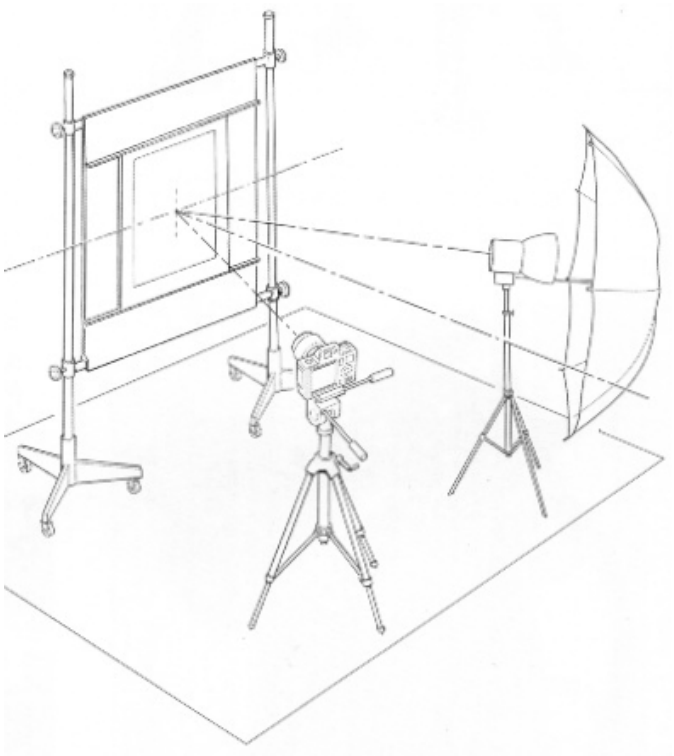


Method 2 *Lighting Methods for Photographing Museum Objects*

Specular Light

This technique intended to highlight the surface texture and irregularities on 2D and 3D objects. It is best used for treatment photos. It can be used to analyze: paintings, paper artifacts, unframed photographs, illuminated manuscripts and gilded frames. Remember, this is for treatment photo purposes only, not for artifact documentation.

- You will need a light with an umbrella so make sure that the umbrella has been secured correctly by following the instructions in the **Equipment Set Up** section
- Place the light (with the umbrella and light facing away from the object) beside the camera, making sure that everything is in line with the object



Lighting Methods for Photographing Museum Objects

*For even more information about lighting see *Lighting Methods for Photographing Museum Objects* by Carl Bigras, Mylène Choquette, and Jeremy Powell

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This blog was useful resource for how not to take artifact photographs, with a good of example of what you should do. It was also written by Karin.

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This website was particularly helpful when I was researching mannequin use. They listed the measurements of clothing from the Victorian period in the artifact records. It was also a good resource for examples of great artifact photography.