
# ENABLER TOOLKIT FOR PARTICIPATORY PRACTICES FOR THE 3D CREATION OF SUSTAINABLE PUBLIC SPACES

Co-funded by the Erasmus+ Programme of the European Union

CollectiveUP

Teatro Circo de Braga EM, S.A.

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CREATIVE INDUSTRY KOŠICE //

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This publication has been written within the Erasmus + project Youth 4 Bauhaus, which aims to work on the New European Bauhaus initiative with the youth by co-creating urban digital spaces and sharing resources about urban participation with the youth. This publication (in English, Dutch, Portuguese, Slovak and Romanian language) and further publications and tools produced in the project can be downloaded free of charge at:
https://www.cike.sk/en/project/youth-4-bauhaus-en/



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# INTRODUCTION

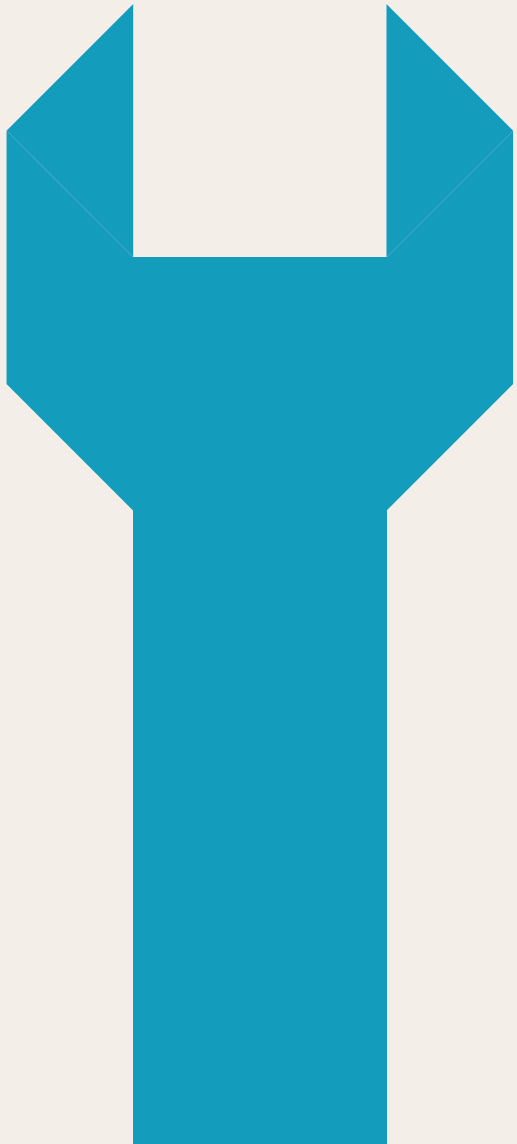
**According to our needs analysis, an increasing number of young people living in Europe today find themselves underrepresented in decision-making processes that affect their lives. The analysis also reveals young peoples' desire for access to safe and inclusive physical spaces, and their concern for the environment, in particular their desire to become ambassadors of change. The NEBI Enabler Toolkit responds to these demands: it is designed to tackle the participatory gap for young people and address the matters most important to them - spaces and sustainability. Specifically, the toolkit focuses on the creation of public spaces inspired by the New European Bauhaus (NEB), using the 3D game Minecraft as a tool for creation. The toolkit builds on the work of the United Nations Habitat program, and also on the Block by Block and CollectiveUP initiatives, which we will go into more detail about later in this document.**

The toolkit includes five modules: a **Green Cookbook** with information about sustainable design and the use of ecological materials for construction; a **methodology guide** on how to facilitate workshops and dialogues with young people; a **3D generic** model of a public space at a river; a **technical inclusive guide** that includes a **video explainer** on how to use the 3D model in Minecraft Education: and, a youth-friendly **lesson plan** that brings together all the components in a didactic way. The toolkit also incorporates the innovative methodology of the NEBI and represents one of the initial introductory publications geared towards introducing young people to this European initiative.

The NEBI Enabler Toolkit is addressed to teachers, youth workers, and young people involved in the project, plus all who are interested to learn more about spaces and sustainability. The target audiences especially include schools and youth organisations who are focused on introducing young people to climate and environmental initiatives, and/or those that prioritise bottom-up citizen participation.

The toolkit is designed to provide a modular and adaptable approach, that can be utilised, reused, and reproduced in a variety of locations and contexts, enabling the replication of this project across Europe. The modular design of the toolkit allows for its use in a similar context or in other contexts, making it transferable and scalable. The participatory guide can be used in relation to other concepts that are not necessarily the New European Bauhaus or the co-creation of spaces. The 3D generic model can be used in classrooms for several courses and workshops with other target groups, or learning goals. The NEBI Enabler toolkit has the potential to significantly impact the lives of young people and communities in the promotion of sustainable designs, participatory practices, and technical skills development.

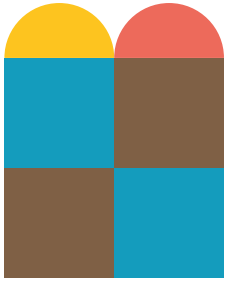




# 1.

# Green Cookbook





**The first module of the toolkit is the Green Cookbook** which covers the green transition and the New European Bauhaus Initiative. As one of the first and introductory publications that focus on presenting the concept of the initiative closer to youth and teachers, it provides a conceptual overview, and presents different available tools, approaches, and guidelines for navigating the initiative.

**This Green Cookbook module contains seven sections. The first section 1.1** introduces the New European Bauhaus initiative, its background, origin, and broad scope. It also covers the core areas, principles, terminology, and tools that define the initiative. The section highlights how the NEB compass and self-assessment tool can be applied to a multitude of opportunities and challenges, and explains the functioning and values involved based on practical examples.

**Section 1.2** presents the New European Bauhaus initiative as a practical interpretation of the European Green Deal. It explains the goals, practical measures and benefits for mankind. NEB aims to merge science, technology, architecture, culture, and the arts to future-proof Europe while maintaining Europe's aesthetic and cultural appeal.

**Section 1.3** describes the functioning of the movement, what tools are used, presents the activities and financial resources dedicated to the implementation, so the reader can understand how to engage with the NEB initiative.

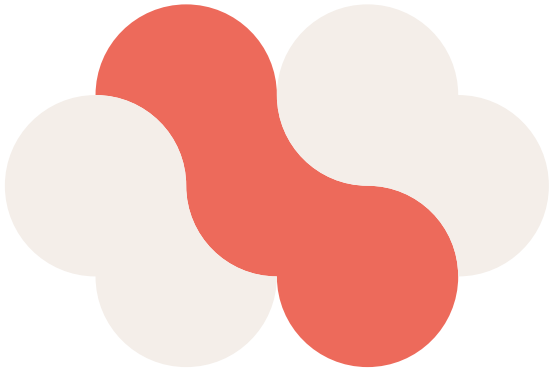
**Section 1.4** explains the use of its values in urban spaces illustrated by numerous examples. It also covers the information about EU green initiatives including some relevant local (Belgian, Slovak, Portuguese and Romanian projects).

**Section 1.5** introduces European green initiatives, their dimension and scopes and highlights some examples from project partner's countries.

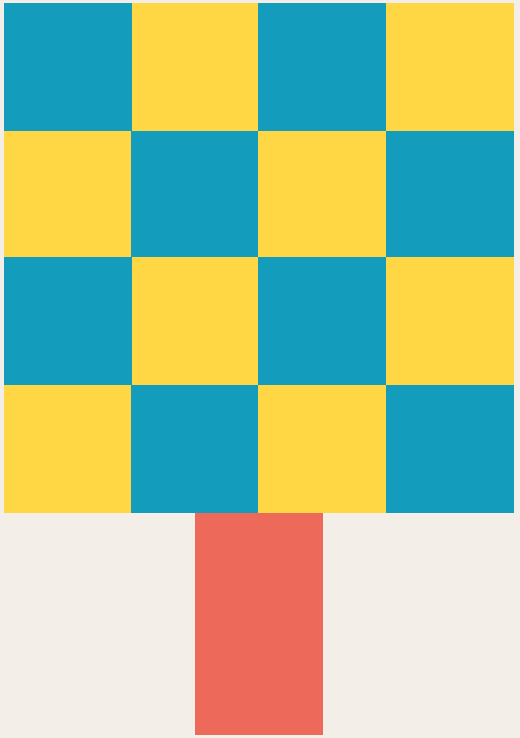
**Section 1.6** presents an overview of sustainable materials for the construction of physical spaces, with a subsection showing the examples of sustainable and inclusive design solutions and other inspirational practical examples.

**The final section** summarises the future goals and next steps forecasted for New European Bauhaus at the European level.

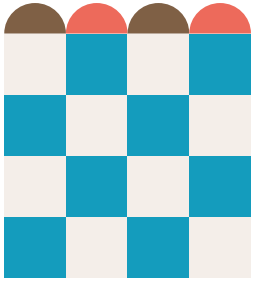
As the reader will see, the Green Cookbook can thus be used independently, adjusted or implemented into curricula for high-school students alongside the other components in this NEBI toolkit.



# 1.1
# The New European Bauhaus in a nutshell







The New European Bauhaus (NEB) initiative is the practical interpretation of the European Union's New Green Deal that is focused on policies to bring about a climate neutral and environmentally sustainable Europe by 2050. The NEB's vision is to merge the worlds of science and technology with architecture, culture, and the arts. According to Ursula Von Der Leyen, "if the European Green Deal has a soul, then it is the New European Bauhaus, which has led to an explosion of creativity across our Union." [(1)] The NEB seeks to future-proof Europe while maintaining its aesthetic and cultural appeal. This is aptly summarised in the Concept Paper by the high-level roundtable, which connects the ambitions of the original Bauhaus dating back 100 years and reframing them to the current societal challenges. [(2)] Broadly, this means that NEB policies support three core areas:

1. **Places on the ground:** fostering the transformation of the built environment into an environmentally sustainable, inclusive and aesthetically pleasing space;

2. **Enabling environment for innovation:** combining sustainability, inclusion and aesthetics in new solutions and products by focusing on innovation;

3. **Diffusion of new meanings:** revisiting our mind-sets and perspectives on the core values of sustainability, inclusion and aesthetics. [(3)]

The **New European Bauhaus movement** is a strategy for transforming Europe into a just and sustainable society. The NEB will do this through the creative application of new technologies and practices such as the use of sustainable construction materials and energy efficient refurbishing, nature-based solutions for stormwater management, or creative recycling techniques to reuse products and usher in the circular economy as well as numerous other practices with the ultimate goal of transforming the built environment into **sustainable, beautiful and inclusive spaces.** The NEBis a platform for bringing together people from all backgrounds with practical ideas on how to design and build the future.

This multidisciplinary movement brings together **scientists, architects, engineers, artists, educators, and experts** from various fields. [(4)] This means that the NEB does not have a dedicated funding programme within the EU and is instead supported by numerous programmes from different policy areas. Such an approach fosters collaboration and builds platforms for experimentation that can work towards a new sustainable lifestyle combining good design, environmental responsibility, inclusivity, and affordability.

## Core Values and Principles of the New European Bauhaus

The NEB is based on the values of **aesthetics (beauty reflected in our cultural values), inclusion (togetherness), and sustainability.** A positive NEB project that builds upon the three values is meant to provide the user and community with a rich experience beyond pure functionality. The NEB envisions three core values and working principles as a guiding compass to help individuals and organisations determine the proper path to transforming the social and built landscape.



The NEB initiative has its own aptly named New European Bauhaus Compass and (self)-assessment tool (see reference for link to full document) to enable the project team to achieve the ambitions set forth by the NEB.[5] With the compass as a guiding tool, individuals are able to plan, analyse, evaluate, and design projects based on the core values. Each of the NEB's three core value strive towards three ambitions to be:

- **Inclusive** → i. to include, ii. to consolidate, iii. to transform;
- **Sustainable** → i. to repurpose, ii. to close the loop, iii. to regenerate;
- **Beautiful** → i. to activate, ii. to connect, iii. to integrate. [5]

A successful project with a transformative and inspirational character should naturally have a combination of these core values and strive towards achieving at least one of the three levels of ambitions per value.

