

Form follows function

SCHOOL, WORKSHOP, MAKERSPACE

Age 14–18, 2 x 3 Hours, 1 project day

Recycling, upcycling, cardboard furniture, packaging, making

Product design, furniture design, Marcel Breuer, Ludwig Mies van der Rohe

YOU WILL NEED

A4 paper, A3 paper, grid paper, strong corrugated cardboard (approx. 4 m² per item of furniture), lead pencils, ruler, folding bone, scissors, craft knives, cutting board, cutting ruler, sandpaper, wood glue, tape

INSTRUCTIONS

In this module participants learn about the design of everyday objects at the Bauhaus. Design was not taught as a subject in its own right at the Bauhaus. Instead, training took place in the workshops (like weaving and joinery), where practical work and theoretical questions of design were addressed together. The creation of “comprehensive artworks” (Gesamtkunstwerke) through collective endeavour was given special weight. After Walter Gropius proclaimed the motto “art and technology, a new unity” in 1923, the design of prototypes for industrial manufacturing became a top priority. Now questions of design were explored through a precise analysis of the problems and materials.

After investigating Bauhaus design classics, participants design and build their own furniture. This might be done in collaboration with a local makerspace, in a workshop at a college of design, or any other suitably equipped room.

Exploring the material is a significant element of this module. Rather than using classic materials like wood or plastic, the module adopts the environmentally friendly idea of upcycling. Corrugated cardboard is used. Participants will be familiar with this lightweight material from its everyday use in packaging. Ideally old corrugated cardboard can be recycled, for example from packaging used for furniture or large electrical goods, or removal boxes.

Step 1: Participants discuss the motto “form follows function” and look at pictures of well-known Bauhaus furniture and everyday objects. First, they explore the function, environmental parameters and production of the materials that were common at the time. Next they discuss the material question from today’s perspective – in relation to resources, biodegradability, reusability, quality, health and price. The idea is to put the idea of recycling and upcycling into practice. For that reason the properties of (corrugated) cardboard are investigated.

Step 2: Individually or in small groups, participants sketch out their ideas for simple furniture. They should pay attention to function, form, stability and whether the design can be realized using cardboard.

Step 3: After a discussion of the draft designs each group chooses one design and plans its structural realization (using crossbars for stability). The required elements are identified, sketched and sized.

Step 4: Paper templates at scale 1:1 are cut out and transferred to the cardboard.

Step 5: The elements are carefully cut out using a craft knife, cutting ruler and cutting board (with supervision and assistance from workshop staff).

Step 6: When all the elements have been cut out, cuts are made for the pieces to slot together. This must be done especially precisely if the final result is to be stable.

Step 7: Now the individual elements are slotted together. Rough edges can easily be sanded smooth.

Step 8: Depending on the design and type, a covering may be needed. This can be made of the same cardboard. If the form is rounded it will be better to use single-layer corrugated cardboard. The covering can be fixed in place using wood glue and tape (but remember, then it cannot be removed easily). The furniture is ready to use.

BACKGROUND

When he founded the Bauhaus in 1919, the architect Walter Gropius was seeking to bring together the arts and crafts. The goal was to train a new type of artist in the field of design and architecture to create products suitable for industrial mass production. The school set out to shape society as a whole by influencing the way people lived. Creating collective “comprehensive artworks” (Gesamtkunstwerke) was one important aspect. Interdisciplinarity and experimentation were also central to the educational concept.

Training at the Bauhaus began with a single-semester preliminary course, using new and experimental educational methods to impart knowledge of materials and basic design principles. The students developed spatial structures, concentrating on materials, construction, function and production. The aim was to optimize production and minimize use of materials, energy and time.

REFERENCE TEXT ON DESIGN AT THE BAUHAUS

Text by Flora Selunka on product design at the Bauhaus:

“Geometrical, monochrome, industrial is how many people imagine ‘Bauhaus-Design’. Marcel Breuer’s tubular steel furniture designs in particular have gone down in history as design classics. Yet design was never taught as a subject in its own right at the Bauhaus. Instead, training took place in the workshops (like weaving and joinery), where practical work and theoretical questions of design were addressed together.

The craft aspect was very prominent in the early years. The workshops mostly produced hand-made one-off pieces which have in the meantime become ‘valuable’ works of art. After Walter Gropius proclaimed the motto ‘art and technology, a new unity’ in 1923, the design of prototypes for industrial manufacturing became a top priority. Now questions of design were explored through a precise analysis of the problems and materials. Apart from the famous tubular steel furniture, other successful products included lamps for Kandem and wallpaper patterns for Rasch. The work of designing prototypes led to discussions about the understanding of authorship and the relationship between art and design. This

often led to conflicts over patents and licenses, where both the designers personally and the Bauhaus as institution claimed the rights.

Prioritizing 'the needs of the people instead of the need for luxury',

Hannes Meyer emphasized the social mission of design, which he sought to realize through affordable products from the Bauhaus.

Professional marketing of Bauhaus products was crucial for the School's reputation as well as its economic survival. This aspect included the design of all the Bauhaus's written materials: from its own publications to its letterhead to the final diploma. Even the German spelling rules were altered: 'we write everything lower case as it saves us time'."

IMAGES, REFERENCES, BOOKS, LINKS

Information on Marcel Breuer, for example at bauhaus100:

<https://www.bauhaus100.com/the-bauhaus/people/masters-and-teachers/marcel-breuer/>

Images of Bauhaus design objects:

<https://www.bauhaus100.com/the-bauhaus/works/joinery/>

<https://www.bauhaus100.com/the-bauhaus/works/metal/>

<https://www.bauhaus100.com/the-bauhaus/works/plastic-arts/>

Inspiration for cardboard furniture:

<https://archzine.net/diy-ideen/diy-moebel/mobel-aus-pappe/>

<http://www.mobilier-orika.com/fauteuil-en-carton.html>