

Screen Printing in the Classroom

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Overview:

Using commercial techniques, diverse media, and featuring everyday subject matter, Pop artists sought to blur the distinction between “high” art and “low” art. These artists aimed for a more accessible artform. This lesson plan introduces screen-printing, the commercial process that Andy Warhol and others adopted in their art, and invites students to engage with an adaptation of the process firsthand.

Grades:

Paper Stencil Method: K-12

Screen Filler Method: 6-12

Duration:

Paper Stencil Method:

45-60 minutes (can be done in one day)

Screen Filler Method:

60-90 minutes (across two days)

Core Standards:

- Visual Arts
 - Strand CREATE: Students will generate artistic work by conceptualizing, organizing, and completing their artistic ideas. They will refine original work through persistence, reflection, and evaluation.
- Cross-curricular prompts can be given to meet core standards in math, social studies, science, and more. For examples, see the section Tips and Tricks.

Goals & Objectives:

- Students will be able to describe the process of screen printing.
- Students will learn about the role of screen printing in Pop art.
- Students will experience a version of the screen printing process to make their own creative work.

Materials:

Do not let the materials list overwhelm you! There are many ways to do this project, so the materials list provides alternative options for many of the materials.

- Screen:
 - Embroidery hoop
 - Screen material: 1 of the following
 - Screen printing mesh
 - Organza Mesh
 - Nylons
- Squeegee: 1 of the following
 - Plastic Squeegee
 - Blank plastic card (like a credit card)
 - Cardboard or foam core
 - Popsicle stick
- Ink: 1 of the following
 - Screen printing ink
 - Acrylic paint
 - Fingerpaints or washable tempera for younger groups
- Spoon for ink: 1 of the following
 - Plastic spoons or plastic knives
 - Popsicle stick
- Masking tape
- Heavy paper for printing
 - Watercolor paper or cardstock work best to avoid warping
- Paper to sketch out design
- Pencils
- *If doing Paper Stencil Method:*
 - Paper scraps (any color)
 - Scissors or X Acto knives
 - Cutting mat if using X Acto knives
- *If doing Screen Filler Method:*
 - Screen filler: 1 of the following
 - Mod podge
 - Latex house paint
 - Screen printing screen filler
 - Paint brushes

Introduction to Screen Printing and its Role in Pop Art:

- Show examples of pop culture and ask your group to identify the person, logo, product, etc. (Zendaya, TikTok, Crocs, Minecraft, for example.) Then show images that are *not* pop culture and ask your group to identify. (For example: Gustave Mahler, a Romantic composer; *Bleak House* by Charles Dickens, published in 1852; petticoats, worn from the 16th-19th centuries.)
 - *Those images that you quickly identified are examples of pop—or popular—culture. They are people, brands, and products that are popular today. The other examples might have been popular in their day, but are not as widely known today. Today we will talk about art that highlights popular culture.*
- *Have any of you heard of Pop art before? What do you know about it?*
 - If they have not heard of Pop art/don't know anything about it, you might say: *Pop art is short for “popular” art. Knowing that, what types of things would you expect to see in this art?*
 - Pop art refers to an artistic movement around the 1960s when artists like Andy Warhol felt there was a divide between their lives/experiences, and the art they saw in galleries/museums. They started to push against these methods and create art inspired by what they saw and interacted with every day. Pop artists often used imagery found in popular media, such as movies and comic books, or even everyday life, like advertisements and product labels. Often relying on mechanical processes and/or advertising techniques, the artist's hand was often visually removed from their work. The commercial techniques these artists employed (such as screen printing) were not traditionally considered high art, but the Pop artist hoped these practices would bridge a gap between the art world and the lives of the general public. Art would become, they believed, more accessible to a wider audience, due to the familiar imagery. Whether a critique or simply a commentary on popular culture, Pop art could only come about because of the economic prosperity of London and New York where mass produced commodities fueled consumerism.
 - While you need not give ALL of this information, gauge what your group knows about Pop art. Show samples that they might be familiar with.
- *Have any of you screen printed before?*
 - This is often done with t-shirts and tote bags.

Regardless of which method you choose for your class, watch this video for a brief overview of one method of screen printing. Though this does not demonstrate the paper stencil method, it still provides a beneficial overview of screen printing. Optional: Show the video to your class before giving instructions. <https://www.youtube.com/watch?v=dY4pEuSGb1Y&t=13s>



Art Project:

Set Up: Making the Screen

(This can be done before class or by the students, depending on what works best for your classroom. A video with detailed instructions on this process is linked below in the Tips and Tricks section.)

