

E D U C A T I O N

FRANK BAUER

Friday 20 June – Friday 26 September 2025

R E S O U R C E

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Bold, creative and responsive to developments in the contemporary visual arts, the University of South Australia's Samstag Museum of Art is a leading university art gallery known nationally for its outstanding artistic programming. Samstag aims to stimulate, challenge and engage its audiences with a program of diverse and innovative exhibitions, publications and public activities. We invite all our students, staff and visitors to the University to experience the creativity, innovation and excitement of many great Australian and international artists through Samstag.



**University of
South Australia**

The University of South Australia acknowledges the Kurna, Boandik and Bangarla First Nation peoples and their Elders past and present, who are the First Nations' Traditional Owners of the lands that are now home to the University of South Australia's campuses in Adelaide, Mount Gambier and Whyalla. We extend that respect to all Aboriginal and Torres Strait Islander peoples who visit Samstag and access this resource from other areas of Australia.

HOW TO USE THIS RESOURCE

This education resource provides a range of learning materials designed to foster students' authentic engagement with the **Frank Bauer exhibition**.

Contextual information and a series of educational activities are provided to support teachers in delivering content related to the exhibition. Students will explore key ideas and issues through a variety of innovative learning experiences designed to activate creative and critical thinking and encourage reflection.

Activities have been designed to help prepare students to critically and meaningfully engage with the works exhibited in the exhibition and gain the most from their art-viewing experience. These activities are structured in three sections: **Before the Gallery**, **At the Gallery** and **After the Gallery**. Each section is designed to support teachers and students during the different stages of the viewing process. Students are encouraged to actively engage with key concepts and techniques to build on their current level of understanding, discover new ideas and respond to what they have seen and learnt.

The **At the Gallery** experience is delivered by Museum staff and will engage with the artworks on display at Samstag.

Definitions of **bold terms** are provided in the glossary at the end of this resource.

Activities have been designed to allow adaptation by teachers to accommodate specific student needs and available resources.

All activities may be undertaken in individual, paired, group or whole class configurations.

This resource can be used on its own or paired with a visit to Samstag to view the *Frank Bauer* exhibition.

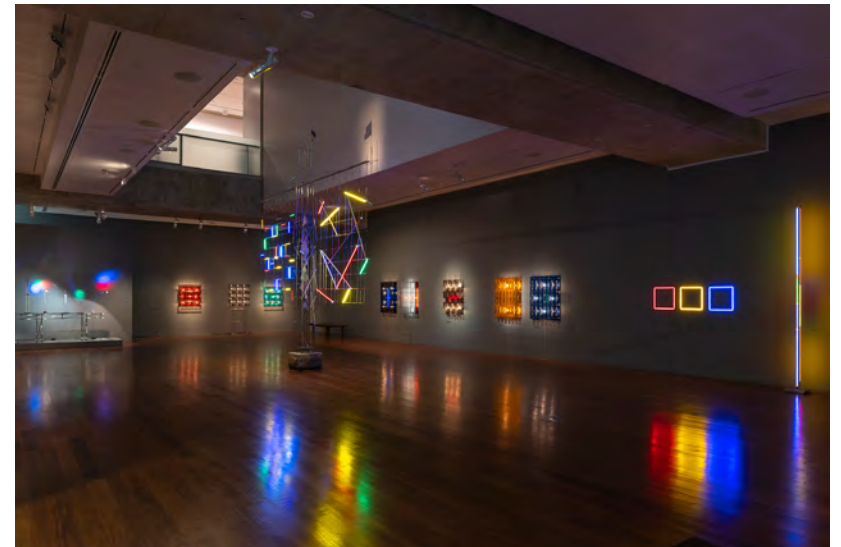


Image 1: Frank Bauer, *Frank Bauer*, 2025. Installation view at Samstag Museum of Art. Photograph by Sia Duff.

This resource is aligned to the objectives set out in the *Australian Curriculum: Visual Arts (Version 9.0)* document.

White boxes outline the *Australian Curriculum: Visual Arts (Version 9.0)* content descriptions (for bands 7/8 and 9/10) addressed by the activities in each section of this resource.

Black boxes identify the general capabilities relevant to activities in each section of this resource:

CCT: Critical & Creative Thinking	IU: Intercultural Understanding
DL: Digital Literacy	LIT: Literacy
EU: Ethical Understanding	NUM: Numeracy
	PSC: Personal & Social Capability

While this resource focuses on secondary Visual Arts education, we encourage teachers of other age groups and subjects to adapt content and activities to suit their class context.

This exhibition presents a unique opportunity to address the Sustainability cross-curriculum priority through Frank Bauer's commitment to sustainable design.



Image 2: Frank Bauer, *Armadillo Lamp*, 2024, stainless steel bars with Teflon, 6 xenon lamps, 1200 (h) x 60 (w) x 150 (d) mm. Installation view, *Frank Bauer* at Samstag Museum of Art, 2025. Photograph by Sia Duff.

Entry to the Museum and school tours are free.

All welcome.

Open Tues – Sat, 10am – 5pm

School visits can be scheduled outside normal opening hours if needed.

Samstag Museum of Art is located on the University of South Australia's City West campus, an easy 15-minute walk or free tram ride from the city:

55 North Terrace

Hawke Building

University of South Australia – City West Campus

TARNTANYA/ADELAIDE SA 5000

Entrance located at the corner of North Terrace and Fenn Place.

For more information or to make a booking, please contact Sarah Buckley: sarah.buckley@unisa.edu.au

For general enquiries:

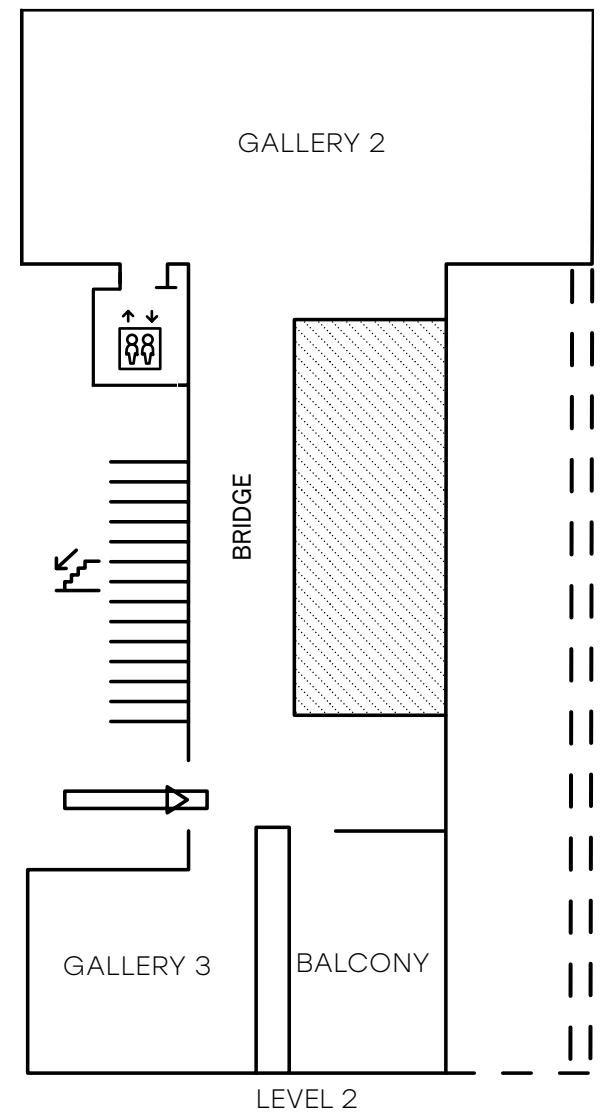
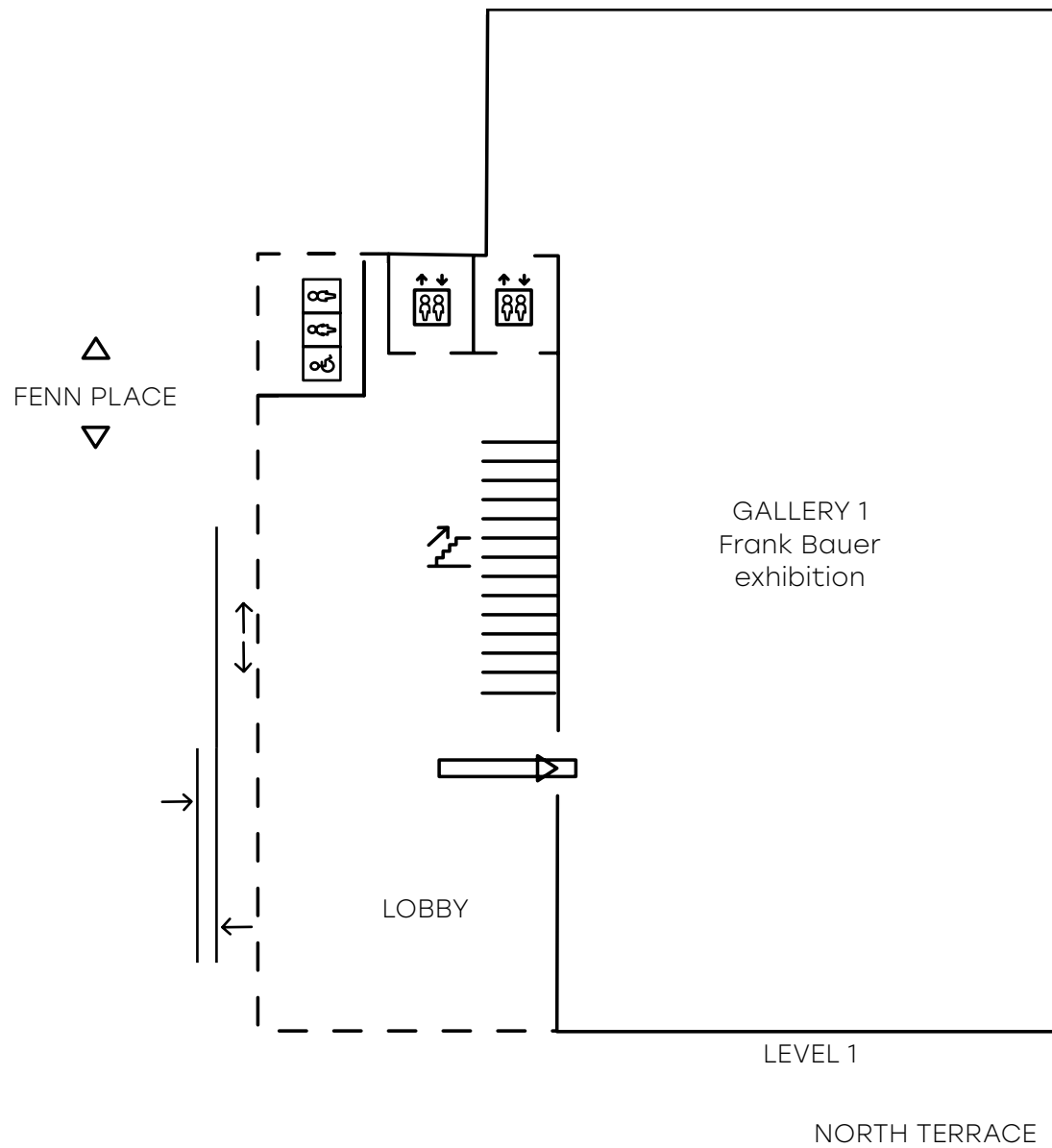
T / (08) 8302 0870

W / www.unisa.edu.au/connect/samstag-museum/

E / samstagmuseum@unisa.edu.au



Image 3: Samstag Museum of Art, Hawke Building, University of South Australia, City West Campus, 2007. Photograph by Sam Noonan.



SHARING STUDENT WORK

Samstag would love to see any work produced by students in response to this resource.

Please feel free to email images of student work to sarah.buckley@unisa.edu.au

OR

Tag posts when sharing student work through your school's social media platforms:

@samstagmuseum

#educationatsamstag



Image 4: Frank Bauer in his studio, 2024. Photograph by Sia Duff.

FRANK BAUER

Frank Bauer is an artist and designer with a practice that spans 55 years. Born in Hanover, Germany, in 1942, Bauer has lived and worked in Adelaide since 1984. His multi-disciplinary practice is founded on his deep knowledge of metals and his technical expertise at working with them. Bauer has taught extensively in the field of design, both in London and in Adelaide. In 2000, Bauer was the subject of a major survey exhibition at the Powerhouse Museum, Sydney, entitled *Frank Bauer: designer – jewellery, metalwork, lighting, 1975–2000*. His work is held in both national and international collections including the Victoria and Albert Museum (London), Berlin's Bauhaus Archiv, the National Gallery of Australia (Kamberrri/ Canberra), the Art Gallery of South Australia (Tarntanya/ Adelaide), the National Gallery of Victoria (Naarm/Melbourne) and the Powerhouse Museum in Gadigal/Sydney.

Read Frank Bauer's CV for a comprehensive outline of his education and career [here](#).



Image 5: Frank Bauer in his studio, 2024. Photograph by Sia Duff.

Frank Bauer's journey as an artist has been a winding one. Motivated by a deep desire to explore new materials, techniques and ideas, Bauer's career has taken him from Europe to Australia (and back and forth again) in order to gain the skills and experiences that would eventually merge into his cross-disciplinary sculptural practice. Born in Hanover, Germany, in 1942, Bauer was immediately plunged into the world of art and design – his father was an architect who had trained at the legendary Bauhaus School and knew many of the leading **avant-garde** creatives of the era. Growing up in this world, Bauer knew he wanted to pursue a creative profession – but he was less certain about what it should be. After completing his schooling, young Bauer began studying music before taking up welding and blacksmithing, and then apprenticing with top German silversmiths who taught him the skills of silversmithing, goldsmithing and enameling. He went to Ireland to continue his study of silversmithing, before returning to Germany and taking up studies in industrial design and architectural drawing. Of this period of his life, Bauer says:

I dabbled in this, dabbled in that – I always felt it was not good enough. My father was quite generous. He moaned and groaned, but he paid for the bills, paid for the study. It took me a long time. I never had a definite career. I was always searching.¹

¹ Howlin, Jan, 'Indesign Luminary: Frank Bauer', *Indesign*, July 2, 2014, accessed April 15, 2025, <https://www.indesignlive.com/uncategorized/indesign-luminary-frank-bauer>.