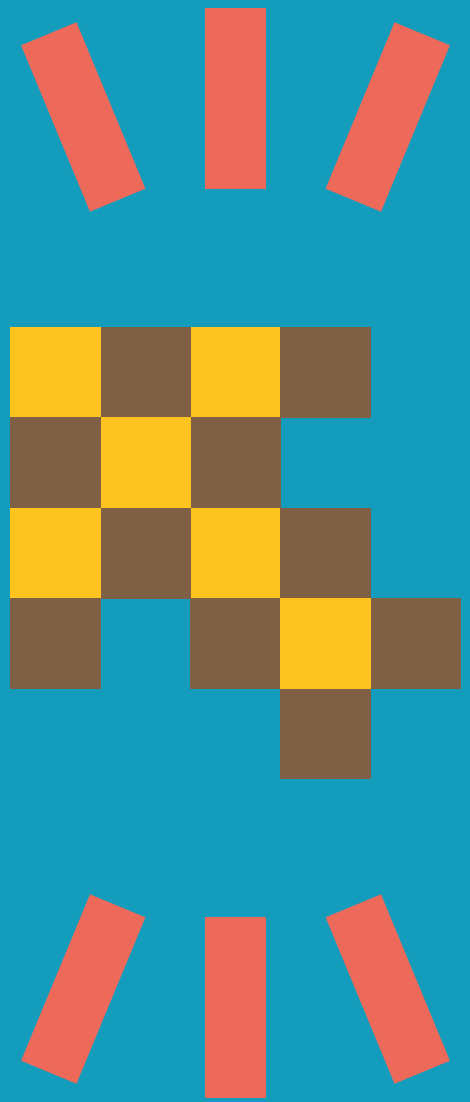
The (self)-assessment tool of the NEB compass further helps determine the impact a certain design or action may have on the environment, a group or organisation, as well as on the wider community. It therefore enables the decision maker to act accordingly in order to deliver the project. The working principles for evaluating one's progress are based on a participatory process, a trans-disciplinary approach, and multi-level engagement. Each working principle is linked to three ambitions:



- **Participatory process** → i. to consult, ii. to co-develop, iii. to self-govern;
- **Transdisciplinary approach** → i. to be multidisciplinary, ii. to be interdisciplinary, iii. to be beyond-disciplinary;
- **Multi-level engagement** → i. to work locally, ii. to work across levels, iii. to work globally. [5]

The transition to an environmentally sustainable and carbon neutral society is as much a cultural and social process as it is one based on science, technology, and engineering. It calls for bringing together bright minds from multiple disciplinary backgrounds and from multiple levels of organisation (whether local government, to non-governmental national, and beyond) to participate in the design and implementation of transformative projects. Furthermore, the NEB compass and (self)-assessment tool can be applied to a multitude of opportunities and challenges as diverse as construction and refurbishment, to product design and manufacturing, or service provision, as well as education and social services.

**In practice**, the NEB approach could be used in the design of furniture that makes use of the concepts of a circular economy by using recycled materials that would otherwise end up in a landfill. The designed furniture would incorporate principles enabling its mass production and affordability while also ensuring its inclusiveness. The project team could, for example, evaluate the use of materials and design considerations to determine whether the furniture piece meets the criteria set forth by the NEB, and if not, how it might address some of the shortcomings of the design piece.





**Another example** could be the transformation of one of the most severely underused urban spaces - roofs. Buildings' roofs are often unused dead spaces that significantly contribute to the so-called urban heat island effect, which causes higher temperatures in urban centres. An effective design incorporating NEB values and principles could be the transformation of a roof into an urban rooftop garden open to the intended users of the building - whether a senior care centre, a school, a public administration building, a shopping centre, or other spaces. Such a green transformation requires a multidisciplinary and perhaps multilevel approach. Engineers need to assess whether a building is structurally sound for such a refurbishment. Architects can contribute to improving access to everyone, including people with disabilities. Botanists and artists can contribute to creating an urban oasis that is beautiful to the senses. Such multilevel engagement would further involve bringing together private and public sector stakeholders as well as the wider community. Together, the ambitions of the project can be made into reality. Examples of NEB values and principles in practice are bountiful and diverse - you will read about more specific examples to get inspiration in the upcoming sections.

## New European Bauhaus in Action

According to the NEB Progress Report published in January 2023 [(6)], two years after its launch, the initiative has become a proven catalyst for the European Green Deal transformation, ensuring social inclusion and participation. Thanks to its successful implementation strategy, the initiative has become a movement with an active and growing community (600 official partner organisations) from all EU Member States and beyond.

The NEB movement has further inspired the establishment of other alliances that share NEB values. For example:

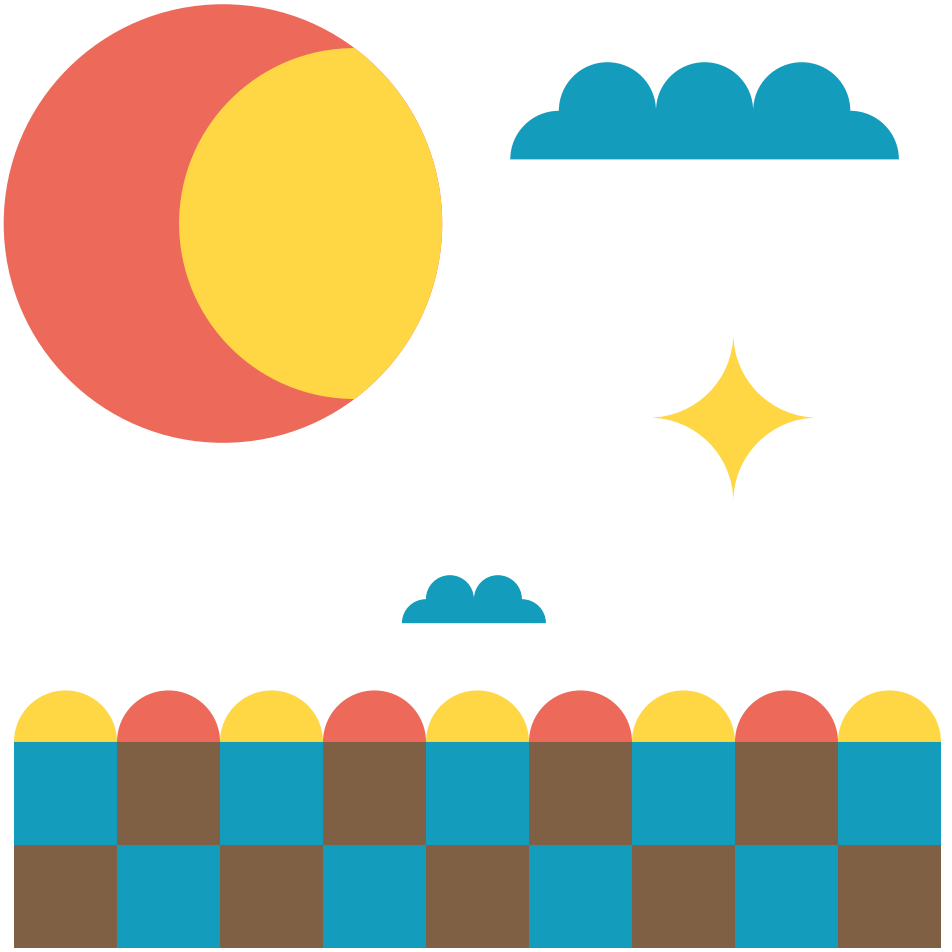
Wood4Bauhaus – a wood sector alliance that aims to raise awareness of the transformative power of the Circular Economy, puts a spotlight on the versatility of innovative wood products and building systems, and facilitate dedicated co-creation partnerships with the wood sector. (7)

European Fashion Alliance - established to accelerate the transition of European fashion towards a more sustainable, innovative, inclusive, and creative future. (8)

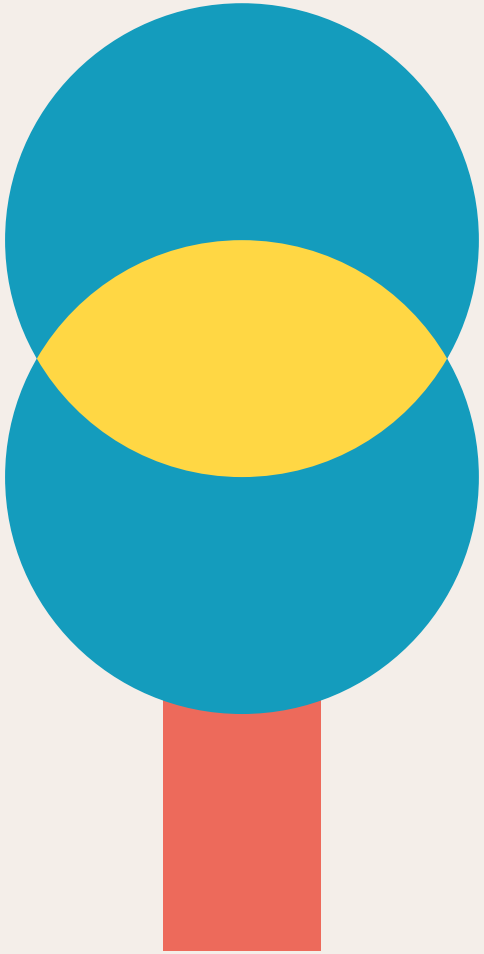
## Story behind the name

Today's New European Bauhaus name dates back to 1919, when German architect and designer Walter Gropius established the **Staatliches Bauhaus**, a school intended to bring together all branches of art and design under one organisation. (9) One of the school's main objectives was to blur the line between the arts and skilled craftsmanship while utilising advancements in technology and mass manufacturing in order to have a tangible and visible impact on the emerging industrial society of the 20th century. As such, students were expected to complete a preliminary course consisting of various tradecrafts prior to acceptance to the school, with the intention of preserving individual creative expression while fostering the principles of functional design and mass production. Even though the establishment existed for a mere 14 years, it left a lasting impression on the power of art and design to positively shape society.

In its essence, the original Bauhaus represented a **strategy for better living.** It called for a reflection on the current state of society in order to design and build a future for all. The conception of the NEB is built on a similar, inclusive principle. It is for us all to take stock of our current state of society - a society where climate change, dwindling resources, environmental degradation, growing economic inequality, social polarisation and other issues are calling into question the sustainability of the current courses of action and which requires us to create viable alternative solutions. Today's NEB raises similar questions that were asked 100 years ago, but within the context of current reality. It is asking us to re-envision how we organise, design, and build our society here and now.



# 1.2
# The European Green Deal





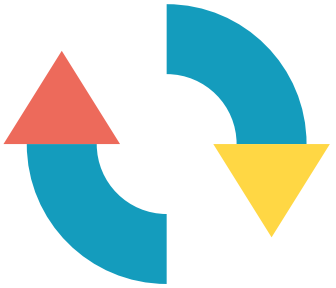
The NEB was born out of the European Green Deal, which consists of a wide array of interconnected policies and strategies covering virtually every element of **European society. Adopted by the European Commission in 2019, the Green Deal has the overarching ambitious goal of transforming Europe into a climate neutral and environmentally sustainable continent by the year 2050.** [(10)] This will be achieved mainly by policies that support the transition of industry and the economy towards one that has a neutral or positive environmental impact. Some measures include the reduction of carbon emissions in the transport sector, manufacturing, or construction sector all the way to more sustainable and affordable agriculture and food production, with the overall aim of decoupling economic growth from resource use. While the top priority is carbon neutrality, the European Green Deal and its multiple interconnected focus areas seek to achieve a resilient and adaptable European continent that is future proof against the unpredictable nature of climate change. One of the key pillars of this transformation is the focus on **renewable energy and resources** to drive the modern European economy and improve the well-being of its citizens.

**Some of the expected benefits of the Green Deal include:**

- **Healthier environment** with fresh air, clean water, healthy soil and rich biodiversity;
- **Improved living space** through renovated and energy efficient buildings;
- **Sustainable agriculture** with more healthy and affordable food;
- **Efficient mobility** with more and better public transport;
- **Sustainable energy** with cleaner energy and clean technological innovation;
- **Quality products** that can be repaired, reused and recycled;
- **Modern economy** with future-proof jobs and skills training for the transition and a globally competitive and resilient industry. (10)

These benefits will be achieved through various EU programmes covering common policy areas such as energy, agriculture, industry, climate, environment, and oceans, transportation, research and innovation, finance, regional development, and the New European Bauhaus.(10) Programmes are truly diverse and employ various funding mechanisms to ensure that the transition is equitable, just and meets the criteria of sustainability.

