"Approved" Director of

TOO Steam Lab

_____ / A.A. Akbar

/ "01" January 2022

Safety precautions in STEAM lessons

1. General rules

1) Only start work with the teacher's permission. Do not get distracted while you are working.
2) Do not use tools that you have not learned the rules for handling.
3) Use tools only for their intended purpose. Do not Use tools only for their intended purpose. Do not drill holes with scissors.
4) Do not work with defective tools.
5) Store tools and equipment in a designated area.
6) Keep your workplace clean and tidy.
7) Lay out the tools in the order given by the teacher.
8) Do not talk while you are working.
9) Do the work carefully.

2. Rules for preparing the workplace before starting a lesson

1) Put a chequeboard on the desk, a work board if necessary.
2) Prepare the necessary Steam-box - materials and tools for the job.

3. Rules for cleaning your own workplace

1) Put the product you made in the lesson in a product box or on a shelf.
2) Collect scraps of material and rubbish from the table.
3) After working with the plasticine, clean the work board if there are any traces of plasticine left. Scrape off the plasticine stuck to the floor - throw the dirty ones in the rubbish, put the clean ones in the Steam-box.
4) Wipe the tools and desk lid with a cloth.
5) Dry your hands thoroughly with a cloth and wash them with soap and water.
6) Take off your work clothes.

4. Rules for working with a sewing needle

1) Always keep the needle in the needle holder.
2) Do not leave the needle at the workplace without thread.

3) Only pass the needle in the needle case and with thread.
4) Do not put the needle in your mouth or play with the needle.
5) Do not stick the needle into the clothing.
6) Check the number of needles before and after work.
7) Keep the needle holder with the needles in the same place only.
8) Do not get distracted while working with the needle.

5. Rules for handling sharp-tipped objects (skewers, toothpicks, awl, etc.)

1) Keep the tool in a safe place.
2) Work with sharp objects only on the backing board.
3) Make the puncture by turning your hand to the right and left.
4) Be careful! Do not injure your hand holding cardboard or any other material.
5) Put the sharp-edged object away in its box after work.

6. Rules for using a box cutter

1) Extend a small part of the blade.
2) Work with a stationery knife on the worktop.
3) When making the cuts, hold the knife firmly with one hand and the material you are working with with the other.
4) When the knife is not in use, the blade must be hidden inside.

7. Rules for working with adhesive

1) Use a brush when working with the glue, if necessary.
2) Take as much glue as you need to do the job at this stage.
3) Apply the glue to the middle of the sheet and spread evenly to the edges. The edges should always be well coated.
4) When the paper is smeared with glue, you must wait a little longer for it to soften and stretch, otherwise wrinkles and creases will occur. Deformation occurs more often in the transverse direction than in the longitudinal direction.
5) The part has to be tried on first. Then apply glue.
6) Wipe off any excess glue with a soft cloth or tissue paper, pressing gently.
7) Wash your brush and hands well with soap and water after use.

8. Rules for working with a compass

1) The compass marker is ready for use when the needle of the compass and pencil are aligned.
2) Take the correct size, tighten the screw.
3) Hold the circular by the head and trace around the circle.

9. Rules for working with a ruler and pencil

1) Hold the ruler with your left hand and the pencil with your right.
2) Work only with a well-honed pencil.
3) Draw the line from left to right.
4) When drawing with a pencil, hold it obliquely.
5) Do not press the pencil and do not move the ruler.

10. Rules for working with clay

1) Only prepare clay with the permission or under the supervision of the teacher.
2) Modelling should be done on a lined board; do not put the clay on the table.
3) Keep the clay in a box separate from notebooks and books.
4) Wash your hands well with soap and water when you have finished.

11. Rules for working with scissors

1) Keep your workplace tidy.
2) Check that the tools are in good working order before use.
3) Do not work with scissors that have been loosened.
4) Work only with tools that are in good working order: well adjusted and sharpened scissors.
5) Only work with scissors at your workplace.
6) Watch the movement of the blades during operation.
7) Place the scissors with the rings facing you.
8) Feed the scissors with the rings forward.
9) Do not leave the scissors open.
10) Store the scissors in their sheath with the blades facing downwards.
11) Don't play with scissors, keep scissors away from your face.
12) Use the scissors for their intended purpose.