Little did he know that this relentless search for new skills and forms of expression would be central to his development as an artist.

In 1971 Bauer moved to Australia and it was here that his career as the creator of exceptional objects began. He quickly established himself as a jeweller and became known for his beautifully crafted and intricate designs. With their industrial references, tiny **modular** units, and moving elements that allowed the wearer to adjust for size, Bauer's jewellery designs reflected the **Bauhaus** theories he had absorbed since childhood. A move to London followed, where Bauer became one of the leading contemporary jewellers of the day and expanded his design practice to include **spectacles**.

[Explore **KEY INFLUENCE: THE BAUHAUS**]

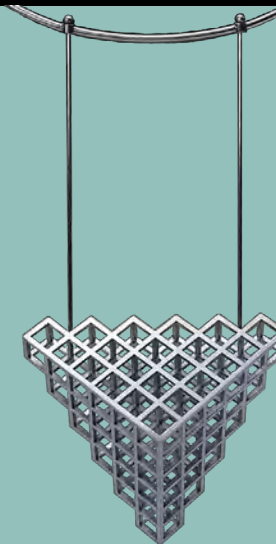


Image 6: Frank Bauer, *Neckpiece*, 1980, palladium, steel, 48 x 53 x 30 mm. Artist's collection. Image courtesy the artist.

In 1984, Bauer returned to Australia, settled in Tarntanya/ Adelaide, and began teaching silversmithing at the South Australian College of Advanced Education (SACAE), which later became the University of South Australia. His design practice continued to expand as he created prototypes for kettles, teapots and coffee pots – each piece a fully-functional yet elegant object.



Image 7: Frank Bauer, *Silver Teapot*, c.2020, silver, 200 (h) x 250 (w) x 150 (d) mm. Artist's collection. Image courtesy the artist.

In 1988, a new chapter in Bauer's career began. While working in London, he had attended an exhibition of the work of Ralph Ball (a renown **industrial designer**) that featured low voltage lights. Now, back in Adelaide, Bauer began to make his own experiments with LED light – which led to the development and **patenting** of his *FB Grid Light System*. The system consisted of a series of interlocking positively and negatively charged bars that could be configured into an endless assortment of structures on which LED lamps could be attached. This system became the basis for Bauer's success as a

designer of **site-specific** commercial lighting features. In his lighting designs, as with all his design work, Bauer was (and remains) guided by the principles of **sustainable design** – for him creating an object that is useful and beautiful is inseparable from ensuring that it will have a long lifespan.

[Explore **KEY CONCEPT: SUSTAINABLE DESIGN**]

Bauer had carved out a successful design practice but he was still searching for something that allowed him to communicate in a more direct way – like music does. As he says:

I think music is still the supreme art – because it doesn't go through your head, it goes straight to your stomach – listening to **Bach** I can't help but cry. So if something moves me in my stomach I think that is a good indication.²

During the 1990s, he began exploring the use of his *FB lighting system* as the basis for creating sculptural artworks incorporating metal and light – resulting in his *Lichtbilder* (meaning 'light pictures' in German) series.

The lichtbild concept brought together Bauer's technical expertise at working with metals, understanding of Bauhaus principles, and interest in the effects of light and movement, to create a unique form of visual representation. When viewed from a distance, a

2 'Frank Bauer', editorial, *Driven*, 2005, 22.

Lichtbild appears to be a geometric grid that emits a composition of coloured light – a sort of painting in light and shadow. Come closer and you discover that the grid is a three-dimensional, box-like sculpture (composed of the *FB lighting system*) with **anodised** aluminium plates ‘woven’ through it. But there is still another surprise. Small perforations in these metal plates create a **moiré effect** – a constellation of black dots that appear inside the Lichtbild and come to life in response to the movement of the viewer.



Image 8: Frank Bauer, *Lichtbild #054*, 2025, anodised perforated aluminium sheets, stainless steel bars, 8 xenon lamps, 1470 (h) x 60 (w) x 150 (d) mm (not including stand). Photograph by Sia Duff.

This effect is a tribute to the work of the pioneering kinetic artist **Jesús Rafael Soto** whose work had a lasting impact on Bauer after he encountered it as a young man. The contrast between the rigid symmetry of the metal grid and the movement of the dots, as they engage in an **impromptu** choreography with the viewer, evokes the tension between the human need for both

harmony and chaos – structure and release.

Bauer’s interest in **kinetic art** has led him to explore a range of ways to create movement in his artmaking. The Lichtbild pieces rely on human interaction and **optics** to create the effect of movement. The patterns created by the moiré effect only come to life when a viewer moves around the Lichtbild, meaning that the artwork is only complete in the presence of an audience. Other works are activated by the force of the wind and are in constant dialogue with their environment. The *wind sculptures* (2000) (Image 9) are a pair of brightly coloured, aluminium sculptures, each one over four metres tall, which were originally produced as an idea for a public art commission but now reside in Bauer’s home garden.



Image 9: Frank Bauer, *wind sculpture red*, c.2000, aluminium, 4800 (h) x 2500 (w) mm. Photograph by Sia Duff.

[Explore **KEY INFLUENCE: JESÚS RAFAEL SOTO**]

Wind generated movement also plays a role in *Balance* (2025) (Image 10) – a freestanding light sculpture (based on the *FB lighting system*) that is adorned with a series of prayer flags. Both the flags and large grided panels move gently as the wind moves through the sculpture.

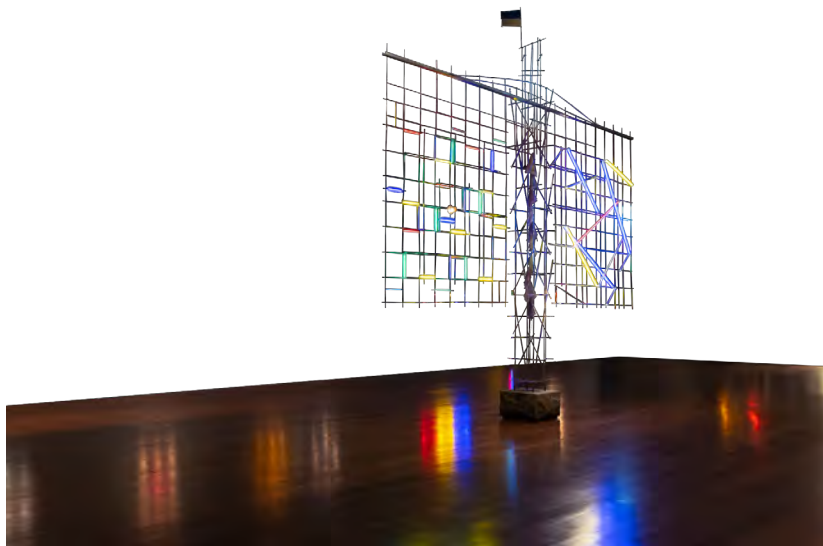


Image 10: Frank Bauer, *Balance*, 2025, stainless steel bars, LED strip lights, two panels 2000 (h) x 2500 (w) x 600 (d) mm (each); centre column 4500 (h) x 400 (w) x 400 (d) mm. Photograph by Sia Duff.

In *Lichtbild* (2011) (Image 11), Bauer has incorporated an element of motorised movement within the Lichtbild framework – the combination of optical illusion and mechanical movement creates a swirling moiré effect that possesses an almost hypnotic quality.

[WATCH A VIDEO OF BAUER'S MOIRÉ EFFECT [HERE](#)]

***PLEASE NOTE: this video may affect those who experience visual sensitivities.



Image 11: Frank Bauer, *Lichtbild*, 2011, motorised anodised perforated aluminium sheets, stainless steel bars, 9 xenon lamps, 850 (h) x 850 (w) x 200 (d) mm. Photograph by Sia Duff.

These pieces are quintessential expressions of Bauer's outlook – always curious, pushing the boundaries, searching for new ways of exploring materials and form. They speak of the extensive range of skills he had developed over the years and the enthusiasm for creation and communication that he has always possessed. For, whether crafting jewellery or a light sculpture, Bauer brings his sincere and carefully formulated visual language to everything that passes through his hands. When we look at his *Neckpiece* (1979) (Image 25) we can see how closely it resembles the format of the Lichtbilder he would begin creating twenty years later. Finding new ways to express his ongoing visual interests has always been at the heart of Bauer's practice.

Today, Bauer continues to explore and innovate inside the glasshouse studio nestled in his garden. Still searching for his next inspiration, for what will 'move him in his stomach' next.



Image 12: Frank Bauer's studio, 2025. Photograph by Sia Duff.

BEFORE THE GALLERY ACTIVITIES

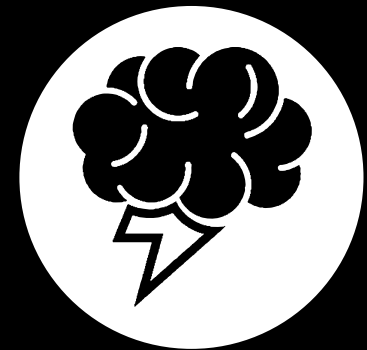
Before the Gallery activities are designed to be undertaken at school, prior to your gallery visit.

These activities aim to prepare students for more meaningful engagement with the exhibition. Students develop foundational knowledge of key concepts, critically analyse exhibition themes and explore how these artworks relate to their own experiences of the world.

Activities in this section have been grouped by key themes. Each group of activities has been organised to scaffold student comprehension, however, they have also been designed so that teachers may adapt activities to suit their individual context.

It is not necessary for students to complete all activities in each section.

All activities included in the **Before, At** and **After the Gallery** sections of this resource have been designed to allow adaptation by teachers to accommodate specific student needs and available resources. All activities may be undertaken in individual, paired, group or whole class configurations.



Build Context

Explore key themes that provide the context needed to help students make the most of their engagement with the exhibition.

The Bauhaus

Jesús Rafael Soto

The Science of Light

KEY INFLUENCE: THE BAUHAUS

Whenever the work of Frank Bauer is discussed, you can be sure that the influence of the Bauhaus will be mentioned – after all, young Frank grew up absorbing the approach of his father, architect Carl Bauer, who had trained at the legendary institution. For Bauer, the fact that he has been shaped by his early exposure to Bauhaus art and theory could not be more natural – as he reminds us:

We all have this accumulative experience in terms of visual art – from childhood we learn by watching others. We walk simply because we've seen people walking.¹

So, what was the Bauhaus?

Bauhaus (meaning 'house of building' in German) was an educational institution that operated in Germany from 1919–1933. The school was founded in Weimar by architect Walter Gropius (1883–1969). Gropius combined the Weimar Academy of Arts and the Weimar School of Arts and Crafts into a single institution that would teach a variety of architecture related disciplines – the Bauhaus. His aim was to create a new kind of arts education – one where students studied

both art and craftsmanship at the same time. This idea was radical because, since the **Renaissance**, art and craft had been seen as fundamentally different approaches to making – art was intellectual and craftsmanship was practical. Gropius believed that bringing art and design together could help to create a better and more beautiful world.

This kind of **utopian** idea had already been explored by English artist and designer **William Morris** (1834–1896), and the Arts & Craft movement, in England during the late 1800s. Morris was concerned about the change from skilled craftsmen making handmade products to mass production (workers creating goods using machines in factories) during the **Industrial Revolution**. He believed that mass production had made the world less beautiful and that factory work was not good for human beings. Morris encouraged society to see craftspeople as skilled artists, making high quality products, and to buy their goods instead of mass-produced products. He advised the public to “have nothing in your house that you do not know to be beautiful or useful.” The problem with Morris' plan was that the goods made by craftspeople were too expensive to be afforded by anyone but the wealthy.

Gropius took a different approach. He saw that mass production was the way of the future and was the only way to ensure that beautiful objects would be available to everyone. The key, he believed, was to work with

¹ 'Frank Bauer', editorial, Driven, 2005, 22.

industry not against it. By bringing art, design and industry together, he hoped to create functional and **aesthetically** pleasing products and architecture that were suitable for the modern world and available to all. Where Morris had looked backwards to the **Medieval** past for inspiration, Gropius (and those he gathered to teach at the Bauhaus) looked to shape the future.

Students at the Bauhaus began their studies with a six month course on the basic elements of design (form, colour and materials) which had been designed by **Expressionist** painter Johannes Itten (1888–1967) and expanded by László Moholy-Nagy (1895–1946). They were then assigned to one of the following studios:

- Carpentry
- Metal work
- Ceramics
- Stained glass
- Wall painting
- Weaving
- Graphics
- Typography
- Stagecraft

Each studio was led by an artist (who taught art theory) and a craftsman who (taught technique). Students would spend three years working in their studio in an environment that prioritised experimentation. An architecture school within the Bauhaus was finally established in 1927 (which was attended by Carl Bauer). Some of the most important names in modern art and design taught and practiced at the Bauhaus including: artists Paul Klee (1879–1940), Wassily Kandinsky (1866–

1944), and Josef Albers (1888–1976), architects Walter Gropius and Ludwig Mies Van der Rohe (1886–1969), and designer Marcel Breuer (1902–1981).

The broad range of studios within the Bauhaus reflected the German concept of *Gesamkunstwerk* ('total work of art') – the idea of different disciplines coming together to contribute to a larger work of art. Rather than focusing on one area of design, the Bauhaus sought to apply their theories to every element of the built world – from **typefaces** to buildings – to design a modern environment for modern people to live and work in. Taking an experimental approach to materials and design, they sought to create products that were both highly functional *and* visually pleasing.