While the overarching goal is **a carbon neutral Europe by 2050**, the Green Deal can be best understood as the **revitalization of degraded ecosystems** that are losing their capacity to



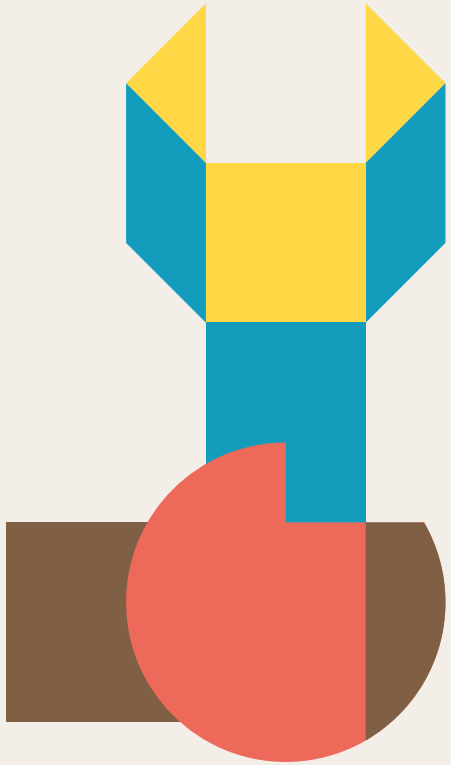


reproduce, thus impacting the capacity of society to reproduce itself and grow. Climate change is the major threat, however, loss of biodiversity, loss of soil fertility, spatial and temporal access to water, emissions of toxins and pollutants and other issues are augmented by climate change but are also problems resulting from anthropogenic activity not directly linked to climate change but should be addressed if the ambitions of the New Green Deal are to have a lasting positive effect on Europe. The New Green Deal seeks multi/disciplinary solutions to common environmental challenges faced by the EU's member states.

**The NEB asks us to rethink how we design and build our built environment.** NEB values can be readily incorporated into urban design that also cross over into other programme areas of the Green Deal. For example, NEB-based actions can take the form of the refurbishment of a building that improves the urban space for a certain bird species found in or near an urban setting. A NEB project could also have the twin goals of reducing a building's carbon footprint, and at the same time creating a new, inclusive place for the community. The possibilities are endless: the multidisciplinary NEB approach exemplifies the Green Deal's potential.

Describing the far-reaching policies of the European Green Deal is beyond the scope of this toolkit. Instead, the reader is advised to conceptualise how interconnected and multidisciplinary are both the objectives of the ambitious goals and the needs for such a set of policy tools and programmes. The toolkit can help users match their own project ideas with these goals and needs and align with European priorities. These are, as the **European Green Deal policy measures outline,** ones that promote economic growth, development, and social cohesion: ones that are sustainable through activities that restore, maintain, and enhance ecosystem services for the benefit of current and future generations.

# 1.3 Workings of the New European Bauhaus Community





Since 2021, the NEB Community and movement have reached the size of more than 600 Partners, more than 80 Friends, 19 High Level Round Table members, 27 National Contact Points and more than 100 beneficiaries of the NEB dedicated open call in January 2023. The overall role of this broad community is not only to disseminate information and amplify values, but also to transfer knowledge into the community and co-develop solutions together.

The European Commission has published the Dashboard[11] - a dynamic interactive map visualising information on NEB projects and key actors across Europe and beyond.

**There are 4 categories of stakeholders:**

1. **National Contact Points** - their aim is to coordinate efforts at the national level and to disseminate information in the Member states;

2. **High-level Roundtable** - its members are experts, advanced thinkers and practitioners in their field bringing inspiration. They act as community ambassadors for the New European Bauhaus, as a diversified sounding board for the Commission President and the Commissioners to test ideas and move the initiative forward;

3. **Partners** - non-profit organisations that act as sounding boards and ambassadors for initiative, too. They participate in the co-creation phase and are regularly invited to contribute to shaping important tools, projects, and documents;

4. **Friends** - business and public authorities in the regions, and cities. They gather and activate local communities, finance, or introduce projects in their city or region and help with the project's implementation. (6)

In April 2022, the Commission established the **New European Bauhaus Lab** to work with the community to co-create, prototype, and test tools, solutions, and policy actions that will bring about meaningful change on the ground. It is a project-based structure where teams self-organise to achieve tangible change in a specific place or context. The Lab is a co-creation space at the service of the broader NEB Community. (12)

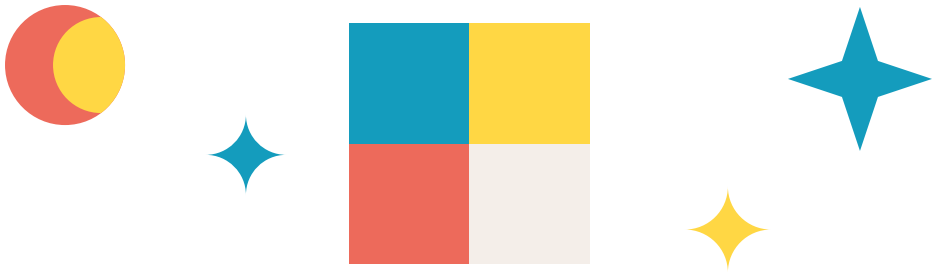
## Approach to education

Building on the original Bauhaus conception, the initiative is also closely connected to education, as one of its main goals is transition to a **sustainable lifestyle** that combines good design, responsibility for our environment, inclusivity, affordability, and respect for diversity. A sustainable lifestyle is not something that can be forced. Rather, it is a gradual process that starts with education and awareness of the complexities and interconnectedness of human activity and the planet.

One of the results of the NEB co-design phase was the acknowledgement for the need to improve skills and **knowledge for transforming society**. Emphasis should also be put on the development of the so-called green skills that are necessary for **greening existing jobs or creating new green jobs.** Co-design, as one of the main principles of NEB validates the need for prototyping a new educational approach that will embrace complexity and contestation while avoiding silencing the perspectives of marginalised and disadvantaged voices. (13)



Several education institutions are currently proposing **new curricula** based on NEB values, hiring researchers to develop relevant projects (University College Dublin, Delft University of Technology, Norwegian University of Science and Technology) and forming a European Master of Arts program that would incorporate the NEB principles. At the beginning of 2022, a call around Transformation of Places of Learning was launched aimed at not only teaching the future generations to respect and protect biodiversity, but also to be open to unlearning harmful behaviours and changing our own mind-sets. [(4)]



## Financial resources dedicated to NEB

According to the NEB Progress Report from January 2023, NEB has been able to implement real change on the ground thanks to broad funding from different EU programmes.

Thus far, over €100 million have been invested into NEB projects supported by different programmes in 2021 and 2022. Some programmes already offer funding opportunities to achieve the aims of the NEB while other programmes are integrating parts of the NEB into their competencies without yet having a predefined budget.

Specific calls and actions were divided into three thematic strands, based on the core areas:



1. **Transformation of places on the ground** – with overall budget more than €102 million through Horizon Europe programme, the European Regional Development Fund and Single Market Programme;

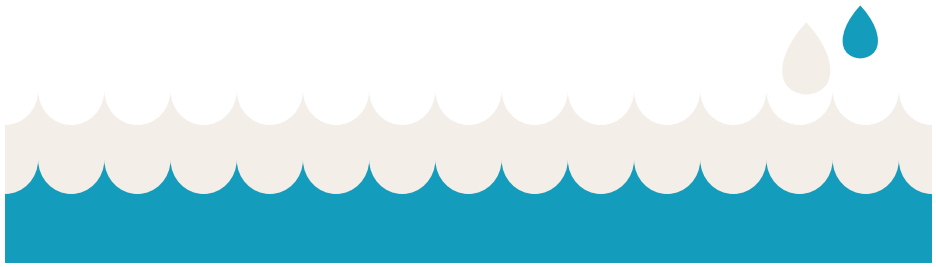
2. **Transformation of enabling environment for innovation** - with overall budget more than €2 million through Horizon Europe programme, COSME programme - predecessor of the Single Market Programme, Single Marker Programme, Digital Europe Programme, ERASMUS+ programme, Creative Europe Programme;

3. **Diffusion of new meanings** – through Horizon Europe, Erasmus + Programme, European Solidarity Corps.[(6)]

**The New European Bauhaus Prize** recognizes and celebrates existing achievements and supports younger generations to further develop emerging concepts and ideas. It is a special way of supporting initiatives on the ground. 38 innovative projects have already been awarded in the 2021 and 2022 editions. [(6)]

There are 4 main Prize categories on transformation themes:

1. **Reconnecting with nature**
2. **Regaining a sense of belonging**
3. **Prioritising the places and people that need it the most**
4. **Shaping a circular industrial ecosystem and supporting life-cycle thinking**



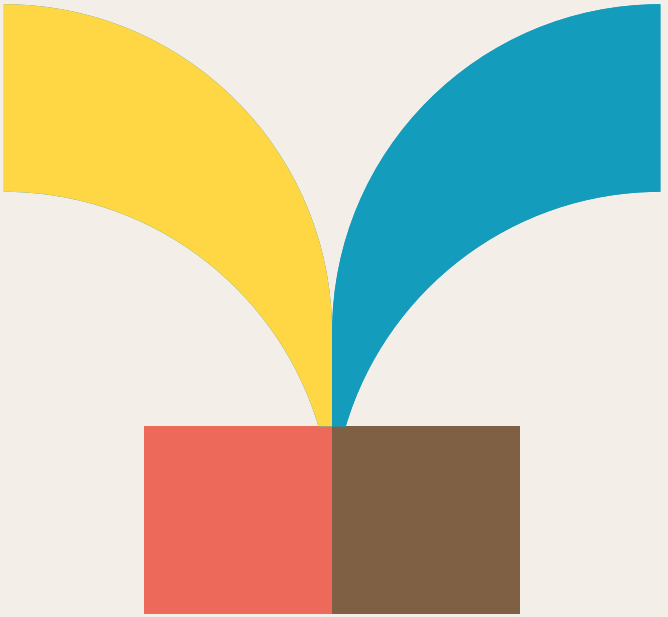
**The Prizes have been awarded in three parallel competition strands:**

- New European Bauhaus Champions for existing completed examples/projects;
- New European Bauhaus Rising Stars for concepts or ideas submitted by young talents aged 30 or less;
- New European Bauhaus Education Champions (from 2023) for education and learning initiatives. (14)





# 1.4
# NEB use for green urban places





Public spaces are commonly understood as streets, squares, parks, marketplaces, and other spaces that are accessible to the public without any restrictions. They can also be in the form of pedestrian zones, promenades, playgrounds, waterfronts, inner block neighbourhoods that are connected with public green spaces. These spaces are usually owned by municipalities, cities, regions, states or other public institutions and are open for general public use. Private owners can also create high-quality public space either as a part of their investment plans or as a part of their public related activities.

Public spaces have the potential to define the atmosphere of a place or neighbourhood, as well as the overall image of the city. Because they are open and accessible to the public and can be used free of charge, they have a high democratic value potential.

**Public spaces serve a few key functions including:**

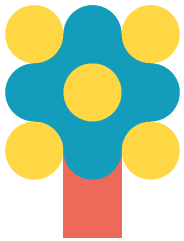
- A medium for transportation – by foot, cars, buses, bicycles, etc.;
- Space for recreational, cultural and social activities (sports, fairs, festivals, social gatherings, relaxation, experiencing culture, etc.);
- A place for expressing social-political views (i.e. voting, protests, movements, etc.).

Well-designed and maintained public spaces have the potential not only to increase the quality of life and well-being, but also to support the development and attractiveness of the city for all kinds of people.

## Green spaces

The basic definition says that green space means **“undeveloped land that is partially or completely covered with a variety of vegetation.”**(15) Many cities are facing problems with the urban heat island effect, which is when urban impermeable surfaces transform solar energy into sensible heat making a city feel hotter by a couple degrees compared to the countryside. (16)

There are natural solutions to this climate problem, commonly referred to as nature-based solutions and expanded green spaces. For example, the implementation of green roofs and facades that absorb solar radiation and transform the energy into latent heat thus regulating the urban micro-climate. These could also include the planting of more trees and other vegetation as well as expanding green spaces in urban areas which contribute to mitigating the urban heat island effect. More nature-based solutions can include various stormwater management techniques that slow down the peak flow and mimic the natural hydrological cycle of a water basin which greatly contributes to not only a stable micro-climate but also sustains the so-called ecosystem services. Besides providing various environmental and health benefits, green spaces and nature-based solutions are aesthetically pleasing and have a positive impact on our mental health. They provide us with an outlet for recreation and social cohesion where people go out and interact with each other, have a picnic, or play sports and enjoy their local, beautiful surroundings.





## EXAMPLES:

## Art in public spaces

Aside from its aesthetic or activist function, an artistic installation can also have a practical green function. Beyond being a piece of furniture or element that encourages the public to play with and create new uses, the artistic intervention can also call attention to the current state of the environment so passers-by can notice its specifics and green potential, which is often overlooked. The installation can also be an intervention in a space to signal a possible change or to implement the green change directly.

**a)** Name: **Archway** [17]

Who: Edoardo Tresoldi
Where: Milan, Italy
When: 2015
What: Wire mesh sculptures in public spaces.

**b)** Name: **Urban Forms Gallery** [18]

Who: Fundacja Urban Forms
Where: Lodz, Poland
When: 2008 - 2020
What: Street art murals.