12. Rules for working with clay

1) Choose the colour of clay you want to work with.
2) Cut out the required amount of plasticine with a stecker.
3) Warm the piece of plasticine with the warmth of your hands to make it soft.
4) When you have finished, wipe your hands well with a soft, dry cloth and then wash them with soap and water.

13. Instructions for working with thermoplastic adhesive

1) Take care of the workplace first. The surface must be protected from the glue by laying a silicone mat or cardboard sheet on it. To keep your hair out of the way, put it away and put on your hands.

protective gloves, if necessary. The children work with the hot-melt under clear supervision of the teacher. Preferably, if the room is well ventilated.

2) Position the gun in an inclined position, resting it on the special stand with the spout facing downwards. Make sure the nozzle is pointing towards the protected area, as some glue may leak out during heating (no more than 7 mm).

3) Connect the heat gun to the mains and press the power button, if there is one. If there is no button on the body, the heating process will start as soon as it is plugged in.

4) Filling the glue gun by hand is simple - there is a hole at the end of the tool for the glue sticks. The "cartridge" or rod is inserted smoothly as far as it will go. No foreign objects should be inserted into the hole. Only suitable adhesive of the appropriate diameter is used. The hotmelt must not be reused.

5) Depending on the manufacturer of the heat gun, the tool will take 3 to 5 minutes to heat up. During this time, do not pull the trigger too hard, which could cause the tool to malfunction.

6) If the heat gun supports temperature adjustment, set the desired temperature. The recommended range is between 170 and 200 degrees Celsius. If you set the temperature lower, it will take longer for the tool to melt the hot melt adhesive in the chamber. A high temperature will cause the glue to boil and "threads" will appear.

7) All you have to do is gently squeeze the trigger to start dispensing the adhesive. The amount of molten adhesive that can be dispensed depends on how hard the trigger is pressed.

8) Clean, degrease and dry the parts to be glued together. Once the glue has been applied, press the surfaces tightly together using a thick cloth. Be aware that the adhesive is still very hot at this stage, so do it carefully.

9) If glue stops coming out of the nozzle, it means the rod has run out. A new portion is inserted into the hole at the end. Press the trigger and hold the rod so that it enters the feeding mechanism.

10) When you have finished, unplug the tool from the mains. Next, set it in an inclined position and leave it to cool down for 10 minutes. Any glue residue may come out of the nozzle during this time, so be careful.

11) Once the tool has cooled down, it may be stored in all positions. Preferably, the location should be protected from dust and debris.

12) As the pieces are glued together, thin threads will form, similar to spider webs. These are easy to remove after curing.

14. Rules for working with certain chemicals

1) It is compulsory for all students working with chemicals (baking soda, starch, alcohol, iodine, etc.) to comply with these instructions.

2) The presence of unauthorised persons in the classroom during the experiment is only permitted with the permission of the teacher.

3) Pupils may not take any substances out of the classroom or into it without the permission of the teacher.

4) Before carrying out the experimental work, each student should wear a gown, goggles and gloves if necessary.

5) When carrying out experiments involving the heating of liquids to boiling point, using corrosive solutions, the students must use personal protective equipment (as instructed by the teacher).

6) Students with long hair should not leave it loose so that it does not come into contact with laboratory equipment.

7) Students must listen carefully to the teacher's safety briefing in accordance with the particulars of the work to be done.

8) The students may only start an experiment with the teacher's permission.

9) When carrying out laboratory and practical work, pupils should strictly follow the safety regulations and make sure that no substances get on your face or hands, since many of them cause irritation to the skin and mucous membranes.

10) ***No substances should be tasted in the laboratory!*** You can only sniff substances by gently moving your hand and not by leaning over the vessel or inhaling them full-throated.

11) When carrying out the laboratory work, the pupils should repeat exactly what the teacher does to show them how to carry out the experiment correctly.

12) On the first request of the teacher, the students must stop the work (experiment) immediately. The work may only be resumed with the teacher's permission.

13) Students are not permitted to conduct any experiments on their own that are not covered in this work.

14) Students must report any spilled or scattered reagents to the teacher or lab technician immediately. Students may not clean up any substances on their own.

15) If students are injured (cuts, burns, etc.) or feel unwell, they should report this to a teacher or lab technician immediately.

16) Do not leave switched on heating appliances unattended.

17) Students must wash their hands with soap and water at the end of the laboratory and practical work.