At the core of the Bauhaus approach is the idea that 'form follows function'. This means that beauty is not created by adding decorative ornamentation (as it had been in the past) but flows from the way that an object or building serves its purpose. By studying the purpose of what was being designed, and allowing this to guide its form, a new kind of beauty could be achieved. So, rather than Morris' idea of having only items that were "beautiful or useful" in one's home, for Bauhaus designers each object created would be both useful and beautiful.

Simple, geometric shapes were the basis of most Bauhaus design. For example, this Tea Infuser and Strainer (1924) by metalsmith Marianne Brandt (1893–1983) is now considered an icon of Bauhaus design. Rather than designing a traditional teapot, which brews all the tea to one strength, Brandt created this tiny pot which brews an intense tea extract which can then be added to individual cups of hot water to make tea of different strengths. Its elements have been reduced to geometric shapes which combine to create a bold but elegant looking object. Comparing Brandt's tea infuser with this Art Nouveau Teapot (1904), made only twenty

years earlier, helps us understand how radically different the Bauhaus concept of beauty was.

In both design and architecture, the Bauhaus approach focused on the use of industrial materials rather than those that were precious or rare. In architecture, steel, cement and large plates of glass were used to create simple, geometric buildings with large **open planned rooms** and abundant natural light. For example, the Bauhaus Campus building in Dessau (where the school moved in 1925) was designed by Walter Gropius himself to exemplify these principles. Another good example is Ludwig Mies Van der Rohe's Villa Tugendhat in Brno Czech Republic.



Illustration of the Bauhaus Dessau, Dessau-Roßlau, Germany.
Designed by Walter Gropius. Completed 1926.

A strong understanding of the nature of materials, texture and form, and how these elements could be combined in ways that were both practical and visually pleasing, was essential to Bauhaus design. For example, Marcel Breuer's 1928 design for the Model B32 Chair (1928) uses a hard, industrial, tubular steel frame which is contrasted with the texture and warmth of a woven cane back and seat. The use of cane references Thonet's bentwood chairs from the 1800s but reimagines it as a symbol of streamlined modernity. The Wall-Covering Material for the Bundesschule Auditorium in Bernau, Germany, designed by Anni Albers in 1929, is another example of innovation that combines beauty and function. Woven from **chenille** and tiny threads of cellophane, it is a visually and texturally pleasing alternative to traditional sound proofing materials – while chenille will absorb sound, the cellophane will reflect light to create a subtle shimmering effect.

Colour theory was another important aspect of Bauhaus studies – the investigations into colour made by artists Paul Klee and Josef Albers were particularly influential. In whatever medium they worked, Bauhaus creatives often used bold (particularly primary) colours which were then contrasted with black, grey, and white, or juxtaposed against the textures of industrial materials. The Bauhaus Ausstellung Weimar 1923 advertising poster designed by László Moholy-Nagy (for a 1923 Bauhaus exhibition) and Anni Albers' Design for Smyrna Rug (1925) both use the interaction between bright primary colour and neutral **achromatic** colour. Josef Albers' famous Nesting Tables (1927) introduced the use of **planes** of bold colour into furniture – here seen in shiny, cold glass that is contrasted against the warm, matte texture of wood. Viennese-Australian Architect Harry Seidler studied with Walter Gropius and Josef Albers and worked for Marcel Breuer during the 1940s (after the closure of the Bauhaus). His Rose Seidler House (completed in 1950), located in Sydney, New South Wales, contrasts

T H E B A U H A U S

primary colour against stone, concrete, timber and glass in a memorable example of Bauhaus-influenced architecture right here in Australia.

The Bauhaus existed as an institution for only fourteen years, before it was forced to close by the **Nazi** government in 1933. The power of visual culture was of great importance to the Nazi regime. They wanted to evoke an **idealised** past based on German **folk** culture and the culture of **Classical** Greece and Rome – not the modern and **egalitarian** future that the Bauhaus proposed. Yet, in this short time, the Bauhaus established the idea of aesthetic and useful objects as the basis of modern design and created a visual language that laid the foundation for the world we know today. Following the closure of the school, many of its staff sought to leave Germany – fearing for their safety as proponents of (what the Nazis called) ‘degenerate art’. Kandinsky moved to France and Klee to Switzerland. Many former Bauhaus members found refuge in the United States of America. In 1933, Anni and Josef Albers moved to Colorado where Josef became head of Black Mountain College, and later taught at Yale University, while Anni continued her career as a commercial textile designer and textile artist. In 1937, László Moholy-Nagy established the New Bauhaus in Chicago (now the Institute of Design at Illinois Institute of Technology) and Walter Gropius became head of School of Architecture at Harvard University. In 1938, Mies Van der Rohe became head of Architecture at Armour Institute in Chicago (now the Illinois Institute of Technology). The immigration of talent from Germany to the United States, due to the Nazi regime, established the US as the centre of modern art and design for rest of the 20th century.

The legacy of the Bauhaus has been far reaching. The former teachers and students of the Bauhaus took both its design principles and education techniques with them, as they scattered around the world. Art education, as we know it today, is directly influenced

by the **pedagogical** approach of the Bauhaus – the idea of undertaking a wide-ranging introductory course followed by a specialisation is common in most tertiary art institutions today. Despite its short lifespan as an institution, the visual language and design theory developed at the Bauhaus became the basis for modern design and shaped the aesthetics of the world we live in today.

You can browse objects and documents relating to the Bauhaus at the *Bauhaus Archiv* [here](#).

THE BAUHAUS

The Bauhaus Archiv Museum has a range of resources that you can explore to learn more about the school and the artists, designers and architects who worked and studied there.

Visit the 'Articles' page and scroll down until you see a series of Bauhaus-Worksheets #1-15. Each worksheet explores a different Bauhaus principle or technique.

Choose one to try, or pretend your in a Bauhaus classroom and give all 15 a go!

Bauhaus-Worksheet #1: Colourful spinning tops

Bauhaus-Worksheet #2: Illusion of movement

Bauhaus-Worksheet #3: Wheelbarrow

Bauhaus-Worksheet #4: Roller skating on paper

Bauhaus-Worksheet #5: DIY Jewellery

Bauhaus-Worksheet #6: Intensified Vision

Bauhaus-Worksheet #7: Metallic Fashion

Bauhaus-Worksheet #8: Slow Vision

Bauhaus-Worksheet #9: Letters

Bauhaus-Worksheet #10: Two-handed drawing

Bauhaus-Worksheet #11: Typographical Abstraction

Bauhaus-Worksheet #12: Typewriter patterns

Bauhaus-Worksheet #13: Letter Sketchbook

Bauhaus-Worksheet #14: Sound Memory

Bauhaus-Worksheet #15: Tactile Box



YEARS 7/8:

> [AC9AVA8E01](#) > [AC9AVA8D01](#) > [AC9AVA8D02](#)

YEARS 9/10:

> [AC9AVA10E01](#) > [AC9AVA10D01](#) > [AC9AVA10D02](#)

> [CCT](#) > [IU](#) > [LIT](#) > [NUM](#)

KEY INFLUENCE: JESÚS RAFAEL SOTO

For Frank Bauer, it is extremely important that artists acknowledge those who have influenced their work. In his view:

I'm just part of a long, continuous chain, with a long accumulation of techniques and wisdom. We are always constantly building on that, and we should acknowledge that. We should give **homage** to predecessors.¹

The Venezuelan artist Jesús Rafael Soto is one of these predecessors whose work has helped shape Bauer's practice – it was through experiencing Soto's art work that Bauer became drawn to the idea of kinetic art. Kinetic art is a form of visual art that involves an element of movement. This could be movement that occurs due to natural forces (for example Alexander Calder's mobiles that moved in the wind) or due to technology (like the motorised works of Jean Tinguely). These kinds of works involve actual physical movement occurring as part of the work. The kinetic art pioneered by Soto was different – it was art that *appeared*

¹ Howlin, Jan, 'Indesign Luminary: Frank Bauer', *Indesign*, July 2, 2014, accessed April 15, 2025, <https://www.indesignlive.com/uncategorized/indesign-luminary-frank-bauer>.

to move. Soto's artworks used optical illusion to create movement that only existed through the perception of the viewer interacting with it. Bauer first encountered Soto's work at an exhibition in 1969 and it made a lasting impression – as he explains:

I loved that exhibition. All of a sudden this totally static [image] moves with your movement. It has another dimension, which the image itself doesn't have – that was why I was always fascinated with kinetic [art].²

While his work has been influenced by other kinetic artists (for example, his *wind sculptures* (2000) (Image 13) clearly references Calder), it is the work of Soto to which Bauer constantly returns – both in his practice and when discussing it.

...

Jesús Rafael Soto was born in Ciudad Bolívar, Venezuela, in 1923. Throughout his life, Soto discussed many events

² Ibid.



Image 13: Frank Bauer, *wind sculpture red*, c.2000, aluminium, 4800 (h) x 2500 (w) mm. Photograph by Sia Duff.

that influenced his art making practice including two memorable childhood experiences. As a young boy, he suffered an intense fever that caused him to experience visual disturbances – including seeing people shrink into dots of light and then expand again. While travelling over the dry plains around his home town, Soto became captivated by the visual effect created when light interacts with hot air rising from the Earth's surface. As light passes through layers of air with different temperatures and densities, it bends (or refracts) in different directions and creates a mirage. To Soto, the air almost seemed to form a solid and visible mass, like a cloud, hovering over the land.³

These experiences left him with a deep fascination about the way humans experience the world as being

³ Ariel Jiménez, *Jesús Soto in Conversation with Ariel Jiménez*, (Fundación Cisneros, 2011), 14–17.

divided between solid form and empty space when, for him, this was only an illusion – what appeared to be solid matter or empty space were both made of light, matter (atoms and molecules) and energy. The study of physics tells us that this is quite true – everything in the world is composed of tiny atoms and the relationships between them. The search for a way of representing, what he called, 'dematerialisation' (visually transforming something that appears solid into light, energy or vibrations) became Soto's artistic obsession. In his words:

I think we are all aware [...] that matter is not fixed, that it can be modified, that it is transformable. My work attempts to explain matter not in an immediately figurative form, but as a universal reality; this means it cannot be presented figuratively. If you like, it involves demonstrating the energy of matter rather than the present form of a tree or a human body, it involves something deeper and more universal.⁴

Soto's quest to translate his way of seeing the world into visual art led him to Paris where he immersed himself in the latest developments in modern art. He was drawn to the work of Piet Mondrian (1872– 1944) and, especially, that of Kazimir Malevich (1878– 1935).

⁴ Jesús Rafael Soto, "Las confesiones de Jesús Soto," interview by Alfredo Barnechea, *Oiga*, February 16, 1973, 32, quoted in Arnauld Pierre, *Jesús Rafael Soto: 1923–2005*, (Atelier Soto/AVILA, 2021), 72, <https://jesus-soto.com/biography/>.

In Malevich's *Suprematist Composition: White on White* (1918) he saw a successful attempt to remove all sense of form from the artwork – to simply paint the light itself rather than the surface (or form) it was reflecting off.⁵ But, for Soto, these works still failed to demonstrate 'dematerialisation' because they remained two-dimensional. As he later explained:

Optical art is what I found in Mondrian when I arrived [in France]. Two-dimensional art, where time was not integrated. So I set out in search for it. What interests me is to guide the artwork towards movement. And by becoming **temporal**, painting becomes kinetic; it involves movement... I consider myself a kinetic painter. My work is in motion, and that makes all the difference... What interests me is the transformation of matter. Taking an element, a line, a bit of wood or metal, and transforming it into pure light... transforming it into vibrations. Making a solid material into something **ethereal**...⁶

⁵ Jesús Rafael Soto, "Las confesiones de Jesús Soto," interview by Alfredo Barnechea, *Oiga*, February 16, 1973, 31–32, quoted in Arnauld Pierre, *Jesús Rafael Soto: 1923–2005*, (Atelier Soto/AVILA, 2021), 72, <https://jesus-soto.com/biography/>.

⁶ Jesús Rafael Soto, "La Gran Pintura es Cosa de Progreso Histórico," interview by Carlos Díaz Sosa, *El Nacional*, August 01, 1966, quoted in Arnauld Pierre, *Jesús Rafael Soto: 1923–2005*, (Atelier Soto/AVILA, 2021), 44, <https://jesus-soto.com/biography/>.

In order to "guide the artwork towards movement", Soto experimented with the use of **plexiglass** to create optical illusions. This resulted in works like *Displacement of a Luminous Element* (1954) where a piece of black wood with white dots is overlaid with a sheet of plexiglass that is also covered with white dots. The dots on the two surfaces align in a way that causes them to appear to flicker when observed by a viewer. In *Spirale* (1955) a sheet of plexiglass with a white spiral printed on it is attached to a white base with a black spiral – when viewed, the intersecting spirals give the impression that they are whirling in space (now in the collection of the Centre Pompidou, you can see *Spirale* come to life in this short film: *Soto: Spirale (1955)*, Centre Pompidou).

The movement in these works is created through the use of the moiré effect. A moiré effect occurs when two layers of similar (but not identical) lines are laid over each other OR when two layers of identical lines are laid over each other but are not aligned. When our eyes attempt to decipher this information an impression of movement is created. This [diagram](#) created by the Encyclopaedia Britannica demonstrates how the effect occurs when two identical images of **concentric** circles are overlaid but not aligned (**PLEASE NOTE, this animated diagram features flashing imagery).⁷ If the two images were perfectly aligned one would hide the other and we would just see a **static** image. This effect was first noticed in the silk production trade – when two layers of silk with the same weave (which could never be perfectly uniform) were pressed together, the tiny differences in the lines of the weave resulted in a pattern like rippling water. This became known as Moiré silk – 'moiré' being the French word for 'watered'. It is this effect that Frank Bauer utilises in his *Lichtbilder* series as a way of paying tribute to Soto's

⁷ "Moiré pattern", *Encyclopaedia Britannica*, last modified March 05, 2025, accessed July 13, 2025, <https://www.britannica.com/science/moire-pattern#/media/1/387754/60023>.

groundbreaking ideas (Image 14).