Photo by Jan Janiak/UFF Archive


**b)** **Urban Forms Gallery,** Aryz Love letter

Photo by Jan Janiak/UFF Archive

**b)** **Urban Forms Gallery,** Os Gemeos, Aryz untitled

## Bringing nature closer to urban environments

Bringing nature back to the city centre is rooted in the human need for having communal spaces in which to be human. Green spaces have the power to invite relaxation, calm down, promote creativity, and generate open, free and lively discussion. As opposed to concrete spaces often found in cities and urban buildings, green spaces provide shadows and reduce summer temperatures. By transforming public spaces into living gardens, sensitivity to the environment can get wider community attention. Living gardens embody the practices of planting with care, and help cultivate in urban surroundings significant quality of life elements in the immediate neighbourhood.

**c)** Name: **Xifré's Rooftop: Floating Wild Garden** [19]

Who: MataAlta Studio
Where: Barcelona, Spain
When: 2019
What: Roof top garden

**d)** Name: **Potsdamer Platz** [20]

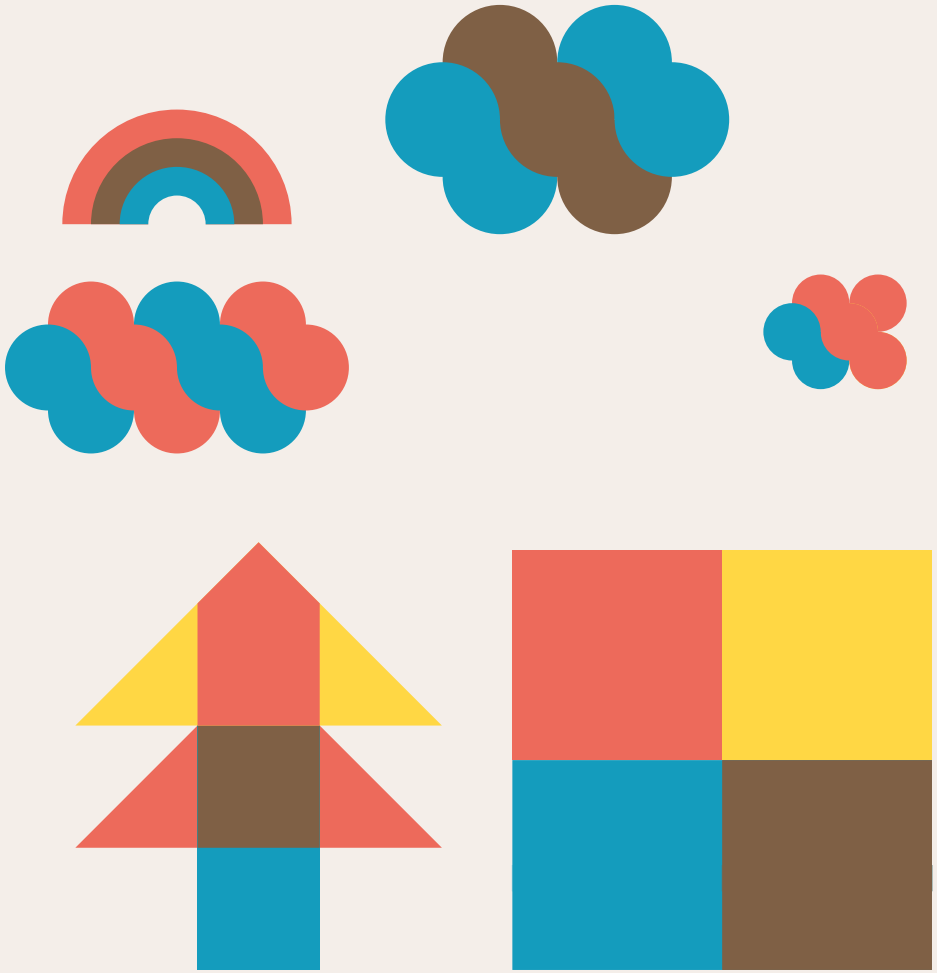
Who: Daimler/international team of architects headed by Renzo Piano/Studio Dreiseitl
Where: Berlin, Germany
When: 1997
What: On-site rainwater management and harvesting system at mixed commercial, residential plaza.





**c) Xifré's Rooftop: Floating Wild Garden,** Barcelona, Spain

# 1.5 European Green Initiatives





The EU supports a wide range of green initiatives and sustainable development targeting youths. It funds initiatives that create or facilitate the development of (learning) materials for green initiatives, where youths help take the initiative to take care of our planet and work for climate change. (21)

In the European Youth Portal, there are articles about youth change makers who fight for a greener planet (22), as well as articles with tips about being greener (23), and recommendations how to reduce one's individual carbon footprint, in the areas of transportation, food, clothing, energy and waste, etc. (24) What's more, in the European Year of Youth 2022 (25), on 4 October 2022, the EU launched its first ever Youth Action Plan (YAP) in EU external action 2022-2027, aiming to promote meaningful youth participation and empowerment in EU external actions for sustainable development, equality and peace. (26)

Key opportunities for a green and just recovery are found in sectors such as rethinking urban mobility and land use; retrofitting the urban building stock; enhancing the role of green infrastructure and nature-based solutions; and transforming urban food systems and the circular economy. (27)

Remarkably, even though there are many resources about green initiatives related to climate, and specific educational resources for the youth (28)(29), not much attention is paid to the materials we consume and use in building our houses, schools, and public spaces. That is why in chapter 1.7 we introduce you to the topic of sustainable materials for the construction of physical spaces.

But first, there are also green initiatives at the local level that we want you to know about:

## 1.5.1 Belgium

In Ghent, the city where partner CollectiveUP is located, there are several interesting green initiatives ranging from mobility plans to food strategies. The city has created a participation website [30] where citizens share their projects, experiences, thoughts and requests. For example, in the Ghent en Garde project, [31] people can ask, give, search and find everything about delicious, local and sustainable food in Ghent, find all the vegetarian restaurants in the city and buy local food directly from the farmers thanks to the food teams. [32]

**Ghent promotes a progressive approach to sustainable living and has several green initiatives. Here are some examples:**

- Ghent as a Climate City brings together all those who collaborate on combating climate change, in different domains: futureproof buildings, renewable energy, food, mobility and greening [33]

- Ghent invests in green spaces in the immediate vicinity of people's homes [34]

- Ghent has zero-waste cafés, city farms and renewable energy initiatives [35]



**Belgium is home to several other green initiatives, too. Among these are:**

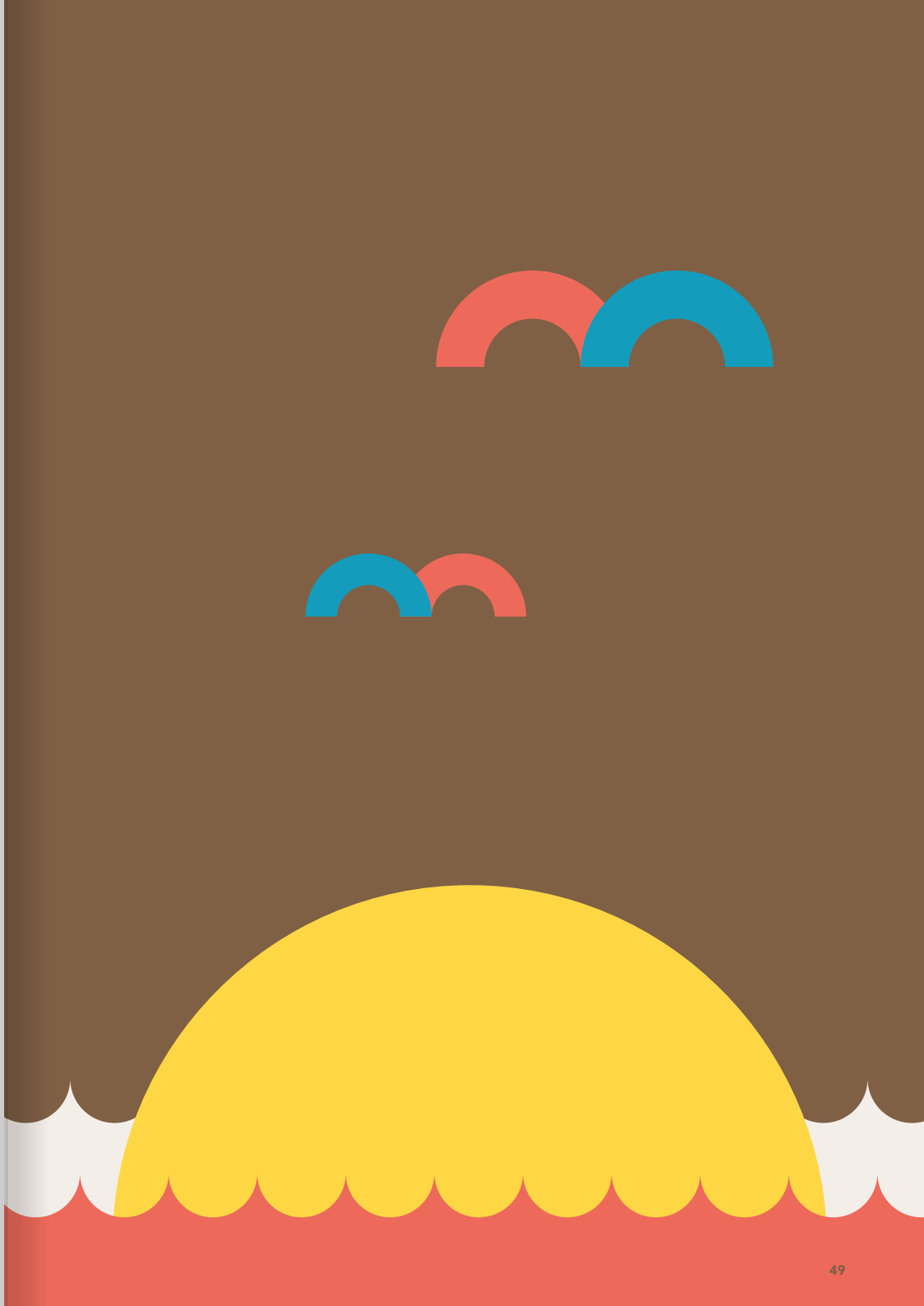
- its sustainable development initiatives at the federal state, regions, communities and municipalities [(36)]
- its adoption of the Sustainable Development Goals (SDGs) which includes 17 goals that incorporate the three dimensions of sustainable development: economic, social and environmental [(36)]
- A guide to SDG initiatives in Belgium can be found on this website [(37)]
- The green MICHELIN star: an award for restaurants that are committed to sustainability and the environment [(38)]
- Colruyt Group invests in green energy and has been running on 100% green energy since 2010. [(39)]
- The Belgian government has issued green government bonds to raise funds to support climate and environmental policies. [(40)]

**The Belgium country profile - SDGs and the environment. [(41)]**
**And that's not all. Belgium (as well as other EU countries) is involved in green urban initiatives, including:**

- The European Urban Initiative that promotes cooperation between Member States, cities, the European Commission, and other stakeholders. [(42)]

- Brussels, as well as other Belgian cities, has green traffic initiatives and is working on making the city fit for walking and cycling. [(43)]



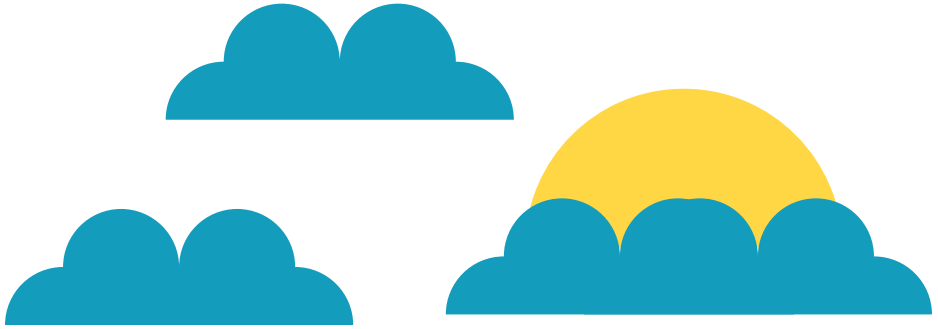


## 1.5.2 Romania

Romania has committed to fighting climate change and pursuing low carbon development. The Government of Romania, through the Ministry of Environment and Climate Change (MECC), has requested the World Bank to provide advisory services to help meet this commitment. [(44)] Romania will be able to access up to €4.4 billion as part of this mechanism, which promises to support the transition to low-carbon energy and also to improve energy infrastructure and create new jobs in the green economy. [(45)] Beginning in 2023, Romania has a target to introduce a green energy support scheme using contracts-for-difference (CfD) to guarantee a minimum electricity sale price and replace a former green support scheme. [(46)]

