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## **METHODICAL GUIDE OF SCREEN PRINTING**

*Painting works inspired by Geometry*

**Erasmus+**

« **Three voices** »

### **EDUCATIONAL OBJECTIVES - GENERAL REQUIREMENTS**

#### **General information in the field painting**

##### **Student:**

1. understands basic screen printing techniques, materials and terminology;
2. is able to prepare colors and templates for both classical and exposure printing;
3. processes the artistic assignment and applies it to the material;
4. can describe and justify individual solutions, use of composition, colors and materials.

#### **Workshop activities**

1. preparation of an art assignment on the topic of geometry;
2. preparation of templates on PC or by classical technique;
3. selection of colors and preparation of textile and paper material;
4. screen printing process application;

5. installation of artistic output.

## **EDUCATIONAL OBJECTIVES – SPECIFIC REQUIREMENTS**

### Cleaning the screens

1. Clean appropriately according to the condition of the screen:

### Removing adhesive tape/ rests of glue...

2. Tear away the adhesive tape from the screen!
3. Check if there is any remaining glue on the screen and remove it! Use alcohol and a wiping rag!

### Removing the old stencils

1. Check if the screen is free from any old stencils (the blue-green colour). If you want to reuse the screen and set up another stencil you have to remove the old stencil using the de-coating solution.
2. Attention: always use the protective gloves (the large green-ones) and appropriate eye protection!
3. Apply the de-coating solution using the sponge. Spread it on both sides of the screen and wait for 3 minutes. Then wash the screen with a stream of water. You can use the pressure gun.
4. If there is some remaining blue-green coloring from the old stencil, repeat the whole process again.
5. Attention: the screen must be free from adhesive tape before de-coating!

### Removing the pigmentation/ hases off the screen

1. Check if there are too many hases /= traces of pigment which dyed the screen/.
2. Removing the so called „hases“ is more or less an aesthetic issue but in some cases a lot of it can cause problems when applying the light sensitive emulsion.

3. The process of removing the hases takes approximately 2 days and it has 2 parts. On the first day (during the first phase) you apply the „hase remover“ liquid on the screen from both sides. Use a trough for laying the liquid on the screen! Afterward the screen has to dry completely.
4. Attention: the time of drying of the liquid in a well ventilated rooms is more then 12 hours. In a wet room it can take several days!
5. When dry the „hase-remover“ crystallizes to a white rime like structure and it looses its transparence.
6. When the screen is totally dry you can begin with the second phase of hase-removing. Apply the „A6“ liquid on the screen from both sides using a brush.
7. Attention: always use some protective gloves, the gas mask and appropriate eye protection! Avoid breathing the vapors/ dangerous gases.
8. Spread well the „A6“ liquid on the screen and wait for approximately 15 minutes. Then wash the screen using the pressure gun. The traces of pigments should disappear and the screen becomes clean and transparent. If not, repeat the whole process again!

### Degreasing

1. Always degrease the screen before applying the light sensitive emulsion! Otherwise the emulsion won't stick to the greasy places of the screen.
2. Apply the de-greaser (blue plastic bottle) on both sides of the screen using a sponge to spread it. Wash the screen immediately with a stream of water.
3. Attention: don't touch the screen after degreasing! You can handle/ manipulate/ with the screen just touching its frame!

### Preparing stencils for the exposure and exposing the screens

1. Draw or print black & white image on transparent/ seethrough paper or on plastic foil. The image can't be based on the scale of grey tones! The only

basic elements you can use for the image are: black or white dots, lines or areas. If you plan to realize a colour print prepare separate stencils for each colour.

2. Check if the black colour in the image is deep enough. Look at the image against the light, if you can see gray tones instead of black, make a photocopy of the image (scale 1:1) and double up the image sticking the copy to the original precisely. For sticking use just seethrough adhesive tape!
3. Check if the light-sensitive emulsion applied on the screen one or more days before is dry enough. If yes, you can continue preparing the exposure.
4. Open the vacuum frame and make sure the glass is clean (clean it if there is a dirt!)
5. Put the stencil in a legible/ readable way in the middle of the glass (check if it's not mirrored!). If you want to expose more stencils at once lay them next to each other.
6. Cover the stencils with the screen, the even part of the screen to the glass. Check if the stencils do not exceed the light-sensitive emulsion field! The screen should be placed in the middle of the glass.
7. Place the vacuum hose next to the screen and cover the whole screen with a thick large piece of cloth
8. Close the lid of the vacuum frame and switch on the vacuum pump (the green button).
9. Wait until the rubber cover copies the relief of the screen and then raise the vacuum frame and fix it to the wall. The glass part faces the lamp.
10. Plug the lamp and switch it on. Set the exposing time on the clock (usually 3½ min).
11. Make sure the dark boxes are being closed
12. Press the trigger and run away, don't forget to close the dark room door.

13. Wait until the exposure is ready then enter the dark room. Don't switch off the the lamp- let it cool down.
14. Switch off the vacuum and put down the vacuum frame. Open it and remove the screen. Run immediately with the screen to a shower stall.
15. Wash the screen from both sides with a stream of water for a couple of minutes. Do not use the pressure gun during developing the screen!
16. After a few seconds the image appears on the screen and it changes its colour. The developing is ready when the colour of the image is yellow or white (depends on the colour of screen).
17. Check the image looking through it against the light, the image should be open and prepared for the passage of colour during the print.
18. Dry the screen and start printing!

#### General instructions how to use the silkscreen paint

1. Choose the base taking into account the colour of material you want to print:
2. „Clear Soft Base“ for printing on light-coloured materials,
3. „Opaque Base“ for colour prints on dark materials,
4. „White Base“ for white prints on dark materials
5. Put appropriate amount of base into a plastic container.
6. Choose required pigments to dye the base, shake well before opening the lid, put a few drops of pigment into the base and stir it well.
7. Do not exceed the maximum amount of pigment for each paste: „Clear Soft Base“ up to 4%
8. „Opaque Base“ up to 10%
9. „White Base“ up 3-5 %
10. The consistence /density of the paint should remind you of yoghurt, add some water if it seems too thick! Stir well again!

11.If you are not going to use the paste straight away you can add some retarder gel to stop the paint drying in the screen.

12.Apply the paint!

### As for the prints on fabric

Exposing the printed fabric to the heat (approximately 150 °C) for 5 or more minutes makes the print wash-resistant. Iron well the underside of the print to achieve this temperature or cover the surface of the print by a piece of parchment paper/ wiping rag and iron it covered!

### Stitched paintings

As part of a workshop focused on screen printing, students tried out sewn images. They introduced the technology of basic sewing, then the technology of working with an adhesive base material - interlining. To create their own designs, they used textile materials, threads, various types of small preparation - zippers, strings, lace, pins, threads.

## **EDUCATIONAL RESULTS IN SCREEN PRINTING**

1. proposal preparation;
2. material selection;
3. application to the underlying adhesive material;
4. completion of manual applications.

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