Image 14: Frank Bauer, *Lichtbild #088 & Lichtbild #089*, 2025, anodised perforated aluminium sheets, stainless steel bars, LED strip lights, 600 (h) x 825 (w) x 150 (d) mm (each – not including stand). Installation view, *Frank Bauer* at Samstag Museum of Art, 2025. Photograph by Sia Duff.

Soto continued to develop the use of optical illusions to represent dematerialisation in his *Vibrations* series. The *Vibrations* works, including his *Première Vibration* (1957), feature sculptures made of tangled wire which have been painted a solid colour and mounted above wooden boards painted with stripes. As the viewer moves around these works, the visual interaction of the wire and lines causes the lines to shimmer and vibrate – an effect which cannot be captured in a still photograph. In his *Écriture* (meaning ‘writing’ in French) or *Escritura* (‘writing’ in Spanish) series, Soto suspended pieces of metal in front of a large, striped background. As the viewer moves in front of the work, shapes suggesting the letters of an unknown language begin to fade in and out of view. The Centre Pompidou has created a short

film that shows Soto’s *Gran doble escritura* (1977) come to life as the viewer/camera varies their position – you can view it [here](#).

Ever since he had created his first plexiglass kinetic pieces, Soto had been fascinated with the space within the work where the movement occurred. He had always wished he could enter this space rather than looking at the work from outside. Now, as he worked on his *Vibration* and *Écriture* series, with their shimmering, vibrating lines, he began to wonder “what would happen if I could place himself inside that vibration?”⁸ The result of this inquiry was the works for which Soto is most well-known – his *Penetrables*. The *Penetrables* are composed of long (often brightly coloured) threads that are suspended in cube formations within a space – the viewer is able to enter the space and move amongst the hanging threads.

One of Soto’s first experiments at inserting himself ‘into the vibration’ was *Volume Suspendu* (1968). This work featured a limited number of suspended threads and is generally referred to as a ‘proto-penetrable’ (a prototype of the concept for his *Penetrables* series). As they developed, the works became larger and assumed the fully immersive form that they are now associated with – see, for example, the huge *Pénétrable* (1992). From the outside, the effect of the *Penetrables* is to make empty space visible – almost the reverse of dematerialisation. The space is still there, we can move through it, but it now has a visual density. Once inside the space, a person (seen from the outside) seems to dematerialise into slivers of light. The individual inside the *Penetrable* loses their normal visual frame of reference as they are surrounded by the vibrating lines of the threads – an experience that art critic Jean Clay

8 Ariel Jiménez, *Jesús Soto in Conversation with Ariel Jiménez* (Fundación Cisneros, 2011), 85.

famously described as “the eye panics and gets lost”.⁹ We can gain an impression of what this experience may feel like by viewing le Centre Pompidou’s film featuring *Cube pénétrable* (1996).

This new idea of an artwork that could surround the viewer – which Soto referred to as “enveloping works” – is now a well-established form of visual art known as ‘**immersive**’ art. Looking back from many years later, we may not be able to understand quite how amazing these works were to the people who first saw them. Frank Bauer was one of those people and they had an immediate, and lasting, impact on him. When seen in person, Bauer’s *Lichtbuild #048* (2008) and *Lichtbuild #068* (2024) (Image 15) come to life with shimmering vertical lines of light that recall Soto’s *Vibrations* and *Penetrable* series.

A fundamental element of all Soto’s work is that the final result is created through the viewer’s engagement with the artwork. The viewer’s perception of movement happening withing the artwork (as they move around it) is what brings Soto’s concept to life. As Clay described it, Soto’s work:

...is no longer the static rendering of a movement previously perceived by the artist, described after the fact via forms and colors (*sic*) evoking and attempting to reconstitute the emotional shock he received... here the esthetic (*sic*) phenomenon takes place directly before our eyes, the work is

⁹ Jean Clay, *Soto – de l’art optique à l’art cinétique* (Galerie Denise René, 1967), quoted in Arnauld Pierre, *Jesús Rafael Soto: 1923–2005*, (Atelier Soto/AVILA, 2021), 48, <https://jesus-soto.com/biography/>.

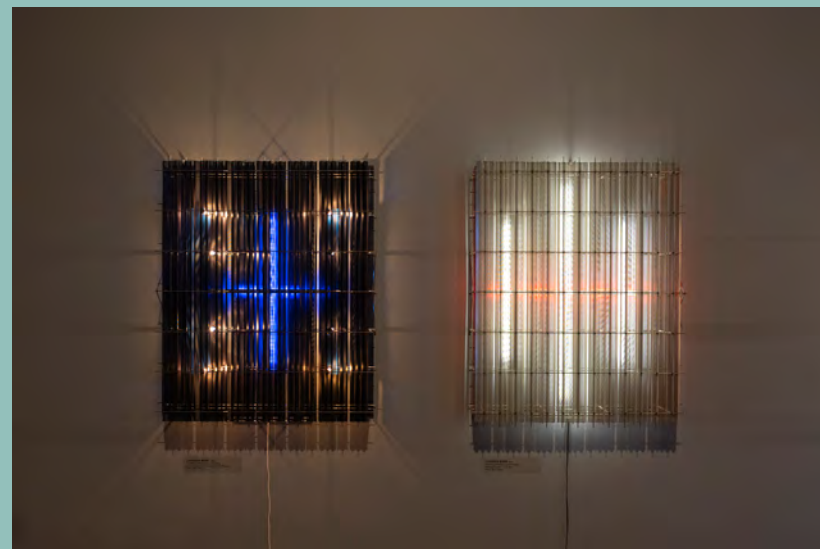


Image 15: Frank Bauer, *Lichtbild #048*, 2008, anodised perforated aluminium sheets, stainless steel bars, 6 xenon lamps and LED lights, 1080 (h) x 850 (w) x 150 (d) mm; *Lichtbild #068*, 2024, anodised perforated aluminium sheets, stainless steel bars, 4 LED lights 1080 (h) x 850 (w) x 160 (d) mm. Installation view, *Frank Bauer* at Samstag Museum of Art, 2025. Photograph by Sia Duff.

born, moves, vibrates, consumes energy, dies and is reborn. It is the place where a real and present natural phenomenon unfolds, channeled (*sic*) by the action of the artist – a phenomenon that both constitutes and creates the work of art. [...] A kinetic artwork only exists via the unfolding of a physical event before our eyes in the here and

now...¹⁰

This means that, instead of looking at a depiction of something an artist saw or imagined, in Soto's work the viewer forms part of the artwork – they are experiencing the work as it occurs in real time, not looking at a representation of something that has already happened. As Soto explained it:

Before, the viewer was like an outside witness to reality. Today we know that man is not on one side and the world on the other. We are not observers but integral parts of a reality which we know to be teeming with living forces, many of them invisible. We are in this world like fish in water: we are not distanced from matter-energy, we are WITHIN it and not FACING it: there are no more viewers, there are only participants.¹¹

Soto began developing his *Penetrable* concept in 1967 and it was only a few years later, in 1969, that Frank Bauer first discovered his work. The impact of experiencing Soto's work at the Kestner-Gesellschaft gallery in Hanover, Germany, played a fundamental role in introducing Bauer to the concept of the individual

¹⁰ Jean Clay, "La peinture est finie," *Robho*, no. 1 (1967), quoted in Arnauld Pierre, *Jesús Rafael Soto: 1923–2005*, (Atelier Soto/AVILA, 2021), 49, <https://jesus-soto.com/biography/>.

¹¹ Jean Clay, "Les Pénétrables de Soto," *Robho*, no. 3 (1968): 22–23, quoted in Arnauld Pierre, *Jesús Rafael Soto: 1923–2005*, (Atelier Soto/AVILA, 2021), 55, <https://jesus-soto.com/biography/>.

being an active participant in an artwork, rather than a passive viewer. This concept has shaped his understanding of what was possible within the realm of visual art. According to Bauer:

... I'm just part of a culture. My work is just a bunch of influences. Absolutely new ideas are very rare. You're always absorbing information, stirring it up in your own pot. Hopefully something comes out which is beyond skill, beyond visual appearance, but that sparks somewhere between all of that...¹²

In discovering Soto's work, Bauer had the equally rare experience of encountering one of those "absolutely new ideas" – an idea that challenged the existing conventions of visual art – at the moment of its most profound impact. It is unsurprising that this discovery has influenced his own practice in such a meaningful way.

An extensive range of artworks and a complete biography of Jesús Rafael Soto can be explored on the [Jesús Soto Foundation website](#).

¹² Howlin, Jan, 'Indesign Luminary: Frank Bauer', *Indesign*, July 2, 2014, accessed April 15, 2025, <https://www.indesignlive.com/uncategorized/indesign-luminary-frank-bauer>.

CREATING MOIRÉ PATTERNS

It is difficult to illustrate the visual effect of a moiré pattern in static images. To the right, we can see the patterns created when two identical sets of concentric squares are layered and are twisted. If we were watching these two patterns pin around in real time, we would observe what appears like a snow flake grow to full size and then fade away.

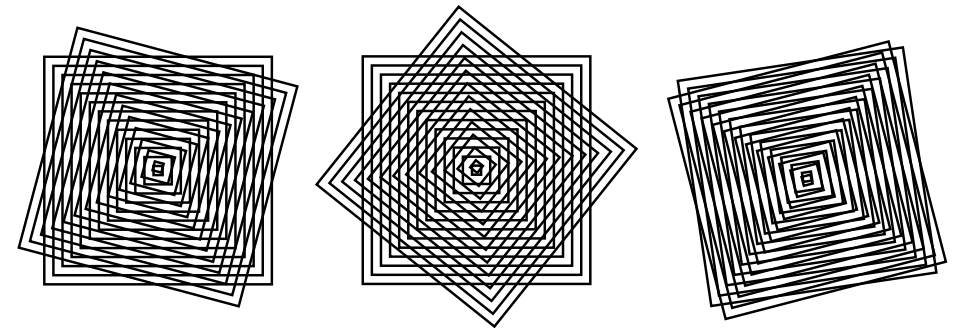
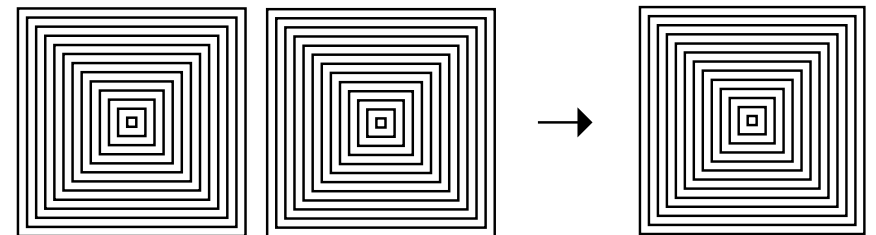
Let's try making our own moiré patterns:

- Draw a repetitive pattern on a sheet of white paper. The pattern can be either geometric or organic and take any shape you like.
- Photocopy your pattern onto a transparency or trace your pattern onto a transparent material such as plastic food wrap, an acetate sheet, a plastic sleeve/sheet protector, or a used, plastic shopping bag (just make sure it is completely transparent).

Alternatively, you could photocopy the pattern and cut out the negative space to create the same effect.

- Slide your transparent material over the top of the your paper. Record how many different visual effects you can create by moving the transparent material in different directions.
- Watch this old episode of *The Curiosity Show* and this *Moirémotion* animation by Takahiro Kurashima. Experiment with different combinations of lines to see if you can work out how the moiré effect has been used to animate the images in these two videos. *****PLEASE NOTE: these videos contain flashing imagery. Do not watch if you are sensitive to strobing.**

*****PLEASE NOTE: the moiré effect produces flashing imagery. Do not undertake these activities if you are sensitive to strobing.**



YEARS 7/8:

> [AC9AVA8E01](#) > [AC9AVA8D01](#) > [AC9AVA8D02](#)

YEARS 9/10:

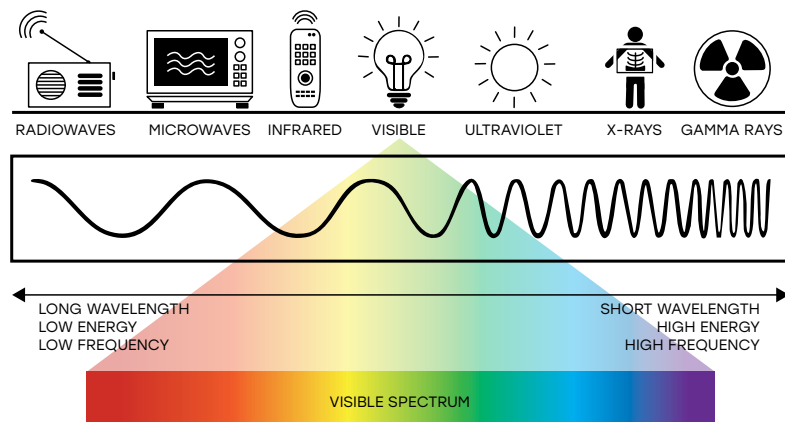
> [AC9AVA10E01](#) > [AC9AVA10D01](#) > [AC9AVA10D02](#)

> [CCT](#) > [LIT](#) > [NUM](#) > [PSC](#)

THE SCIENCE OF LIGHT

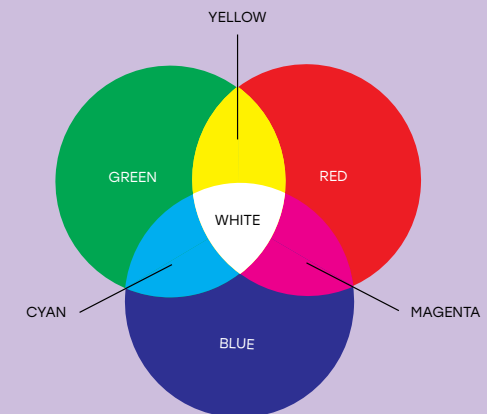
Sunlight, car headlights, torches and the bulbs we use to illuminate our homes, classrooms, shops and offices are all referred to as white light. However, this name is quite misleading because white light is actually made up of many different colours. This is because light comes in many wavelengths and each wavelength is a particular colour. When they combine, they produce white light.