**Romania is home to several other green initiatives, too. Here are some stand-out examples:**

EfdeN - specialises in designing and building sustainable houses using energy-efficient solutions and renewable energy systems. It offers services such as energy audits, energy-efficient design, and construction, with a focus on reducing the environmental impact of buildings while ensuring comfort and cost savings for the occupants. EfdeN is known for its innovative and award-winning approach to sustainable building design. [(47)]



Greenpeace Romania - a global environmental organisation that works to protect the planet by promoting renewable energy, fighting against deforestation, and advocating for solutions to climate change. Greenpeace Romania has campaigns that focus on issues such as forest protection, energy transition, and air pollution. (48)

Let's Do It, Romania! - a civic initiative that organises clean-up events across the country to raise awareness about waste management and recycling. It has mobilised thousands of volunteers to clean up public spaces and natural areas, and it also offers educational programs to schools and local communities. (49)

Green Energy Cooperative - a non-profit organisation that promotes the use of renewable energy sources and supports the development of community-owned energy projects. It works to increase access to clean energy and reduce greenhouse gas emissions, while also empowering local communities to take action on climate change. (50)

Pădurea Copiilor - (Children's Forest) is a reforestation project that aims to plant one million trees in Romania by 2025. The project is focused on creating new forests and restoring degraded areas, while also promoting environmental education and engaging local communities in tree planting activities. (51)



The Green Roof Initiative - is a project that promotes the installation of green roofs on buildings in Bucharest to improve air quality, reduce urban heat islands, and increase biodiversity. The project is implemented by the Bucharest City Hall and offers incentives and support to building owners who install green roofs. (52)

Save Rosia Montana - is an environmental campaign that opposes a proposed mining project in the historic village of Rosia Montana, which is a UNESCO World Heritage site. The project involves open-pit mining techniques and the use of cyanide to extract gold and other metals, which would have significant negative impacts on the environment and local communities. The campaign against this mining project is supported by numerous NGOs and activists who are working to protect the cultural and natural heritage of the area. (53)

## 1.5.3 Slovakia

There are several green initiatives in Slovakia. One of them is the EU Biodiversity strategy which aims to protect biodiversity and ecosystems in Europe. Slovakia has met the target with respect to terrestrial ecosystems, with over 25% of the area of the country now being protected by law. (54)

Another initiative, a study, is called "Advancing Urban Green Infrastructure through Participatory Action" which critically evaluates current trends in greenspace planning in Slovakia at national, regional and local levels. (55)

**We must also showcase the following initiatives:**

Klíma ťa potrebuje (Climate needs you) - an initiative composed of individuals that recognize the threat that climate change poses to the future of our survival on this planet. Its goal is to achieve carbon neutrality earlier than in 2050, to create a common vision of a climate neutral state, to make a strategic plan on how to fulfil the vision and to find the leaders to implement the plan. (56)

Manifest 2020.sk - a cross-sector platform organisation that has become an ambassador of the New European Bauhaus in Slovakia and in the Central European region. (57)

Spolka - a collective of experts in the field of architecture and sociology, which focuses on creating sustainable cities for everyone. (58)



Živica - a non-profit organisation that inspires change. It inspires, educates and motivates people to create a society that is respectful and sensitive to people and nature and the world around. (59)

Karpatský rozvojový inštitút - an independent expert organisation working to support and promote a systemic approach to innovative and sustainable development of regions, cities and municipalities. (60)

OZ STOP Zelená - a civic initiative that develops educational activities in the field of environmental protection to reduce waste in the form of „human footprints“ left not only in the wild but in the cities and regions in Slovakia, as well. (61)

Zelená domácnostiam - it supports their use of renewable resources for Slovak households. (62)

SKI – Slovenská klimatická iniciatíva - The Slovak Climate Initiative is an association that brings together non-governmental organisations, the academic community and the business sector to create concrete and professional solutions for achieving a sustainable economy leveraging the effective sustainability measures in the field of energy. (63)

## 1.5.4 Portugal

There are several green initiatives in Portugal. One of them is the Green infrastructure [64] project which is proving to be crucial in order to achieve a more sustainable city and promote the well-being of Lisbon's citizens. The new Master Development Plan for Lisbon includes the ecological structure as a key factor in the city's planning strategy.

The Portuguese government has selected 51 consortia [65] to invest a total of 7.57 billion EUR in green and other innovative projects over the next four years as part of the European Union's recovery programme. The projects include green hydrogen and lithium battery plants, agro-industry, electric bicycles, investments in health and energy-efficient housing construction.

**Portugal is increasingly promoting initiatives that raise citizens' consciousness to practise sustainable lifestyles, such as:**

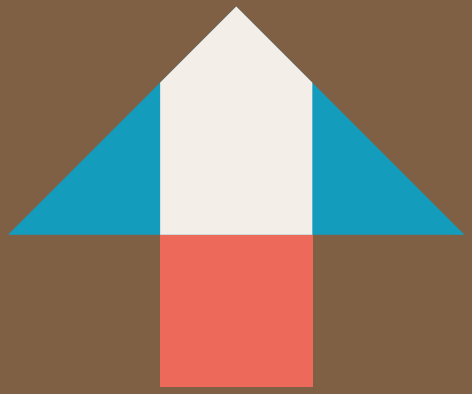
Green Fest - It is the biggest sustainability event in Portugal and has been running for 15 years. The aim is to bring together the best references in each specific area of sustainability and to continue to be the reference of sustainability in Portugal for the world, or from the world to Portugal. The themes under discussion are: climate change; circular economy; green houses; going healthier; green community; green food; green destinations; green entrepreneurs; generosity and green culture. [66]

São Dinis Building, Porto - The work of renovation and extension of the São Dinis Building, in Porto, is an example of sustainable architecture rehabilitation. Built in the 19th century, it functioned until around 1910 as the Municipal Slaughterhouse. The project by architects Ricardo Caetano de Freitas e César Machado Moreira, which includes a green roof, was designed to meet the technical requirements of the demanding LEED environmental certification, and ensures significant savings in energy, water and waste. It will be the first rehabilitation building in the country to receive this recognition. (67)

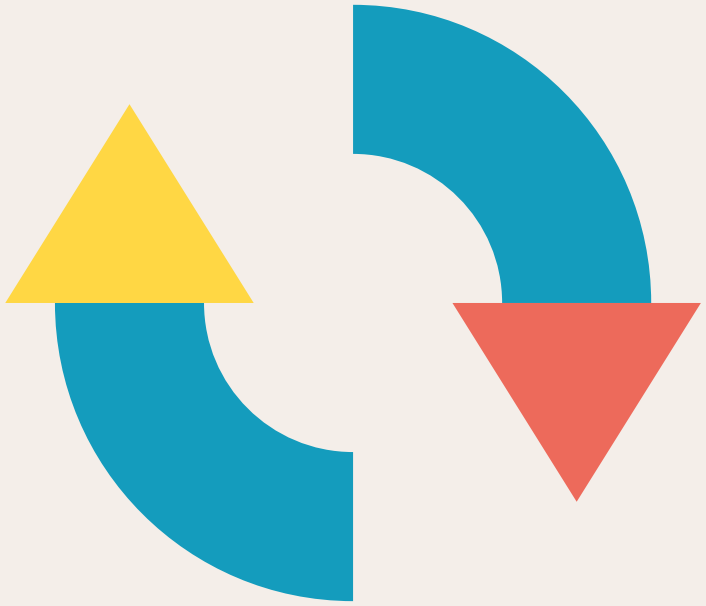
Rotating House, Coimbra - The Rotating House, designed by Pedro Bandeira is a single-family housing project built on the outskirts of the city of Coimbra. The owner is an engineer of special structures with a broad knowledge in mechanics and monitorization. Sensitive to energy issues, the client decided to develop an experimental project in which the whole house revolves around the sun. (68)

Torre Verde, Lisbon - It was a forerunner in Portugal in terms of sustainability and energy efficiency in buildings. Torre Verde, with 41 flats, at Parque das Nações in Lisbon, is the largest project of the architect Lívia Tirone and is considered the most sustainable building in Portugal. An advocate of bioclimatic architecture, she was a member of the Task Force Environment and Sustainable Architecture for the Architects' Council of Europe, thus contributing to the drafting of the directive for energy efficiency in buildings. (69)

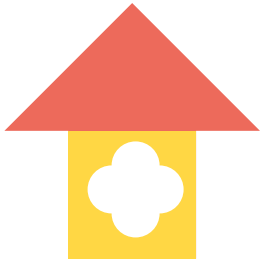




# 1.6
# Sustainable materials for the construction of physical spaces

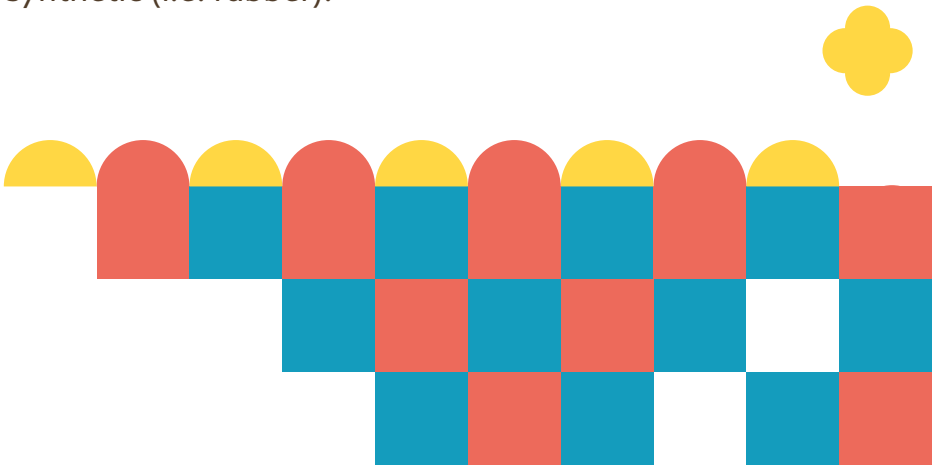






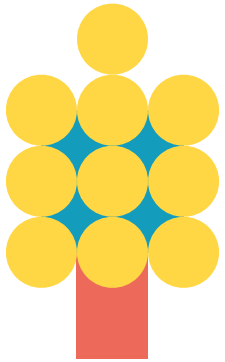
Sustainability can be defined as the processes and actions through which humankind avoids the depletion of natural resources to keep an ecological balance so that society's quality of life doesn't decrease. [(70)] Sustainability depends on various factors, such as how resources are used, how production systems operate, how investments are directed, how technology evolves, how wealth is distributed, and how institutions change. These factors are sustainable if they allow ecosystems to provide their services without disruption and society to maintain its positive development.

In construction, eco-friendly materials (also known as green building materials) are characterised by their low environmental impact and ability to be reused. These materials also should be natural or effectively recycled and repurposed if synthetic (i.e. rubber). [(71)]



**Several characteristics differentiate sustainable building materials from traditional ones:**

- **Locally available and sourced:** reduces the carbon footprint of transporting materials.
- **Recyclable:** concrete, steel, plastic, wood, rubber, bricks, and other materials can be recycled.
- **Recycled content:** materials made from recycled products—roof tiles, insulation, carpets, etc.
- **Durable**: lasts longer, so it requires fewer replacements and produces less waste.
- **Resource-friendly manufacturing:** supplied by eco-friendly companies that use renewable energy sources, toxic-free materials, etc. (64)



**Examples of sustainable building materials:** (72) bamboo, recycled steel, straw bales, mudbrick, ashcrete, hempcrete, timbercrete, sandcrete, grasscrete, woodcrete, recycled plastic or rubber, cork, insulated concrete forms, sheep wool, ferrock, mycelium (fungi root), rammed earth, reclaimed wood and so forth.



## EXAMPLES:

## a) Name: **Forest Sauna** (73)

Who: Woven, Anna Cséfalvay, Marianna Maczová, Mgr. art. Veronika Michalíková, Danica Pišteková, Lívia Gažová, Martin Lipták, Centrum architektúry, Čierne diery
Where: Spišský Hrhov, Slovakia
When: 2019
What: Locally designed and built forest sauna open to the public for free or with a voluntary donation.

## b) Name: **Sara Culture Centre and Hotel** (74)

Who: Skellefteå Municipality, (by White Arkitekter)
Where: Skellefteå, Sweden
When:  2021
What: World's tallest timber building just below the Arctic Circle  in northern Sweden; It houses venues for arts, performance, and literature as well as a hotel.



Photo: Lukáš Procházdka

**a) Forest Sauna,** Spišský Hrhov, Slovakia



**b) Sara Culture Centre and Hotel ,** Skellefteå, Sweden

## 1.6.1 Sustainable and inclusive design

Sustainability has risen to the forefront of cultural discussion over the past few years. As a result, **sustainable design** has become significantly more popular in building construction or refurbishment.