1. Take your embroidery hoop and separate the inner hoop from the outer hoop.
2. Optional: line the outer edge of the inner hoop with a bead of hot glue and allow it to harden. This will allow the screen to have something to grip, helping it to stay stretched tightly.
3. Cut your screen into a square 3-4 inches larger than your embroidery hoop on all sides. (You will want a good amount of screen hanging over in order to tighten the screen).
4. Lay your screen over the inner hoop and place the outer hoop on top.
5. Fit the outer hoop over the screen and the inner hoop and tighten the screw.
6. Gently begin pulling the edges of the screen outward, making your way around the hoop. This will tighten the screen in the embroidery hoop. For the best results, there should be very little give when you press your hand onto the screen.

Paper Stencil Method Instructions (Grades K-12)

- For this method of screen printing, you will cut your design out of paper to use as a stencil to block the ink from passing through the screen.
- Written instructions for this method can be found here:
 - <https://theartofeducation.edu/2017/10/easiest-screen-printing-lesson-ever/>
- A video tutorial of this method can be found here:
 - <https://www.youtube.com/watch?v=d7LCyOF-XQ0&t=45s>
- For a more durable design, you can use contact paper for your stencil. The contact paper will adhere to the screen, allowing the stencil to remain in place over multiple prints and even through a few washings. Detailed instructions on this method can be found linked in the Tips and Tricks section below.



Screen Filler Method Instructions (Grades 6-12)

Day 1

1. Plan out your design. Sketch out a few options on a separate sheet of paper/in a sketchbook before finalizing your design.
2. Once you have decided on a design, sketch your image on a loose piece of paper. Remember to make sure the image is small enough to fit within your screen with at least an inch between the edge of the image and the embroidery hoop. It is also helpful to outline your design with a sharpie or a pen so that it is easier to see when you trace it.

3. Place the screen face down on top of your design. The fabric should lay flat against the paper.
4. Trace your design onto the screen (be gentle so as to not tear the fabric). A dull, non mechanical pencil works best; a pen or a sharpie may also work, but the ink might bleed onto your print.
5. Flip your screen over so the flat side of the screen faces up. This will leave some space between the screen and your working surface so the screen filler doesn't stick to the surface underneath.
6. Using screen filler, paint around your design. Remember that the screen filler is used to block the ink from passing through, so paint all the areas that you want to remain *unprinted*.
7. After the screen filler has been painted on, bring your screen to the drying rack to dry overnight.

Day 2

1. Once the screen filler is fully dry, cover the edges of your screen with masking tape. This prevents ink from leaking through the edges onto the paper.
2. You are now ready to print! Lay your printing paper on your work surface with the screen on top, face down.
3. Spread a bead of ink across your screen, just above the design. Make sure it extends the whole width of your design. You don't need as much ink as you might think.
4. Hold the frame down firmly with your non-dominant hand (or ask a partner to help). With your other hand, hold the squeegee at a 45-degree angle and pull the ink firmly across the image, applying pressure downwards as you pull. Go over the image once or twice until the whole image area is covered evenly in ink.
5. Set the squeegee aside and gently lift the screen off your paper.
6. Bring your print to the drying rack.
7. As soon as you finish printing, scrape off any excess ink from both your screen and squeegee, and return the ink to the original container. Then, wash the ink out of your screen with cold water. If necessary, scrub gently on the inside of the screen. It is critical that you do this quickly and thoroughly so that ink does not dry into your screen, ruining it for future prints.

Modifications:

- For a more involved, but more precise version of the Screen Filler Method, you can use a drawing fluid and screen filler. With this method, you will paint your design directly onto your screen with drawing fluid. Once it has dried, you will cover the entire screen with a coat of screen filler. The drawing fluid acts as a resist to the screen filler, preventing the screen filler from adhering to the screen. After the screen filler has dried completely, the drawing fluid can be washed out of the screen, leaving the areas of your design free of screen filler and able to let

the ink pass through. A detailed description and tutorial of this method can be found here:
<https://www.youtube.com/watch?v=dMHRt8hXJAA>



- This method does not work with alternative screen fillers (latex house paint or mod podge) so if you choose to use this method, you will need screen printing screen filler.
- This would require another project day as you would need to wait for the drawing fluid to fully dry before applying the screen filler.
- Screen printing is often used to print designs on fabric like T-Shirts or canvas bags. Instead of or in addition to printing their design on paper, students can bring in a blank T-shirt, bag, hoodie, etc. to print their design on. The process is mostly the same for fabric as it is for printing on paper, but there are a few things to keep in mind:
 - When printing on fabric, make sure to use an ink designed for use on fabric.
 - Place a piece of cardboard or some other thick, flat material inside the shirt or bag between the layers of fabric. Otherwise, the ink may bleed through onto the back of the shirt/bag.
 - Make sure the surface of the fabric is smooth and flat before printing.
 - Follow any instructions on the container about caring for the screen printed fabric. Often, before the fabric is safe to be washed without risk of damaging the print, inks need to be heat set.