The human eye is only capable of detecting a small part of the electromagnetic spectrum (the complete range of wavelengths). There are seven colours of the visible light spectrum - **RED, ORANGE, YELLOW, GREEN, BLUE, INDIGO, VIOLET**. You may recognise these colours as being the seven colours of the rainbow. 🌈



The Electromagnetic Spectrum.

We know from colour theory, that the primary colours when mixing paint are red, yellow and blue. However, when mixing light, the primary colours are **RED, GREEN** and **BLUE** (RGB). When red, green and blue light are combined in equal amounts, they produce white light. However, mixing these colours in different proportions can make all the colours that we see. This is how the screens on our TVs, computers and phones work. Electronic screens contain thousands of tiny pixels that emit red, green and blue light. Because the pixels are so small and so tightly packed, our eyes perceive each pixel as one colour. By changing the combination and intensity of the red, green and blue light on each pixel, an electronic screen can create a whole spectrum of colour to produce realistic looking images.



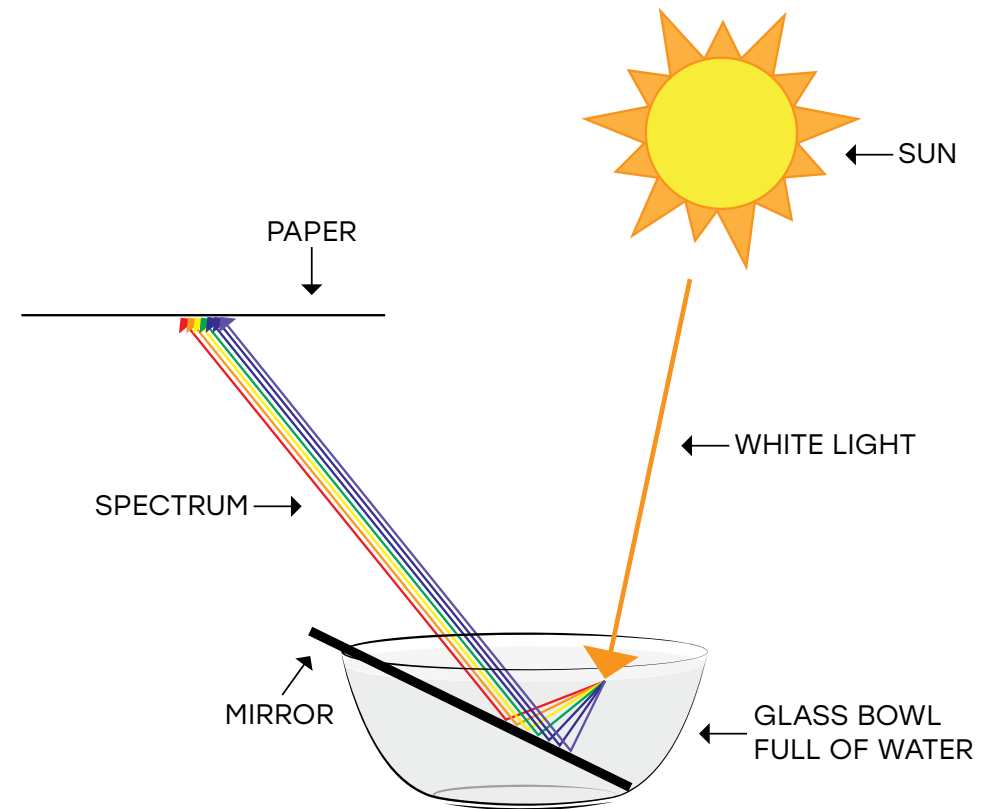
Additive colour mixing

DISPERSION

We can split white light into its component colours through a process called *dispersion*. When moving through open air, all wavelengths of light travel at the same speed. However, when moving through transparent materials, such as glass or water, wavelengths travel at different speeds – depending on their energy level. This change in speed causes light to bend (or refract) so that it begins travelling in a different direction. The individual speed of each wavelength will cause them to refract at different angles, therefore separating white light into each wavelength colour.

This process can be achieved using a glass prism, or we can simply use a bowl of water and a mirror:

- Fill the bowl of water to the brim and place the mirror inside the bowl so that it is, at least partly, covered by water.
- Take the bowl outside and position it so that the mirror is facing bright sunlight. If the weather is too overcast, this experiment can also be conducted using a bright torch.
- Hold a piece of white paper above the path of the light being reflected from the mirror to reveal a mini rainbow.



ADDITIVE COLOUR MIXING

Frank Bauer created his *Lamp with Coloured Lights* (2014) (Image 16) to demonstrate the phenomenon of additive colour mixing. However, we can create the same effect by using cellophane and torches...

- First, cover the ends of three torches: one with red cellophane, one with green cellophane and one with blue cellophane. Try crossing the coloured beams of light in different combinations see if you can make white light, as well as the three secondary colours (**YELLOW**, **MAGENTA** and **CYAN**).
- Next, try layering pieces of cellophane in different colours and shapes over a light table or window. See what kinds of patterns, colours and visual effects you can create by applying your knowledge of art elements and principles to the use of coloured light.

YEARS 7/8:

> [AC9AVA8E01](#) > [AC9AVA8D01](#) > [AC9AVA8D02](#)

YEARS 9/10:

> [AC9AVA10E01](#) > [AC9AVA10D01](#) > [AC9AVA10D02](#)

> [CCT](#) > [NUM](#) > [PSC](#)

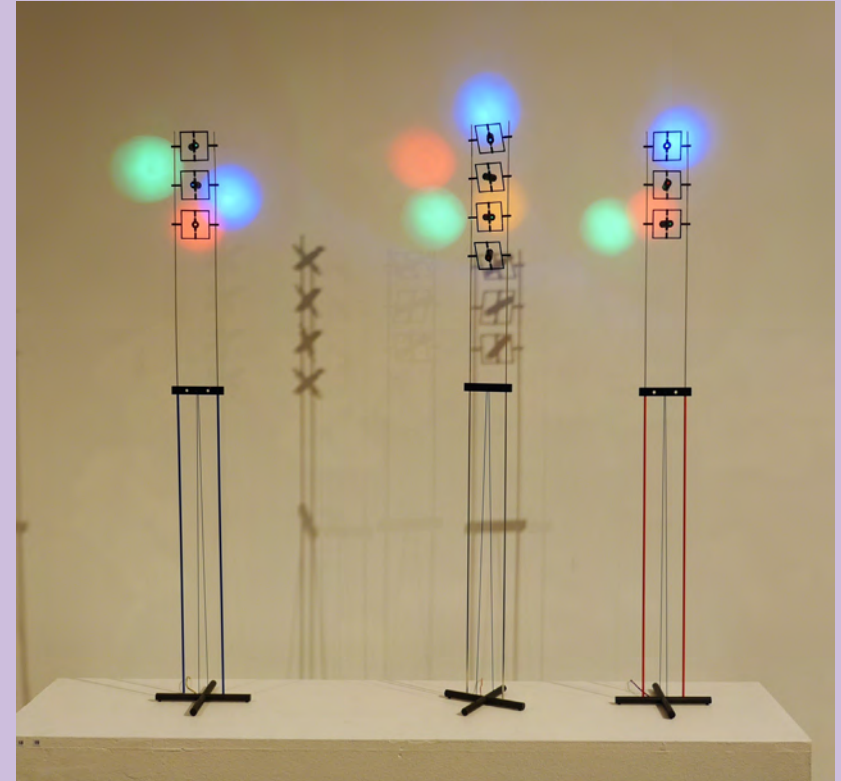


Image 16: Frank Bauer, *Table Lamp with Coloured Lights*, 2014, stainless steel, brass, 3 adjustable LED lamps, 950 (h) x 170 (w) x 165 (d) mm; *Table Lamp with Coloured Lights*, 2014, stainless steel, brass, 4 adjustable LED lamps, 955 (h) x 165 (w) x 165 (d) mm; *Table Lamp with Coloured Lights*, 2014, stainless steel, brass, 3 adjustable LED lamps, 950 (h) x 170 (w) x 165 (d) mm. Artist's collection. Image courtesy the artist.

AT THE GALLERY

The **At the Gallery** experience is an opportunity for students to enjoy the full sensory experience of viewing the exhibited works in person at full scale and to benefit from the specialist knowledge of Samstag's curatorial staff.

While Gallery staff may possess specialist art knowledge, educators understand how their students learn. Samstag welcomes educator input throughout the At the Gallery experience. We encourage educators to ask follow-up questions, paraphrase or restate statements, elaborate on ideas, and make connections between student prior knowledge and new information in order to ensure students benefit from clear and meaningful dialogue.

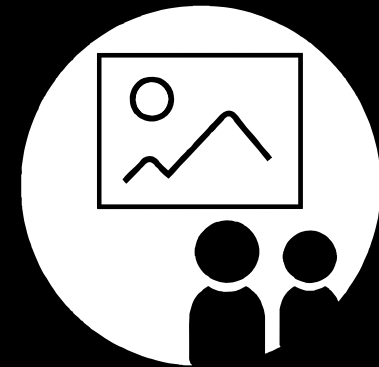
The At the Gallery experience is scheduled for one hour per booking

We ask that all school groups review art gallery etiquette before their visit.

Key items include:

- Quiet talking
- Careful and respectful movement through the space
- Consideration of other visitors and fragile artworks

Samstag Museum of Art is located in the Hawke Building on the University of South Australia's City West Campus, North Terrace. The Museum is accessed via the north eastern entrance on Fenn Place. On arrival, please wait in the foyer for a staff member to meet you at your allocated time.



Engage with the exhibition

Experience the artworks in person and extend understanding of key themes through gallery-led activities.

Gallery Tour

Student Viewing

Creative Activity

YEARS 7/8:

> [AC9AVA8E01](#) > [AC9AVA8D01](#) > [AC9AVA8D02](#)
> [AC9AVA8P01](#)

YEARS 9/10:

> [AC9AVA10E01](#) > [AC9AVA10D01](#) > [AC9AVA10D02](#)
> [AC9AVA10P01](#)

> [CCT](#) > [LIT](#) > [NUM](#) > [PSC](#)



Gallery Tour

Students will be taken on a brief guided tour of the exhibition during which a Samstag staff member will share key ideas regarding the artist, their practice and individual artworks.

We welcome curiosity at Samstag and encourage students to ask questions during this tour in order for them to enhance their understanding and appreciation of the works.



Student Viewing

Students will then be given time to view the exhibition independently. We encourage students to give their full attention to viewing the exhibition in order to maximise engagement with the artworks and themes. A staff member will be available to answer any further questions that may arise and to engage students in dialogue about their thoughts and ideas in response to the artworks.

It is important to us that all students feel comfortable and confident to participate in all activities while at the Museum. We acknowledge the diversity of student groups that visit Samstag and wish to reassure educators that students will be supported to participate in this activity in a range of ways tailored to individual needs.

Creative Activity

The experience will culminate in a fun and creative activity during which students are given the opportunity to experiment with, and respond to, concepts and techniques used throughout the *Frank Bauer* exhibition.



Frank Bauer has always been drawn to the art of weaving – how the interaction between warp and weft can produce intricate patterns. It is this fascination that inspired his *Lichtbilder* series. Each sculpture consists of layers of aluminium sheets composed of different colours, textures, shapes, combinations and formations. When light shines through them, the overlapping layers create a woven-like visual effect.

Just as the artist has used industrial materials to create his woven sculptures, students will experiment with a range of (non-traditional) transparent and semi-transparent materials, such as cellophane, sheer fabrics, plastic mesh, honeycomb paper packaging, bubble wrap, and pastic bags, to create their own decorative tapestries that interact with the light.

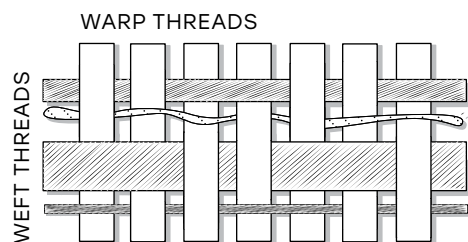


Image 17: Frank Bauer at home with his textile collection, 2024.
Photograph by Sia Duff.

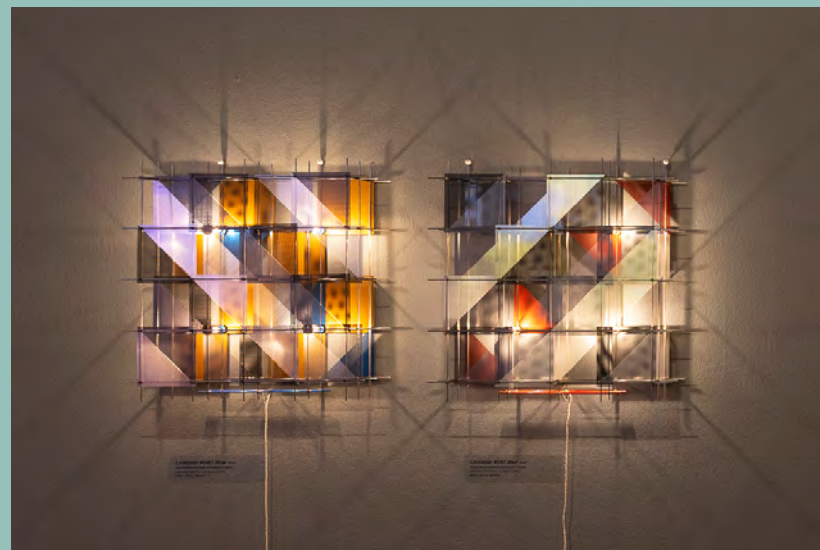


Image 18: Frank Bauer, *Lichtbild #080 Blue* and *Lichtbild #081 Red*, 2024, anodised perforated aluminium sheets, stainless steel bars, 4 xenon lamps, 600 (h) x 600 (w) x 150 (d) mm (each). Installation view, *Frank Bauer* at Samstag Museum of Art, 2025. Photograph by Sia Duff.