However, inclusive design has not been given the same attention, despite being an important component of green design. Only recently have **discussions about disabilities, inclusivity, and accessibility** begun to circulate in media and public discourse.

Inclusive design is practically synonymous with sustainable design where one presupposes the other for a more just future. Inclusive and sustainable design both require a unique, open mindset. Architects who design for the benefit of all people have to look at their buildings from an angle that goes beyond how they would use it or what their client has in mind for the structure.

This big-picture mindset means taking the time to consider the needs of the entire community. Experts have pointed out this connection between accessible and sustainable design, which complement each other for the wellness of a building's occupants. (75)

Designing for inclusivity actually increases the sustainability of a project because it is better able to serve the needs of the people who utilise the building. What's more, inclusive design opens up better job opportunities for citizens with disabilities. Indeed, it can be easy to forget that the way a building is designed can also quite literally change someone's socio-economic future and capacity to contribute to the community. (76)



## EXAMPLES:

**a)** Name: **Loop** [77]

Where: Gdansk, Poland
When: 2021
What: Modular furniture manufactured with recycled waste and repurposed materials.

**b)** Name: **Paper Partition System** [78]

Who: Manifest 2020 (NEB official partner),
Shigeru Ban (High-Level Round Table member)
Where: Assistance centre for UA refugees, Bratislava, Slovakia
When: 2021
What: Paper partition system made from cardboard and curtains for providing privacy to refugees in temporary shelters.





**a) Loop,** Gdansk, Poland



**b) Paper Partition System ,** Bratislava, Slovakia

## 1.6.2 Other inspirational practical examples out of NEB

### Nature-based solutions

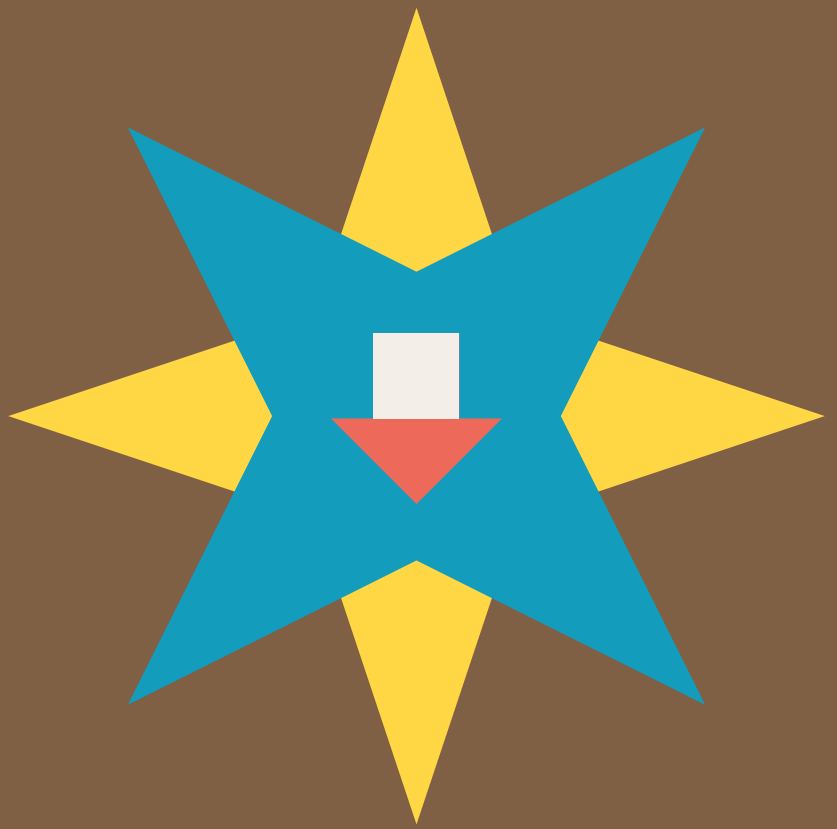
Nature-based solutions aim to help to address a variety of environmental, social and economic challenges in sustainable ways. It means they are inspired by, supported by or copied from nature. These solutions use the features and processes of nature in order to achieve desired results - reduce disaster risk, improve well-being and socially inclusive green growth.

**Examples of the nature-based solutions:**

- Planting trees along streets and in other urban locations for sustainable urbanisation, climate change adaptation, risk reduction and resilience;
- Green facades of the public buildings;
- Sustainable urban drainage systems - permeable surfaces, rain gardens, green roofs, retention ponds, infiltration basins, etc.;
- Rainwater harvesting for reuse as utility water or for irrigation, etc.;
- Reclaiming urban space from roads and replace then with green spaces;
- Living gardens - creating the green sustainable spaces where water, soil, energy, biodiversity and edible greenery are taken into account.

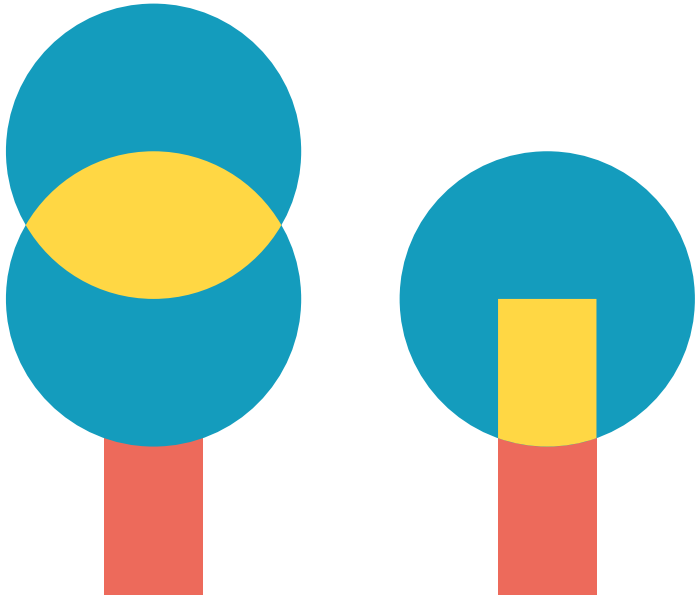


## EXAMPLES:



## a) Name: **Vía Verde Vertical Gardens** [79]

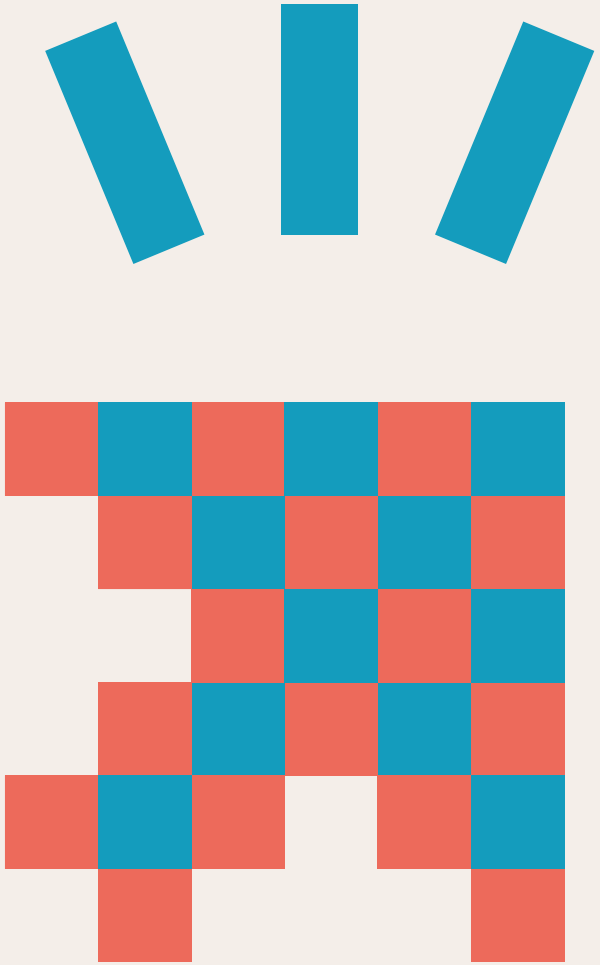
Who: Fernando Ortiz Monasterio
Where: Mexico City, Mexico
When: 2017
What: Construction of 60,000 $m^2$ vertical gardens on bridge columns (>1000 units) along the Periférico highway, which circles the city centre.



## b) Name: **Villa M** [80]

Who: Philippe Starck accompanied by Coloco
Where: Paris, France
When: 2021
What: Mixed-use complex with living wall (green façade and roof)

# 1.7
# New European Bauhaus next steps



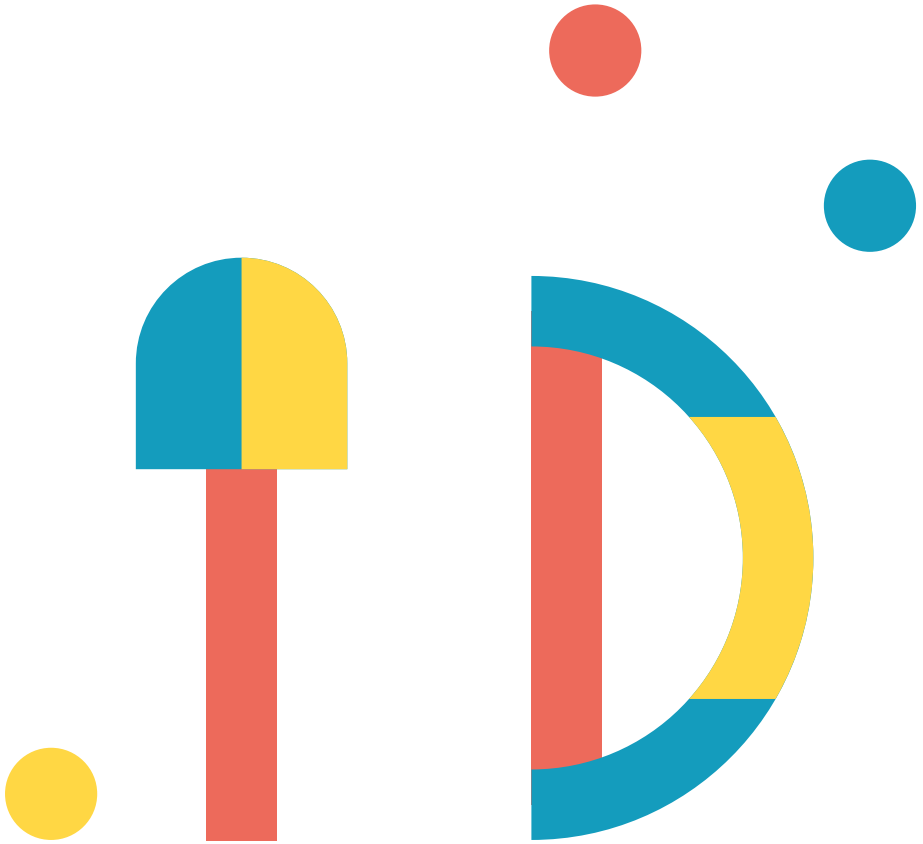


The Cookbook has brought an overview of the steps that the NEB initiative has made from its beginning up to January 2023. The initiative has already significantly contributed to the transformation of the European economy and societies to reach the climate goals.

**NEB's plans and ambitions for the year 2023 include:**

- To work on **removing barriers**, including bureaucratic and legal ones, for people with local initiatives on the ground.
- To keep contributing to other **policy initiatives** of the European Commission like the revision of the construction product regulation or the transformation pathways of several ecosystems.
- To develop the **NEB Academy** as a contribution to the European Year of Skills and put in place training on sustainable construction, circularity and biobased materials to accelerate the transformation of the sector.
- **To reach out to sectors underrepresented** in the Community including the social economy and the younger generations.
- To reach out to **partners elsewhere in the world.**
- Based on the example of NEB Compass, more detailed **assessment tools** will be developed, starting with the built environment. First results should be available in 2024.

Indicative funding for the initiative for 2023 - 2024 will be provided under Horizon Europe programme, dedicating €106,3 million through funding from the Clusters and the Missions. Additional funding will be made available through NEB contributing calls. Beyond Horizon Europe, contributing calls in 2023 are foreseen in Erasmus+, Creative Europe, European Solidarity Corps, and LIFE. Moreover, the European Parliament has proposed the additional funding of €2 million to Pilot Projects and Participatory Actions focused on the development of tools to characterise and recognise what makes a concrete initiative a „New European Bauhaus" initiative. [6]



# 2. METHODOLOGY



**In order to create public spaces with and for the youth, it is recommended to organise participatory workshops, co-creation sessions, dialogs, lectures and inspiration moments on the topic of youth participation in urban design.**

For our project Youth 4 Bauhaus, we have taken inspiration from the urban design methodology by Block by Block [81] and the urban co-creation exhibition methodology by CollectiveUP at Build Peace Conferences. [82] Our methodologies were adapted to the specific needs of each participating country/city (Slovakia/Kosice, Romania/Bucharest, Portugal/Braga, and Belgium/Ghent) and of each project partner (Creative Industry Kosice, GEYC, Teatro Circo de Braga, and CollectiveUP).