Extensions:

- Create an edition of prints! Printmakers work in series called editions. This is a set of one design that was printed multiple times. Make your own edition of prints by printing more than one image.
- Print with multiple colors! If time allows, add another element to your prints by using multiple colors. This can be done by using two (or more) different stencils that work together to make a final image. The second color will be printed after the first has dried completely.
 - If printing multiple colors with the Screen Filler Method, more materials are needed. Because the design made by applying screen filler is permanent, this will require a new screen for every color. However, you can reuse the embroidery hoops by removing the screen and replacing it with a new screen for the remainder of the design.
- Remember to sign your prints in the traditional method of a printmaker! Sign your name and write the date in the bottom right corner of your paper, just below the print. In the left hand corner, write its number in the edition of prints (for example, if you printed an edition of four images, number it 1/4, 2/4, 3/4, or 4/4). If you choose to title your print, write it between the number and your name.

Tips and Tricks:

- Videos Demonstrating Additional Advice
 - The following video includes helpful tips on making a screen from an embroidery hoop, using contact paper as a stencil, printing with multiple colors, and registering your image.
 - <https://www.youtube.com/playlist?list=PLcQVWtKqgmu7enx1AfLLmIB4-LpjroCC>
- Registration
 - Registering your image refers to the act of lining up your image so it fits exactly where you want it to be on the page. This can be done in a variety of ways. Detailed instructions on how to register your image can be found at the link above. This is not necessary in all circumstances, but helps in creating uniform prints that sit exactly where you want them on the page. It is especially helpful when printing with multiple colors so that each color lines up as desired.
 - An artist might choose to not perfectly register each ink color, which will create a bit of variety amongst prints. For example, if you look at Andy Warhol's images of Marilyn Monroe, her mole does not line up in the exact same place every time.
- Partner Up
 - Having a printing partner can make parts of this process easier, such as having one person hold the screen down as a second student prints. Additionally, one student can take finished prints to the drying rack while the printing student moves quickly onto the next edition (if printing more than one image).
- Inks
 - Ink can dry in the screen if proper care is not taken. If it does, ink will not be able to pass through those areas, thus impacting the screen for future prints. Keeping a spray bottle on hand to *lightly mist* the screen between prints can help.
 - The screen should always be washed out as soon as possible after printing to ensure the ink does not dry in the screen.
 - Set the screen upside down between prints to avoid getting excess ink on the table.
 - If choosing to use regular acrylic paint as your printing ink, please note that it does dry more quickly than the others, and special care will need to be taken to make sure the paint does not dry in the screen.
 - Check the details on your ink container to know the drying time. Some inks or paints will dry faster than others, meaning that depending on the length of your class and the drying time of your ink, you may be able to print multiple colors in one day.



- Cleanup
 - To simplify cleanup, make sure to cover your tables and have the students wear aprons.
- Tips and Tricks for Screen Filler Method
 - Any gaps in the screen filler will allow ink to pass through. After the screen filler has dried, inspect the screens closely by holding them up to a light. Light will not pass through where screen filler has been painted. Gaps can be patched not only with screen filler, but also with tape. Mod Podge dries transparent, so if you are nervous about any areas not being fully covered, simply add a second layer over the whole screen.
- Tips and Tricks for Paper Stencil Method
 - Thick, blocky shapes are best for this method. Though, when age appropriate, X-Acto knives will allow for more detailed designs.
 - Remember that the stencil will be used to block the ink, so a stencil cut like this:  will print an image like this:  while if this is your stencil:  this is what will print: 
- Project Prompts
 - To make this lesson cross-curricular, consider specific lesson prompts. For example:
 - Create an image that depicts two changes to the earth's surface—one must be a quick change, and the other must be a slow change (SEEd 2.1.2).
 - Create an image using at least three geometric shapes. Identify the angles in each shape used (Math 4.G.1).
 - Depict the causes and effects of the Great Depression (Social Studies 6.3.5).

Assessment:

- Can the student explain what screen printing is and its role in art?
- Did the student explore a variation of the screen printing process?
- Other metrics may be used to assess cross-curricular elements implemented in your own class.