AFTER THE GALLERY ACTIVITIES

After the Gallery activities are designed to be undertaken at school, following your gallery visit.

These activities are designed to provide students with the opportunity to reflect on and respond to everything they have seen, learnt and experienced during this unit of work.

Activities in this section are more extensive projects and can be undertaken in any number or combination desired.



Reflect and Consolidate

Reflect and respond using critical and creative thinking to help consolidate learning.

Creative and critical thinking activities designed to facilitate:

Consolidation of knowledge and skills development

Personal reflection and response

KEY CONCEPT: SUSTAINABLE DESIGN

In 2001, Apple launched a piece of technology that became a sensation around the world – the iPod. The iPod was not the first MP3 player released onto the market but, thanks to its signature minimal and elegant design, it quickly became *the* portable music device to own. But there was an unpleasant surprise waiting for the legion of iPod devotees who had paid between US\$299–\$499 (approximately equal to US\$540–\$900 today or \$885–\$1425 Australian Dollars) for their new toy.¹ The battery that powered the iPod was rechargeable (like a mobile phone) but, eventually, it would wear out and no longer recharge. It was only at this point that the first generation of iPod users discovered that the battery was **soldered** into the device and was unable to be easily replaced. The only way for customers to replace the battery was to return it to Apple for **refurbishment** – a process which would cost the customer US\$250 (almost the same amount as its original cost). The better solution, according to Apple: just buy a new iPod. Music lovers had always been able to replace the batteries in older technology like the Walkman and portable Compact Disc (CD) players. Without a replaceable battery, the iPod had its end-life built into it from the beginning. In the world of design, this concept is called ‘planned obsolescence’.

Planned obsolescence is not a new concept. The idea of

¹ Hank Steuever, “Battery and Assault,” *The Washington Post*, December 19, 2003, <https://www.washingtonpost.com/archive/lifestyle/2003/12/20/battery-and-assault/29056cfd-59d7-4dc7-b12f-cda99203ae6d/>.

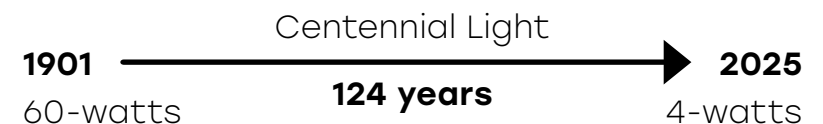
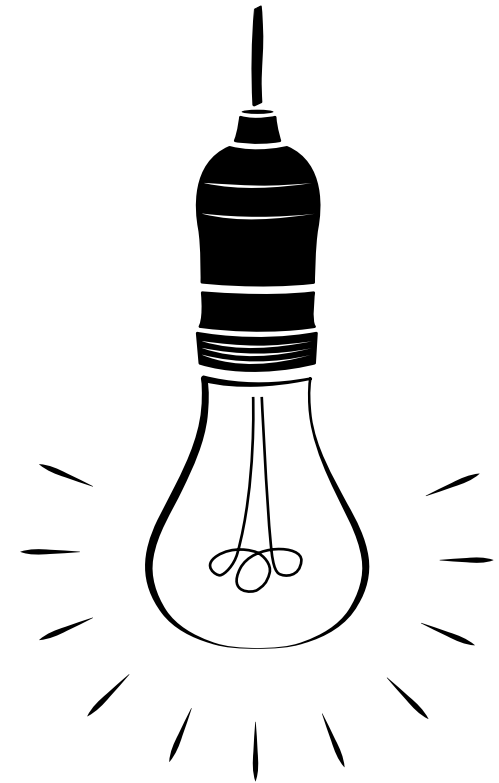


intentionally generating a need to repurchase items has been part of technology for a long time. One of the most famous cases of planned obsolescence involves the intentional development of **incandescent light bulbs** in 1924 that would operate for *shorter* times before their fuse blew and they needed to be replaced.² The result ensured a constant (and continually growing) stream of customers needing to buy lightbulbs. As a comparison, the famous Centennial Light (located in a fire station in California, USA) is an incandescent bulb that was made in the 1890s and has been continually glowing since it was installed in 1901 (it was originally a 60-watt bulb but now emits only around 4-watts) – you can view a live feed of the amazing bulb [here](#). What was new in the case of the iPod was that the whole device could become obsolete after just 18 months of use (depending on how frequently the device was used and the battery recharged). The situation was brought to public attention by brothers, and New York based multimedia artists, Casey and Van Neistat. The brothers created a short film entitled *iPod's Dirty Secret*, which they uploaded to the internet, and engaged in a campaign of graffitiing promotional posters for the iPod with a warning about its short lifespan – the film is can be viewed [here](#). The brother's campaign gained widespread media coverage and iPod customers were not impressed to discover that their expensive new purchase had a significantly shorter lifespan than they had expected. Apple soon introduced a battery replacement service – although this was still costly at US\$99.³

The iPod controversy was a reflection of the changes taking place in the world of manufacturing in the early 2000s. Changes to **legislation** in many countries (including the United States and Australia) had created

² Markus Krajewski, "The Great Lightbulb Conspiracy," *IEEE Spectrum*, September 24, 2014, <https://spectrum.ieee.org/the-great-lightbulb-conspiracy>.

³ Steuever, "Battery and Assault."



the opportunity for companies to manufacture their products offshore – in countries with weaker economies and (therefore) workers willing to work for far less money. No obligations were placed on companies to pay a reasonable wage to offshore workers – as opposed, for example, to the minimum wage for manufacturing that must be paid to workers within Australia. The responsibility for setting wages was left to the **discretion** and morality of the company itself. As a result, companies were able to manufacture products at a very low cost which then allowed them to sell these products to consumers at lower prices and still make profits. The low price of products sold to the consumer meant that the cost of repairs to these products became disproportionately high – it was cheaper to replace the product rather than repair it. This became the standard manufacturing model in the twenty first century. The problem Apple encountered with the iPod was that, in 2001, its cost to the consumer was still significantly too high to be seen as a ‘disposable’ object.

It is often argued that the drive towards built in obsolescence is the speed of technological innovation – why build something like a smartphone to last when its technology is likely to be **superseded** in a few years?⁴ This may be true, but the same system of creating low cost and easily discarded goods is now applied to the manufacture of products such as electric toasters and leather shoes which have had little technological change since the mid-1900s. In the past, these items would have been taken to the electrician and the cobbler to be repaired. Today, they are usually discarded and replaced when they wear out because repairing them is more expensive than replacing them (an exception to this trend is highly expensive ‘luxury’ goods where the initial cost will probably justify repairs). In today’s world, we

⁴ Adam Hadhazy, "Here's the truth about the 'planned obsolescence' of tech," *BBC*, June 13, 2016, <https://bbc.com/future/article/20160612-heres-the-truth-about-the-planned-obsolescence-of-tech>.

are all familiar with the result of these **economic models** – ever increasing mountains of landfill. This situation is something that Frank Bauer has always taken issue with. As he describes it:

There are too many products piled up on rubbish dumps. The economy is based on consumption and obsolescence – buy, buy, buy – and the next generation will have to deal with massive environmental problems. Something designed well has the potential to last a lot longer. I really believe [an object] should be of such quality that it [will] still work in, say, 20 or 30 years’ time.⁵

Sustainable design is the alternative to this culture of obsolescence. It proposes that we think about design in the broader context of the world that it exists within – rather than just focusing on what will make a design desirable and useful in the short term. Sustainable design practices involve designing products in such a way that they are attractive and useful to consumers, while also taking into account their appropriate life span and how they will be disposed of when they are no longer useful. A very simple example of this idea is the use of pure wool to create a thick sweater: wool is a natural fibre that is warm, strong (if properly cared for), can be easily reknitted if holes occur, and will easily decompose into the earth. The alternative is to use wool blended with a synthetic, like nylon. While the nylon may make

⁵ Howlin, Jan, "Indesign Luminary: Frank Bauer", *Indesign*, July 2, 2014, accessed April 15, 2025, <https://www.indesignlive.com/uncategorized/indesign-luminary-frank-bauer>.

the sweater easier to care for, synthetic fibres are not as easy to reknit and they do not decompose – therefore, the sweater will end up as landfill. A designer's choice of materials can drastically impact on the lifespan of a product, its ability to be repaired and the environmental impact of its disposal. This is of critical importance to Bauer, as according to him:

We always think with design the look has to be good, and I agree it has to look good, but it also has to be clear, giving a message of what it is about...It has to be the best, lasting material...not throwaway.⁶

He also draws attention to the fact that all of his work, both design and artworks, are made so that they can be repaired. They can also to be broken down into their core components and repurposed, where necessary. For example, the main body of his large-scale sculpture *Balance* (2025) (Image 19) has been constructed from materials recycled from an earlier work. The idea that nothing is wasted is particularly important to him. For Bauer, designing objects that will last is about “more than the utility and the practical aspects, it's also to give us something to love and [to show] care and expression.”⁷ It is a way of creating a meaningful connection with the consumer of his work. The people who interact with his pieces, and finding ways to help make their lives easier and more beautiful, are always central to Bauer's work.

⁶ Suzie Keen, "‘People could see it from the train’: Frank Bauer's life of light and colour," *IN review*, Jun 19, 2025, <https://www.indaily.com.au/inreview/visual-art/2025/06/19/frank-bauer-light-colour>.

⁷ Ibid.



Image 19: Frank Bauer, *Balance*, 2025, stainless steel bars, LED strip lights, two panels 2000 (h) x 2500 (w) x 600 (d) mm (each); centre column 4500 (h) x 400 (w) x 400 (d) mm. Installation view, *Frank Bauer* at Samstag Museum of Art, 2025. Photograph by Sia Duff.

WHAT IS 'GOOD' DESIGN?

What makes something a 'good' design? This is an important question for anyone seeking to create an object to consider. For many years, Frank Bauer has been inspired by German designer Dieter Rams' 10 Principles of Good Design. Rams' principles reflect his long experience as an **industrial designer** and attempt to distil his understanding of what makes a design a useful contribution to society.

- Read Rams discussing his principles in this 1993 article for Italian design magazine, *Domus*.

Dieter Rams, "10 principles for a good design," *Domus*, April, 1993, <https://www.domusweb.it/en/from-the-archive/2023/03/14/dieter-rams-and-the-10-principles-for-a-good-design.html>.

- Choose a product that you use every day and assess it based on Rams' 10 principles for a good design:
 - How many of the principles does your product demonstrate? Give it a score out of 10.
 - Explain your score: give examples to show how your product does/does not demonstrate each of the 10 principles.
 - What modifications, changes, or improvements do you think could be made to help your product achieve a 10/10 rating?

DIETER RAMS' TEN PRINCIPLES

1. Is innovative
2. Makes a product useful
3. Is aesthetic
4. Makes a product understandable
5. Is unobtrusive
6. Is honest
7. Is long-lasting
8. Is thorough down to the last detail
9. Is environmentally friendly
10. Involves as little design as possible

ENVIRONMENTAL IMPACT

The negative environmental impact of products being produced from cheaper materials and labour has been discussed in the KEY CONCEPT above. However, it is always important to view an issue from all angles.

- Read the BBC article "Here's the truth about the 'planned obsolescence' of tech" which highlights a range of positive and negative ramifications that have arisen from cheaper manufacturing:

Adam Hadhazy, "Here's the truth about the 'planned obsolescence' of tech," *BBC*, June 13, 2016, <https://bbc.com/future/article/20160612-heres-the-truth-about-the-planned-obsolescence-of-tech>.

- Consider whether you believe the positive benefits of cheaper manufacturing outweigh the negatives?
- Does it depend on the nature of the product?
- Can you think of any other negative impacts on society (or parts of society) that the BBC article does not mention?

YEARS 7/8:

> [AC9AVA8E01](#) > [AC9AVA8D02](#)

YEARS 9/10:

> [AC9AVA10E01](#) > [AC9AVA10D02](#)

> [CCT](#) > [DL](#) > [EU](#) > [LIT](#) > [NUM](#) > [PSC](#)



Image 20: Frank Bauer in his studio, 2024. Photograph by Sia Duff.

MOIRÉ MATERIALS

Frank Bauer creates the **moiré effect** in his artworks by layering sheets of perforated aluminium and shining light through them. However, moiré patterns can be created using all sorts of different found materials and objects.

Have a look through your house, garden and classroom to discover materials or objects with moiré potential. Look for things that feature perforations, slats, or openwork OR that feature opaque patterns on transparent backgrounds.

*****Make sure to ask appropriate permission before taking or using any materials or objects.**

For example:

Makisu (bamboo sushi rolling mats)

Cane, bamboo or rattan mats, materials or objects

Sheer, patterned fabrics or papers

Lattice, trellis or fencing materials

Honeycomb paper packaging

Bamboo or willow screens

Peg board

Netting

Mesh

Image 21: Frank Bauer, *Lichtbild #068* (detail), 2024, anodised perforated aluminium sheets, stainless steel bars, 4 LED lights 1080 (h) x 850 (w) x 160 (d) mm. Installation view, *Frank Bauer* at Samstag Museum of Art, 2025. Photograph by Sia Duff.



MOIRÉ SCULPTURES

- First, experiment with layering different materials to see what kind of visual effects they create.

Things to consider:

- Are your layers identical or do they feature slightly different patterns?
- Are your pattern's lined up square, but sitting slightly off-centre, or are they twisted at different angles?
- How close / far apart are the two layers?
- What shadow / light effects can be created by shining light through your layers?