While the specific needs in each place were different, every partner organised a multi-cultural event in each city based on the New European Bauhaus initiative, and followed some common steps:

**Before the Youth 4 Bauhaus event in each city, a number of actions took place:**

- Preparation of a 3-days immersive program to work with the youth;
- Confirmation of speakers, panellists, and workshop facilitators
- Selection of a site to redesign in the city;
- Implementation of a 3D starting world in Minecraft Education for the site to redesign (see our starting worlds and chapter 3 of this book);
- Invitation and registration of the participants;
- Hotel, accommodation, and transportation booking;
- Travelling for foreign participants.

**During the Youth 4 Bauhaus event in each city, each partner took care of::**

- Local logistics;
- Introduction to youth participation in urban design (see methodology presentations);
- Introduction to youth participation in urban design;
- Site visit;
- Brainstorming sessions, addressing diversity and inclusion challenges;
- Individual and group drawings for the site to redesign;
- Prioritisation of ideas;
- Working with Minecraft Education for the co-creation of the 3D advanced world in for the site selected;
- Group presentations, showing the final 3D world, and individual/collective drawings;
- 5 fingers evaluation of the event.

**After the Youth 4 Bauhaus event, each partner carried out:**

- An evaluation survey;
- Reporting;
- The collection of the final 3D worlds to upload on the project website (see our final worlds and chapter 3 of this book);
- The refinement of the methodology.



**Kosice's 3-days agenda and methodology presentation**

**Ghent's 3-days agenda and methodology presentation**

**Bucharest's 3-days agenda and methodology presentation**

**Braga's 3-days agenda and methodology presentation**

# 3D GENERIC MODEL

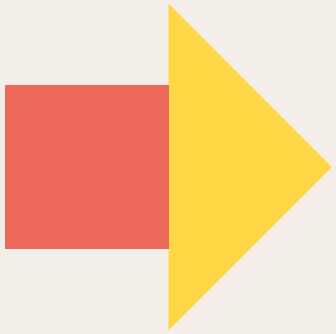
Generic 4x4 map of public space with river

Gent Dampoort park

Gent Dubbele Brug

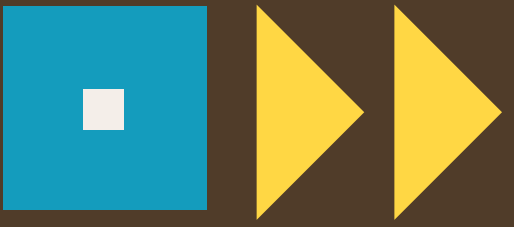
Bucharest

Before each Youth 4 Bauhaus event, partner CollectiveUP prepared a generic model for Minecraft Education which was used in the events by the youths to co-design urban spaces into this 3D educational game. All materials for this Youth 4 Bauhaus project, including the generic starting worlds as well as the advanced worlds created by the youths can be found here.

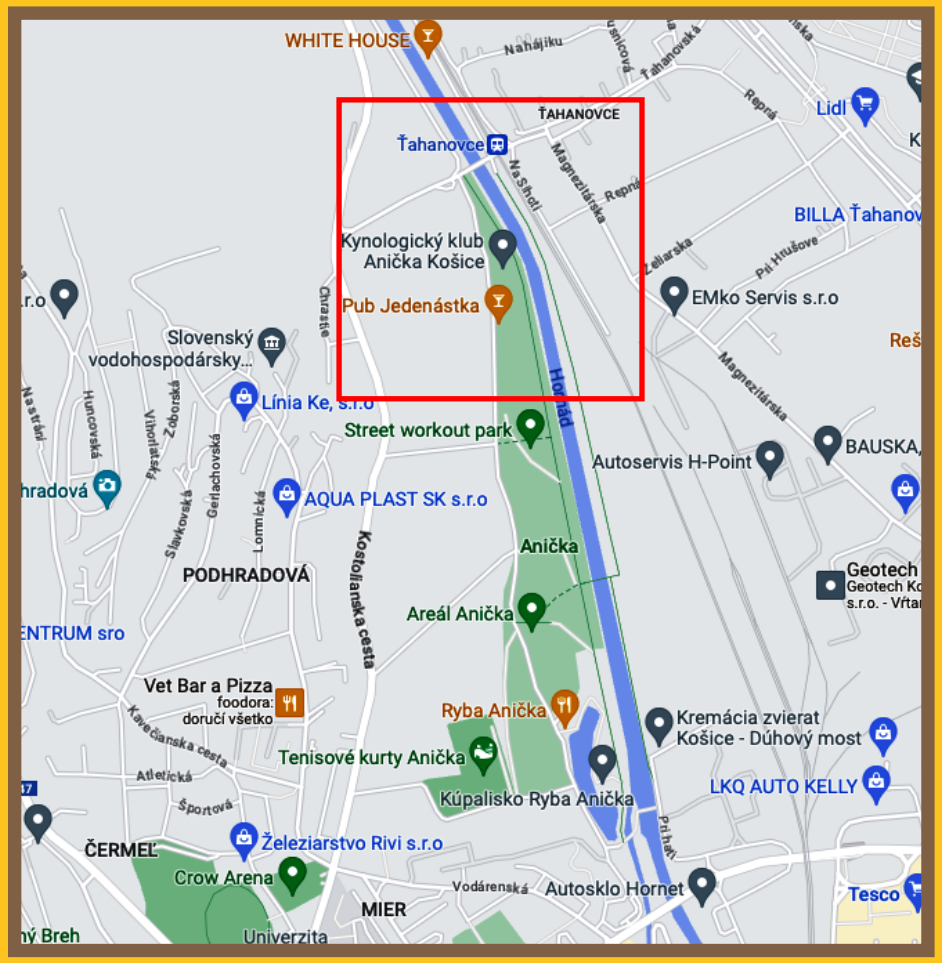


You will see in the website, the generic/starting worlds for the spaces in the cities of **Kosice, Ghent, Bucharest and Braga.**





# 3.1
# Kosice's worlds



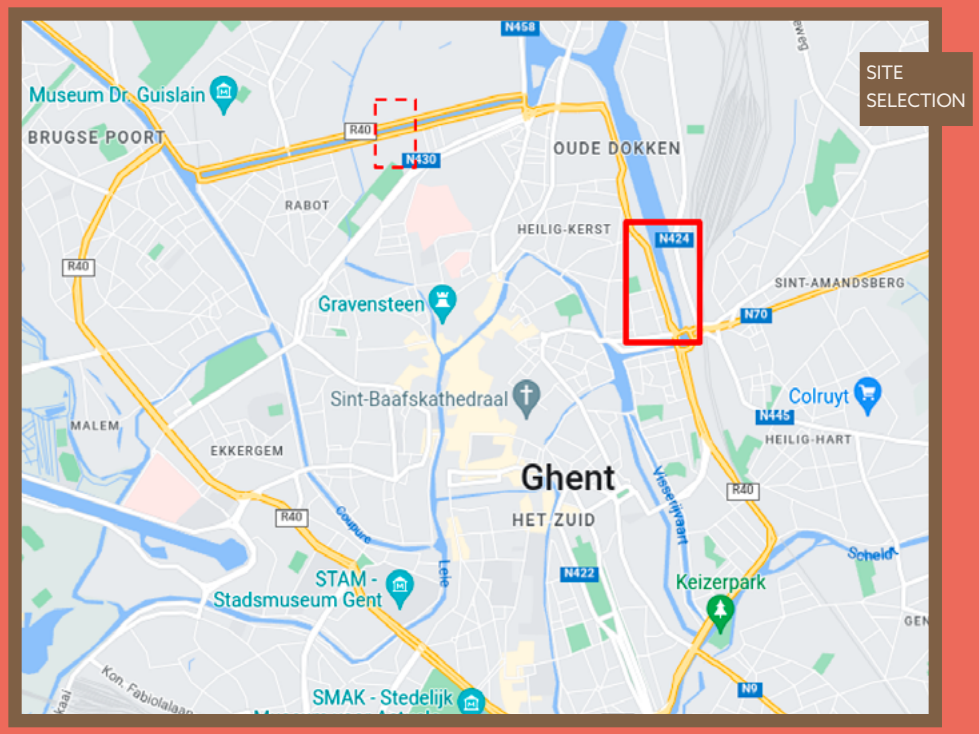

**For the city of Kosice, we got inspired by the activities of CollectiveUP at Build Peace Conferences and used a 4x4 world that represents 4x4 real spaces from the city. The task of the youths was to re-create further the spaces and build their NEB-inspired ideas for the city into the game. The result of Kosice's event was one advanced world, co-created by every youth attendee.**

The starting 4x4 world for Kosice can also be found in the educational resources page of Minecraft Education.

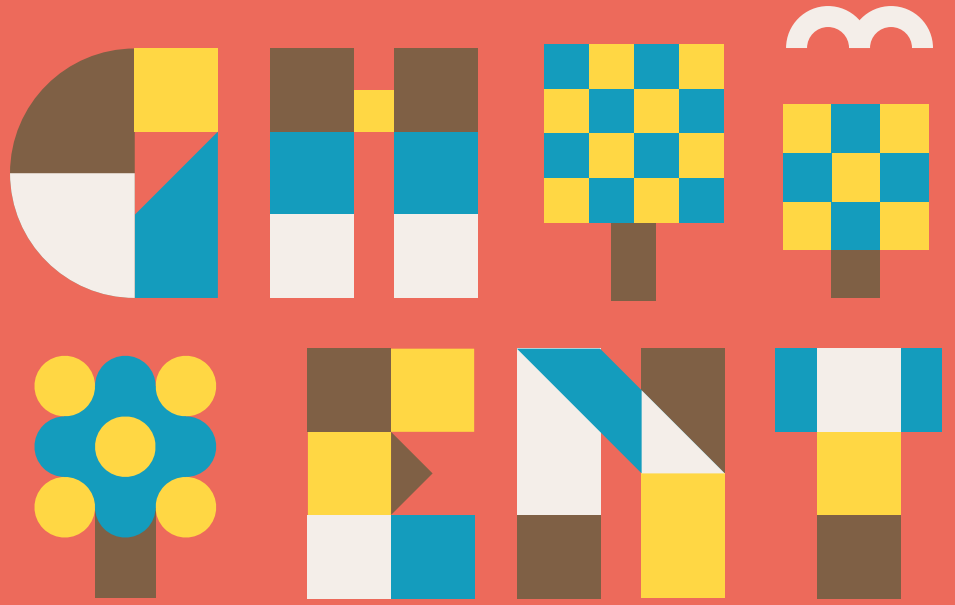
**The 4x4 world was submitted by Scott Jost to the Minecraft Education resources page.**

This final world is a ED representation of youths' ideas for the Hornád River area in the city of Kosice.

# 3.2
# Ghent's worlds





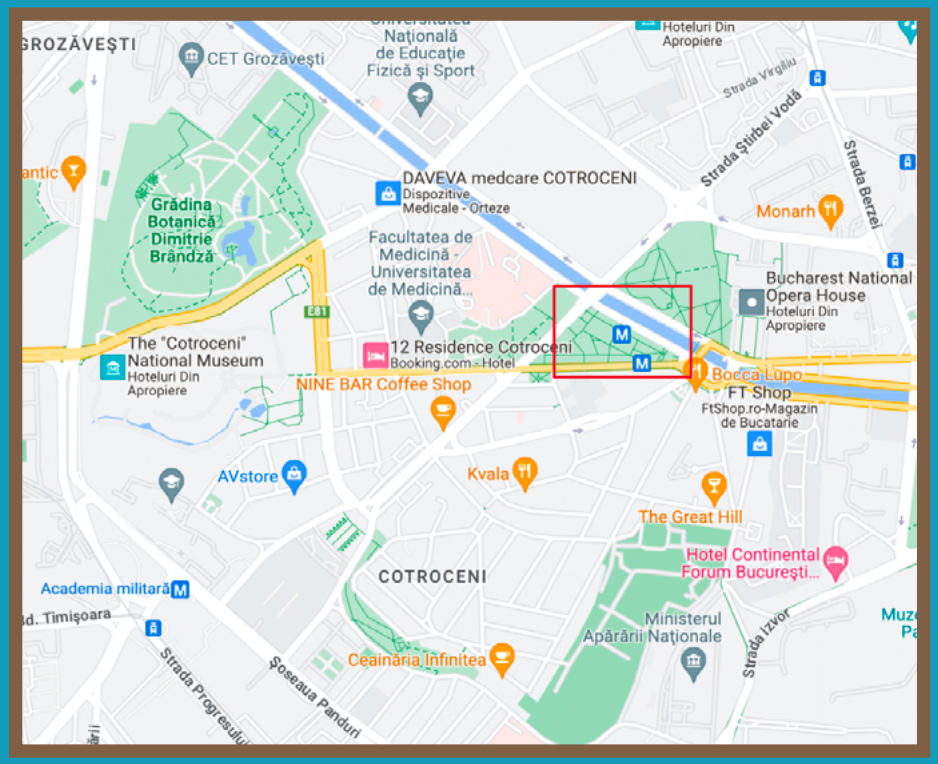
**For the city of Ghent, and after our first experience in Kosice, we decided not to work with the 4x4 generic map, but instead re-create a starting world for the city that looked similar to the physical space. We used 1 Minecraft Education block per 1 square meter, and re-created 2 physical spaces from the city of Ghent as starting worlds: Ghent dampoort, and the 'lost bridge'.**

**The 300m long starting worlds were created by Frederick Ducatelle (CollectiveUP) and Delphine Ducatelle Carrillo (Keerpunt School).**

The youths worked with the starting worlds to put their ideas into action and created more advanced models for these city spaces. We have a collection of 14 ideas and x advanced worlds for the spaces in Ghent.