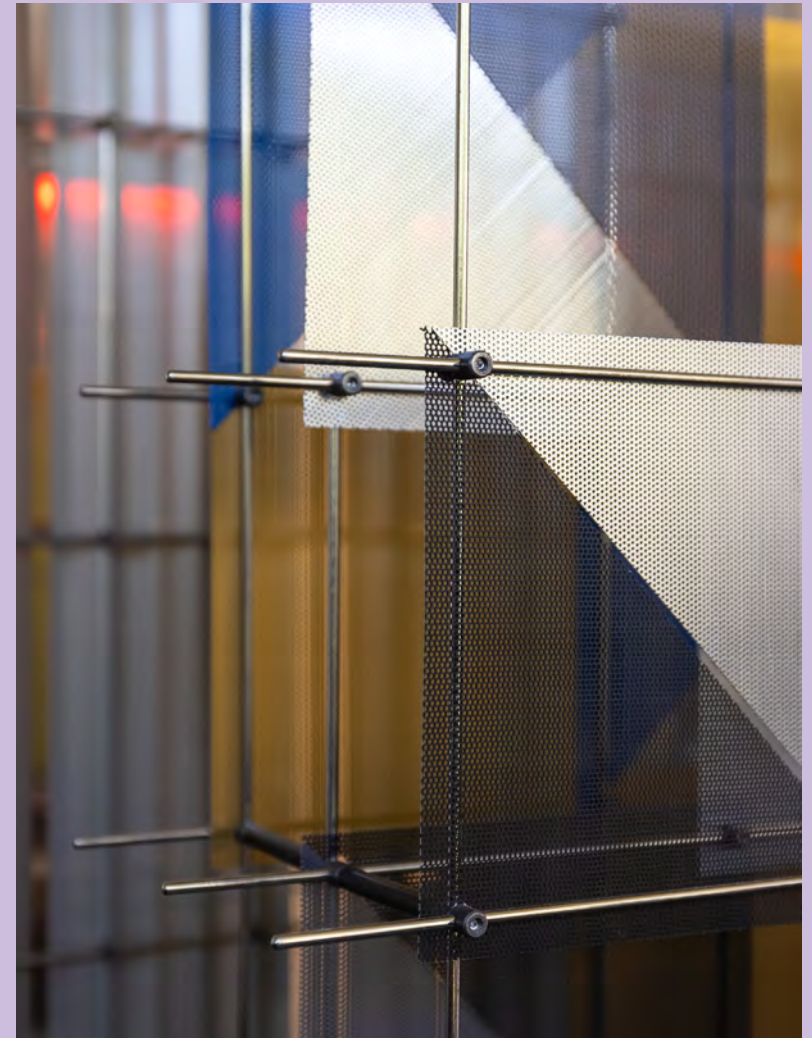
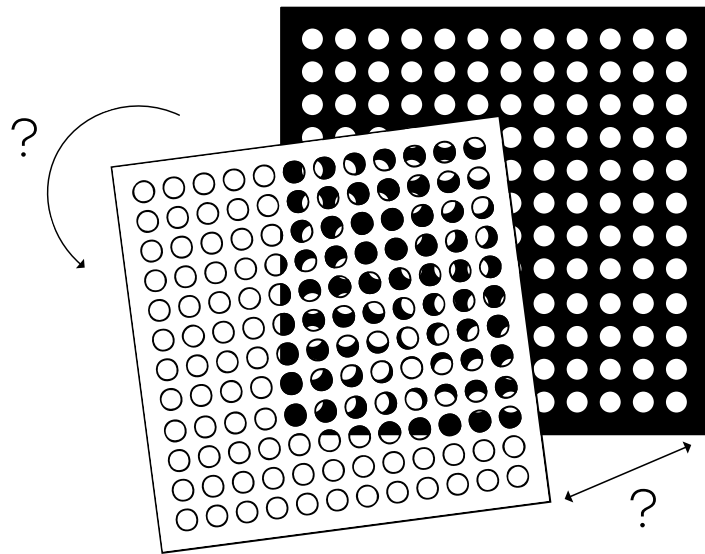


Image 22: Frank Bauer, *Lichtbild #080 Blue* (detail), 2024, anodised perforated aluminium sheets, stainless steel bars, 4 xenon lamps, 600 (h) x 600 (w) x 150 (d) mm. Photograph by Sia Duff.

- Now you have observed the visual effects created by your materials, try making a sculpture out of them using light.

For example: you could make two cylinders that sit inside each other and shine a torch up through the base. The torch may be concealed inside a small plinth for the sculpture to sit on.

Something to consider:

Is your sculpture going to be:

- Static (so that the viewer must move around it to see the moiré effect).
- Dynamic (so that it moves independently using wind power or a mechanical mechanism).
- Interactive (for example, the viewer pulls a tab to slide one panel across the other).

YEARS 7/8:

> [AC9AVA8E01](#) > [AC9AVA8D01](#) > [AC9AVA8D02](#)

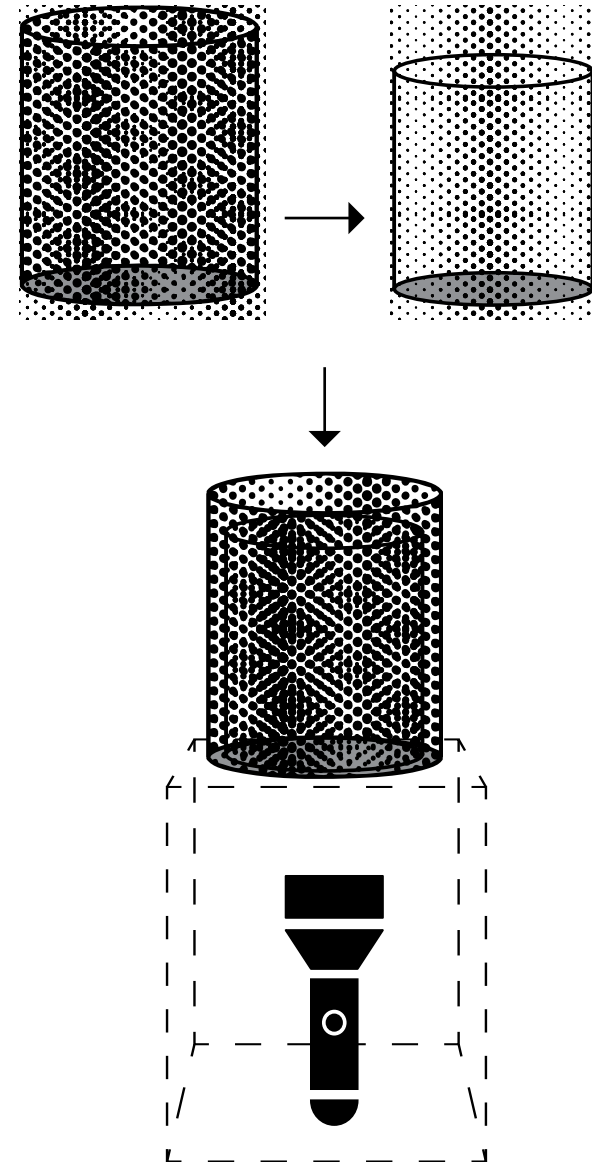
> [AC9AVA8C01](#) > [AC9AVA8C02](#) > [AC9AVA8P01](#)

YEARS 9/10:

> [AC9AVA10E01](#) > [AC9AVA10D01](#) > [AC9AVA10D02](#)

> [AC9AVA10C01](#) > [AC9AVA10C02](#) > [AC9AVA10P01](#)

> [CCT](#) > [NUM](#) > [PSC](#)



BAUER HAUS

Now that you have learnt about the Bauhaus (see [KEY INFLUENCE: THE BAUHAUS](#) on Page 15), let's see if you can identify some Bauhaus influences in the work of Frank Bauer.

STYLE CODES

- Choose one of the Bauer pieces represented in images 23–25 and describe what Bauhaus principles you can see reflected in the artwork...

YEARS 7/8:

> [AC9AVA8E01](#) > [AC9AVA8D01](#) > [AC9AVA8D02](#)

YEARS 9/10:

> [AC9AVA10E01](#) > [AC9AVA10D01](#) > [AC9AVA10D02](#)

> [CCT](#) > [NUM](#)



Image 23: Frank Bauer, *Teapot*, c.1985, 925 silver, lacquered wood, titanium, stainless steel, a) 117 (h) x 225 (w) x 195 (d) mm; b) 5.4 (h) cm, 4.8 cm (diam); c) 5.3 (h) cm, 3.2 cm (diam); d) 6.8 (h) cm, 3.3 cm (diam). National Gallery of Australia, Kamberri/Canberra. Purchased 1987. Accession Number: 87.35.A–D. IRN: 62373. Image courtesy the National Gallery of Australia (NGA), Kamberri/Canberra.

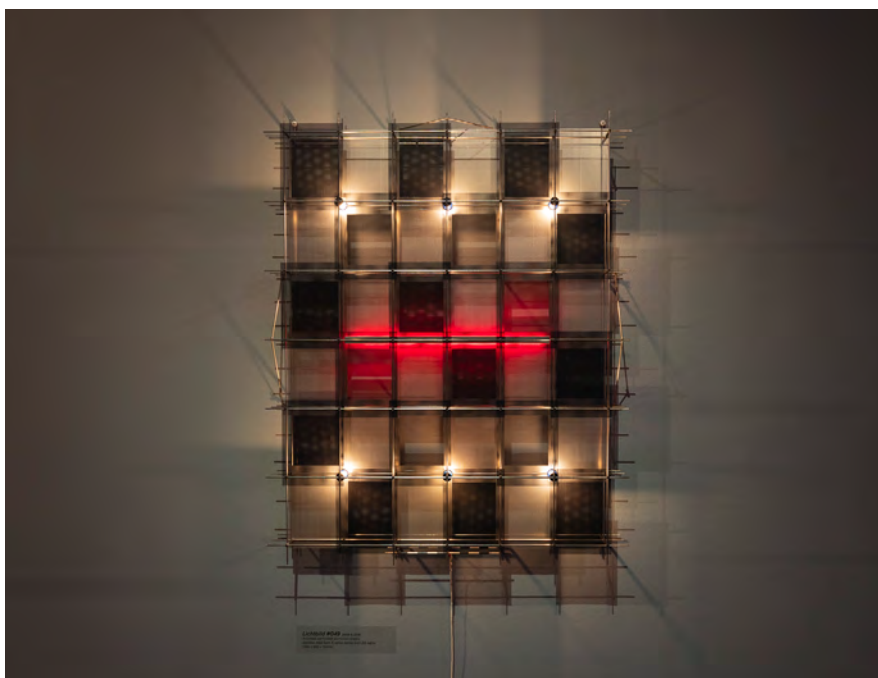


Image 24: Frank Bauer, *Lichtbild #049*, 2008 & 2018, anodised perforated aluminium sheets, stainless steel bars, 6 xenon lamps, LED lights, 1080 (h) x 850 (w) x 150 (d) mm. Installation view, *Frank Bauer* at Samstag Museum of Art, 2025. Photograph by Sia Duff.

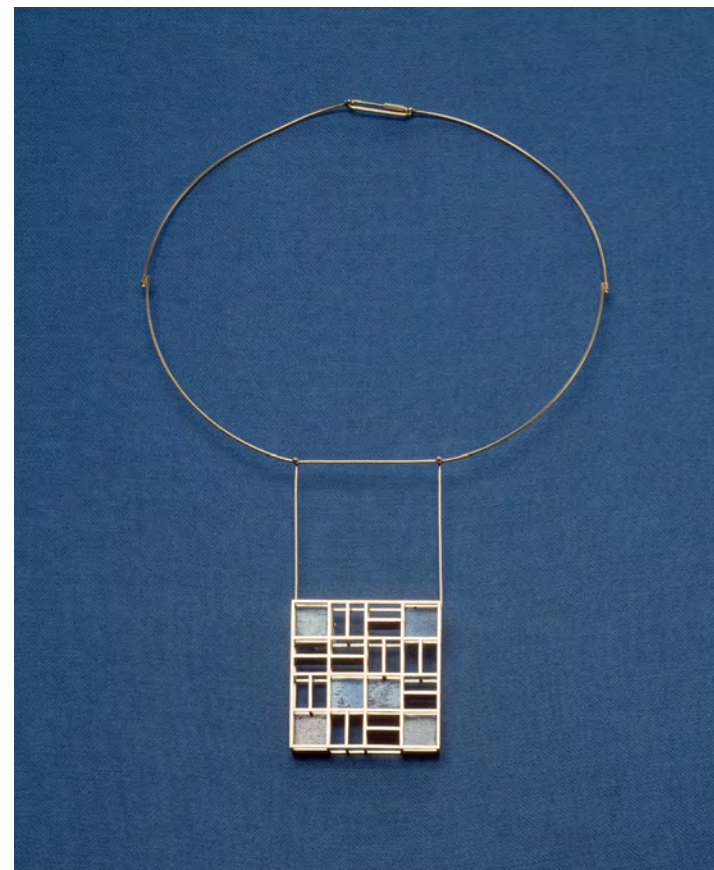


Image 25: Frank Bauer, *Neckpiece*, 1979, 18ct gold, rolled steel, 218 (h) x 148 (w) x 12 (d) mm. National Gallery of Victoria, Naarm/Melbourne. Purchased 1992, ©Courtesy of the artist. Image courtesy National Gallery of Victoria (NGV), Naarm/Melbourne.

ADDITIONAL RESOURCES

Samstag Museum of Art: *Frank Bauer* (exhibition)

<https://www.unisa.edu.au/connect/samstag-museum/exhibitions/2025/frank-bauer/>

Samstag Museum of Art: *Frank Bauer* (exhibition catalogue)

https://www.unisa.edu.au/siteassets/samstag/docs/catalogues/2025/2025_sma_frankbauer_catalogue.pdf

BMG Art: Frank Bauer (artist profile)

<https://www.bmgart.com.au/artists/frank-bauer/>

BMG Art: Frank Bauer, CV

https://archive.bmgart.com.au/individual_artists/bauer_frank2008/resume/bauer_frank_resume.htm

BMG: Frank Bauer, Metal (exhibition)

<https://www.bmgart.com.au/exhibitions/frank-bauer-margie-sheppard-2025/>

IN review: "People could see it from the train": Frank Bauer's life of light and colour" (article)

<https://www.indailysa.com.au/inreview/visual-art/2025/06/19/frank-bauer-light-colour>

Art Gallery of South Australia (AGSA): Frank Bauer, works in the collection

<https://www.agsa.sa.gov.au/collection-publications/collection/creators/frank-bauer/2613/>

National Gallery of Victoria (NGV): Frank Bauer, works in the collection

<https://www.ngv.vic.gov.au/explore/collection/artist/2761/>

Indesign: Indesign Luminary: Frank Bauer (article)

<https://www.indesignlive.com/uncategorized/indesign-luminary-frank-bauer>

National Gallery of Australia (NGA): Frank Bauer, works in the collection

<https://searchthecollection.nga.gov.au/artist/15567/frank-bauer>

JamFactory: Exhibition Insight... Materials Matter: A Bauhaus Legacy (article)

<https://www.jamfactory.com.au/marmalade/2019/6/25/exhibition-insight-materials-matter-a-bauhaus-legacy>

GLOSSARY

Achromatic: Meaning without colour. Technically, black, white and grey are not colours as they do not contain any hue (pure colour). Therefore, they are considered achromatic colours.

Aesthetic: Relating to the appreciation and critique of beauty or good taste; a particular taste or style of visual composition.

Aesthetically: Something done in a way that is visually pleasing.

Anodised: Having been covered in an oxide (a chemical compound containing oxygen and one other element) layer through the process of anodisation. During anodisation, metal is immersed in an electrolyte bath (a solution containing substances that will conduct electricity) which then has an electrical current pass through it. The electricity generates a chemical reaction between the metal and electrolytes that produces a thin, dense oxide layer on the surface of the metal. This layer makes the metal more durable and resistant to corrosion. It also produces an attractive finish which can be dyed a number of different colours. Anodisation may be used for either decorative or protective purposes. Most metals will naturally react with oxygen in the atmosphere to produce an oxide outer layer (a process called oxidation). Anodisation is a controlled electrochemical oxidation process that produces a thicker (by comparison) layer with more uniform density – hence, making it stronger.

Avant-garde: A French term that refers to people who are leading the way in developing new and experimental ideas, styles or techniques in a particular field.

Bach: Johann Sebastian Bach (1685-1750). A German composer from the Baroque era (17th and early 18th centuries – a period in European history characterised by a highly decorative and dramatic style of art, architecture and music). Bach is now considered to be one of the greatest composers of all time.

Chenille: A soft, fuzzy type of yarn (a type of thread).

Classical: Relating to ancient Greece and Rome.

Concentric: Describes a series of shapes ranging in size, that fit inside each other and share the same centre point. In this case, concentric squares describes variously sized squares positioned one inside the other so that they share the same centre point.

Discretion: The freedom to make a decision or choice based on individual judgement.

Economic models: Different ways that an economy can be organised. A country will organise its economy depending on what natural resources it has, what it can produce (its industries), what it can sell and what it needs to buy from others (trade), and how its people want their society to operate (their values or ideology). Egalitarian: Relating to the idea that all people are equal and deserve equal rights and opportunity.

Egalitarian: Relating to the idea that all people are equal and deserve equal rights and opportunity.

Ethereal: Something that is so delicate, light or refined that it does not seem to be of our world and evokes a spiritual or celestial (of the sky or heaven) quality.

Expressionist: This term relates to German Expressionism. German Expressionism was an art movement that focused on conveying the artist's emotional and psychological state, rather than representing what the world looked like. A group of artists who came together in 1905 and called themselves Die Brücke (The Bridge) were the leaders of this movement. Their idea of art as an expression of the emotions of an artist became so popular throughout the **West** during the first half of the 20th century that, nowadays, we often refer to any artwork that does this as Expressionism or Expressionist. So, for example, the famous painting *The Scream* (1893), by Norwegian artist Edvard Munch, (which had a strong influence on the development of German Expressionism) is an example of the kind of work that we would call Expressionist today.

Folk: Describes traditional forms of customs, arts, crafts, music, stories, traditions, and myths that have originated in a specific country, region or place in response to the landscape, and beliefs and lifestyles of the local peoples. Something is usually only categorised as 'folk' after it has been handed down over many generations.

Homage: The act of expressing great respect and admiration for someone or something else by incorporating their/its influence in your work. In this case, Frank Bauer has created artworks that utilise the moiré effect to show his great esteem for earlier **kinetic** artist Jesús Raphael Soto, who is known for using moiré patterns in his own work.

Idealised: To have been perceived of, or represented as, being perfect or significantly better than what is the reality.

Immersive: The word 'immersed' describes the state of being completely surrounded by something – for instance, when you dive into a pool you are immersed in water. In visual art, the term 'immersive' relates to an artwork that creates a strong sense that the viewer is physically immersed in the world created by the work.

Impromptu: Something that is done in the moment without planning or preparation.

Incandescent light bulbs: A type of electric light bulb first developed in the 1800s. The bulb operates by running electricity through a filament (a thread-like strip) of tungsten (a chemical element) so that it heats up to such high temperatures that it glows. Incandescent light bulbs use large amounts of electricity to produce a small amount of light, making them much less efficient than newer forms of electric lighting (such as LED lamps). As a result, most varieties of incandescent light bulb have been banned in Australia since 2009 in an effort to reduce electricity consumption.

Industrial designer: A professional whose job involves developing ideas and designs for industrial, commercial or consumer products that will be manufactured by mass-production processes. When designing a product, the industrial designer must consider many factors including: how well it will function, how easy it will be to use, safety, appearance, how it will be manufacture, and how much it will cost to manufacture.

Industrial revolution: A period of transition that occurred in Britain, Europe and the United States, during the late 1700s to early 1800s, as manufacturing processes changed from hand production methods to mass production using machines. The introduction of machines and new power sources resulted in new ways of working in the manufacturing, transportation and agricultural industries and had widespread effects on **Western** society, working conditions and economics.

Kinetic art: A type of art that uses movement to express ideas. Movement within the artwork can be produced by a number of different methods, such as wind, motor or human interaction.

Legislation: A law or set of laws.

Medieval: Of or relating to the Middle Ages – the period of European history from approximately 500 AD to 1500 AD. These terms specifically refer to the time between the fall of the Roman Empire in the 5th century to the beginning of the Italian **Renaissance** in the 14th century. They were introduced during the Renaissance to describe what, at the time, was perceived as a dark period of history characterised by a lack of culture, knowledge and learning.

Modular: Something that is composed of smaller units (modules).

Moiré effect: A visual phenomenon that occurs when two layers of similar (but not identical) lines are laid over each other OR when two layers of identical lines are laid over each other but are not aligned. When our eyes attempt to decipher this information an impression of movement is created. This effect was first noticed in the silk production trade – when two layers of silk with the same weave (which could never be perfectly uniform) were pressed together, the tiny differences in the lines of the weave resulted in a pattern like rippling water.

This became known as Moiré silk – ‘moiré’ being the French word for ‘watered’.

Nazi: The National Socialist German Workers' Party (or Nazi Party). The Nazi party ruled Germany from 1933–1945 under the dictatorship of Adolf Hitler.

Open planned rooms: Interiors that feature large, open spaces used for multiple purposes, rather than having smaller, separate rooms that are accessed via a hallway. For example, rather than having a separate lounge room, dining room and kitchen, a house may have an open planned living area that combines all three functions.

Optics: The science that explains how the human eye interacts with light.

Patenting: Taking out a patent. A patent is a legal registration of the ownership of an invention or design. This prevents others from replicating this new technology.

Pedagogical: Relating to the methods and practice of teaching.

Planes: Flat surfaces.

Plexiglass: A type of transparent plastic that is lightweight, durable and does not break easily.

Refurbishment: The act of cleaning, decorating and, or, repairing something to make it look or function like new again. In this case, the replacement of a battery to make an iPod function properly.

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Renaissance: A French term meaning rebirth or revival. The Renaissance refers to a period of great innovation in Europe that occurred from the mid-14th century to the mid-16th century, beginning in Italy before spreading throughout Europe. The Renaissance was characterised by the revival of classical (relating to ancient Greece and Rome) art, architecture and literature as well as scientific discovery.

Site-specific: Designed to exist in a specific location.

Soldered: Two pieces of metal having been joined with solder. Solder is a metal alloy (a pure metal mixed with other elements) that has a very low melting point so that it will easily melt when heated. Once melted, the solder is applied to the join. The solder sticks to each piece of metal so that, as it cools, it creates a permanent bond that connects them together.

Spectacles: Old-fashioned term for reading glasses.

Static: Not moving or changing.

Superseded: Having been replaced by a newer, improved model.

Temporal: Describes something relating to time. In this instance, an artwork that moves and changes over time so that each viewer will have a different experience of it.

Typefaces: A set of letters, numbers and symbols (used for printing) that belong to the same design family. Fonts are subcategories of a typeface. For example, while 'Arial' a typeface, *italicised Arial at size 12* is a font.

Utopian: Relating to the concept of a utopia – an imaginary society where everything is perfect and all the citizens are happy. A utopian idea is an idea about what that society would be like.

William Morris: (1834–1896) English designer, craftsman, poet, writer and social reformer.

Western: From, characteristic of, or related to the cultures of lands located in the western part of the world and the cultural, political and social beliefs these cultures share. Countries that have been colonised by Western peoples are also referred to using this term. 'Western' countries include the United Kingdom, North America, Canada, Australia and countries located in the western part of Europe, such as France, Germany and Italy.

HYPERLINK DETAILS

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BMG Gallery: Frank Bauer – CV

https://archive.bmgart.com.au/individual_artists/bauer_frank2008/resume/bauer_frank_resume.htm

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University of the Arts London Researchers: Ralph Ball

<https://researchers.arts.ac.uk/51-ralph-ball>

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Vimeo: Samstag – *Lichtbild* (2020), moire effect

https://player.vimeo.com/video/1105641677?badge=0&autoplay=0&player_id=0&app_id=58479&autoplay=1&loop=1

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The Art Story, Johannes Itten

<https://www.theartstory.org/artist/itten-johannes/>

László Moholy-Nagy Foundation: Art Database

<https://www.moholy-nagy.org/art-database-gallery/>

Paul Klee: Famous Paul Klee Paintings

<https://www.paulklee.net/paul-klee-paintings.jsp>

Wassily kandinsky: Selected Wassily Kandinsky Paintings

<https://www.wassily-kandinsky.org/wassily-kandinsky-paintings.jsp>

Josef Albers: Art by Josef & Anni Albers

<https://www.albersfoundation.org/art/highlights?artists=josef-albers&page=1>

Rethinking the Future: 20 Projects that made Walter Gropius the pioneer of Modern Architecture

<https://www.re-thinkingthefuture.com/know-your-architects/a294-20-projects-that-made-walter-gropius-the-pioneer-of-modern-architecture/>

Mies van der rohe: Projects

<https://miesvanderrohe.org/projects.html>

The Art Story: Marcel Breuer

<https://www.theartstory.org/artist/breuer-marcel/>

Metropolitan Museum of Art (The Met): Tea Infuser and Strainer (1924), Marianne Brandt

<https://www.metmuseum.org/art/collection/search/491299>

Victoria and Albert Museum: Art Nouveau Teapot (1904), Paul Follot

<https://collections.vam.ac.uk/item/O88373/teapot-follot-paul/>

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Bauhaus Dessau, Bauhaus building

<https://bauhaus-dessau.de/en/venues/bauhaus-building/>

Muzeum města Brna: Vila Tugendhat

<https://www.tugendhat.eu/en/>

Victoria and Albert Museum: Model B32 (1928), Marcel Breuer

<https://collections.vam.ac.uk/item/O114123/model-b32-chair-breuer-marcel-lajos/>

Victoria and Albert Museum: Thonet

<https://collections.vam.ac.uk/context/organisation/A15105/thonet>

Museum of Modern Art (MoMA): Wall-Covering Material for the Bundesschule Auditorium in Bernau, Germany (1929), Anni Albers

<https://www.moma.org/collection/works/3579>

Museum of Modern Art (MoMA): Bauhaus Ausstellung Weimar 1923 (1923), László Moholy-Nagy

<https://www.moma.org/collection/works/189329>

Museum of Modern Art (MoMA): Design for Smyrna Rug (1925), Anni Albers

<https://www.moma.org/collection/works/3735>

Josef & Anni Albers Foundation: Stacking tables (ca. 1927), Josef Albers

https://www.albersfoundation.org/art/highlights/stacking-tables_2000-5-3

Architecture & Design: A selection of Harry Seidler's best-known work

<https://www.architectureanddesign.com.au/editorial/features/A-selection-of-Harry-Seidlers-best-known-work>

Museums of History NSW: Rose Seidler House

<https://mhnsw.au/visit-us/rose-seidler-house/>

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Bauhaus Archiv Museum: Collection

<https://www.bauhaus.de/en/research/collection/>

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Bauhaus Archiv Museum

<https://www.bauhaus.de/>

Bauhaus Archiv Museum: Discover, Articles

<https://www.bauhaus.de/en/discover/article/>

Bauhaus Archiv Museum: Bauhaus-Worksheet #1: Colourful spinning tops

<https://www.bauhaus.de/en/discover/article/bauhaus-worksheet-1-colourful-spinning-tops/>

Bauhaus Archiv Museum: Bauhaus-Worksheet #2: Illusion of movement

[https://www.bauhaus.de/en/discover/article/bauhaus-worksheet-2-illusion-of-movement/Bauhaus Archiv](https://www.bauhaus.de/en/discover/article/bauhaus-worksheet-2-illusion-of-movement/Bauhaus%20Archiv)

Museum: Bauhaus-Worksheet #3: Wheelbarrow

<https://www.bauhaus.de/en/discover/article/bauhaus-worksheet-3-wheelbarrow/>

Bauhaus Archiv Museum: Bauhaus-Worksheet #4: Roller skating on paper

<https://www.bauhaus.de/en/discover/article/bauhaus-werkblatt-4-roller-skating-on-paper/>

Bauhaus Archiv Museum: Bauhaus-Worksheet #5: DIY Jewellery

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