These final worlds are a 3D representation of youths' ideas for Ghent dampoort and the lost bridge, both at the city river.

# 3.3
# Bucharest's worlds







**For the city of Bucharest, we decided to re-create a starting world for the city that looked similar to the physical space. We used 1 Minecraft Education block per 1 square meter, and re-created physical spaces from the city of Bucharest as a starting world. The youths worked with the starting world to put their ideas into action and created more advanced models for this city space.**

**We have one generic starting world for the chosen space in Bucharest. This 300m long world was created by Frederick Ducatelle (CollectiveUP) and Delphine Ducatelle Carrillo (Keerpunt School)**

As a result of the event and workshop activities, we collected 10? Ideas and 8 final worlds created by the youths at the event.

These final worlds are a 3D representation of youths' ideas for the region of Cotroceni in Bucharest, close to the river Dâmbovița.

# 3.4
# Braga's worlds




**For the city of Braga, we decided to re-create a starting world for the city that looked similar to the physical space. We used 1 Minecraft Education block per 1 square meter, and re-created physical spaces from the city of Braga as starting worlds. An area of 2800 m long was divided in eight smaller spaces of 350 m each into Minecraft Education and 8 starting worlds were created, smaller than in the previous editions, and more manageable for co-designing in groups.**

**These 350 m long worlds for 8 areas of the city of Braga were created by Maria Alves (PRT, a participant in Design Think Your City in Kosice and Bucharest) and David Oliveira (PRT) and at the event and workshops, youths created 8 advanced final worlds.**

These final worlds are a 3D representation of youths' ideas for this area of the river Este in Braga.



# 4.

# TECHNICAL INCLUSIVE GUIDE

# 4.1
# Introduction



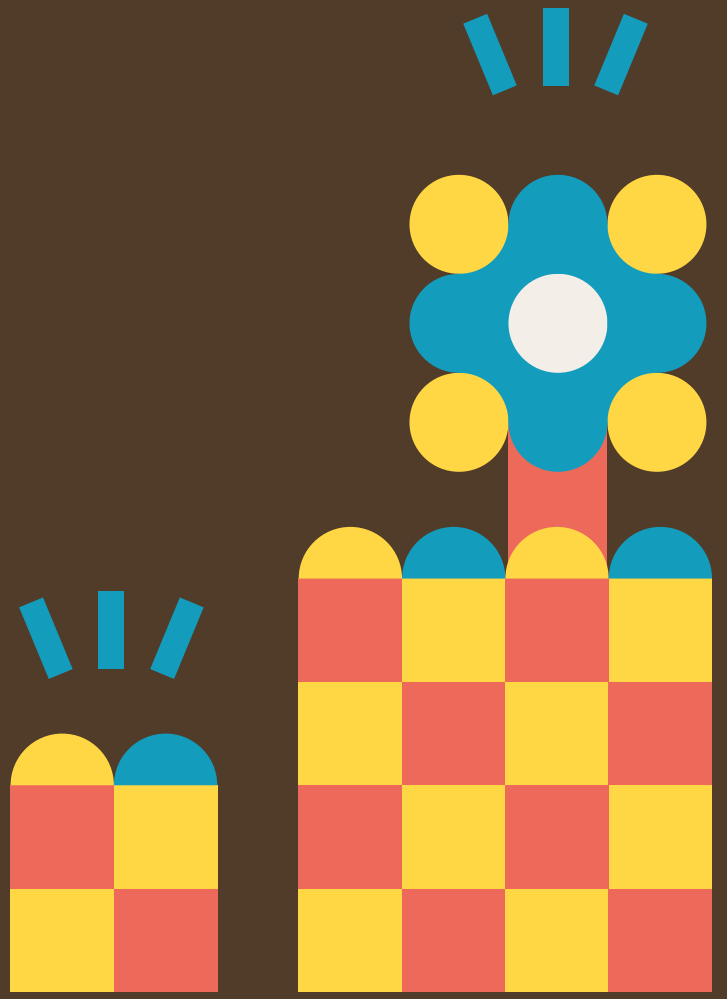
**As we have pointed out, our Youth 4 Bauhaus project supports capacity building of organisations in the use of innovative approaches to empower and engage young people, using democratic and participatory processes, for co-creating public spaces in sustainable, greener, and inclusive ways. All in the spirit of the New European Bauhaus (beautiful, sustainable, and together).**

This guide is part of a toolkit of resources to be used for the 3D creation of sustainable public spaces. It provides step-by-step instructions for installing Minecraft Education, as well as descriptions of the main features of this game that can be used to create and develop virtual worlds. It also gives a series of additional resources that can be used for game-based learning with Minecraft Education.

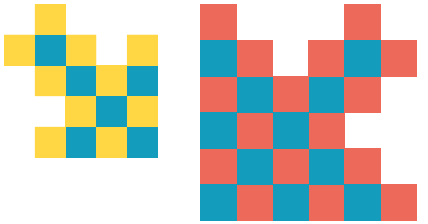
Minecraft Education is a game-based platform that inspires creative, inclusive learning through play. It has become an innovative tool for engaging youth in the process of city co-creation. The game's intuitive and user-friendly interface, combined with its ability to build and create in a virtual world, has made it a valuable tool for educators and city officials alike. By using Minecraft Education, students are able to design and build virtual versions of their neighbourhoods, cities, and landmarks, which can help them learn about urban planning, architecture, and other related subjects. Additionally, the game has been used as a tool for community engagement, allowing city officials and members of the public to collaborate on designing and building virtual versions of proposed developments and public spaces. This approach helps gather input from residents and stakeholders, promoting transparency and inclusivity in the decision-making process. Overall, Minecraft Education has the potential to empower youth to have a more active role in shaping the built environment of their communities.

Have a look at our Youth 4 Bauhaus video about Minecraft Education here.

# 4.2 About Minecraft Education





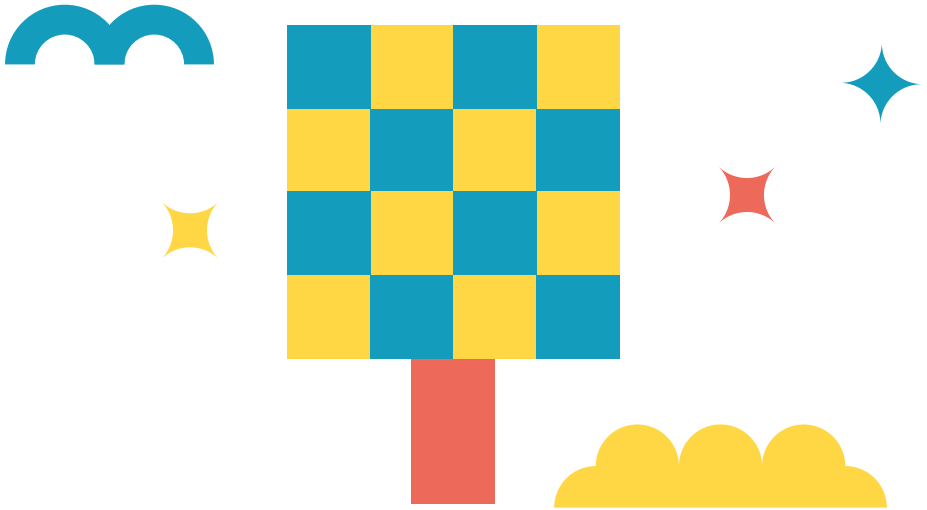


Minecraft is a hugely popular computer game which has been around since 2011. It is known as a sandbox game which means that it offers an immersive and sometimes imaginary gamer experience. With few limitations on what can be done within the game, it often comes down to players' creativity. The Minecraft Education edition is a version of the popular game Minecraft that is specifically designed for use in educational settings. It is similar to the standard version of Minecraft, but it includes additional features and tools that make it easier to use in a classroom setting.

**Some of the key features of Minecraft Education include:**

- In-game tutorials and resources to help students learn new skills and concepts;
- Access to a library of lesson plans and activities created by educators;
- Collaboration tools that allow students to work together on projects and assignments;
- Classroom management tools that allow teachers to monitor and control student activity in the game;
- Access to a code builder that makes it easy to use coding to create and control elements in the game.

Minecraft Education is available on Windows, Mac, iPad, and Xbox. It requires an Office 365 Education account or Microsoft account to access. It can be used across different subjects and age groups, from primary school to higher education, to support learning in Science, Technology, Engineering, Arts and Math (STEAM) subjects, as well as social studies, history, and language arts.

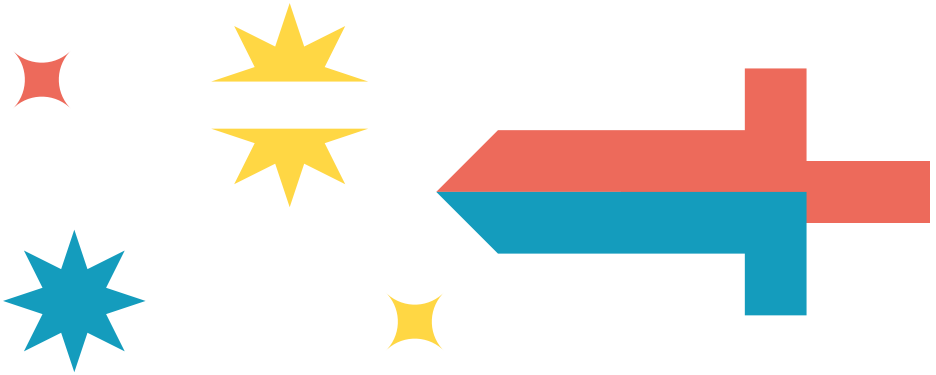


**Minecraft Education is used in classrooms and educational settings to engage students and enhance their learning experience, having the following features:**

- **Hands-on learning:** it provides a unique and interactive way for students to learn, allowing them to actively engage with the material and apply their knowledge in a practical setting.

- **Collaboration**: it allows students to work together in a virtual environment, fostering teamwork, communication, and problem-solving skills.





- **Creativity and imagination:** it encourages students to use their creativity and imagination as they build, explore, and create in the virtual world.

- **STEM education:** Minecraft offers a wide range of opportunities for students to learn about science, technology, engineering, and maths in a fun and engaging way.

- **Accessibility**: it is available on a variety of platforms, making it accessible for students of all abilities and backgrounds.

- **Gamification of learning:** it provides an opportunity to gamify the learning experience, making it more fun and motivating for students.

- **Classroom management and differentiation:** it offers a variety of tools for teachers to manage their classroom and differentiate instruction for students with different learning needs.

- **Access to resources:** it comes with a library of lesson plans, tutorials, and resources that teachers can use to integrate the game into their curriculum.

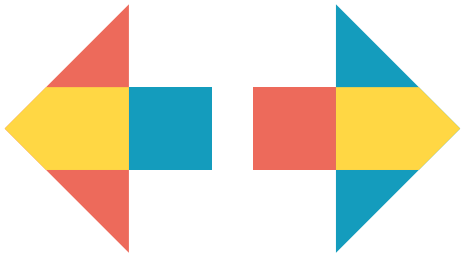
**Minecraft Education can be used in many different ways and in different educational settings to support learning and teaching a variety of subjects, it is a versatile and powerful tool to enhance learning experiences and make it more engaging for students:**

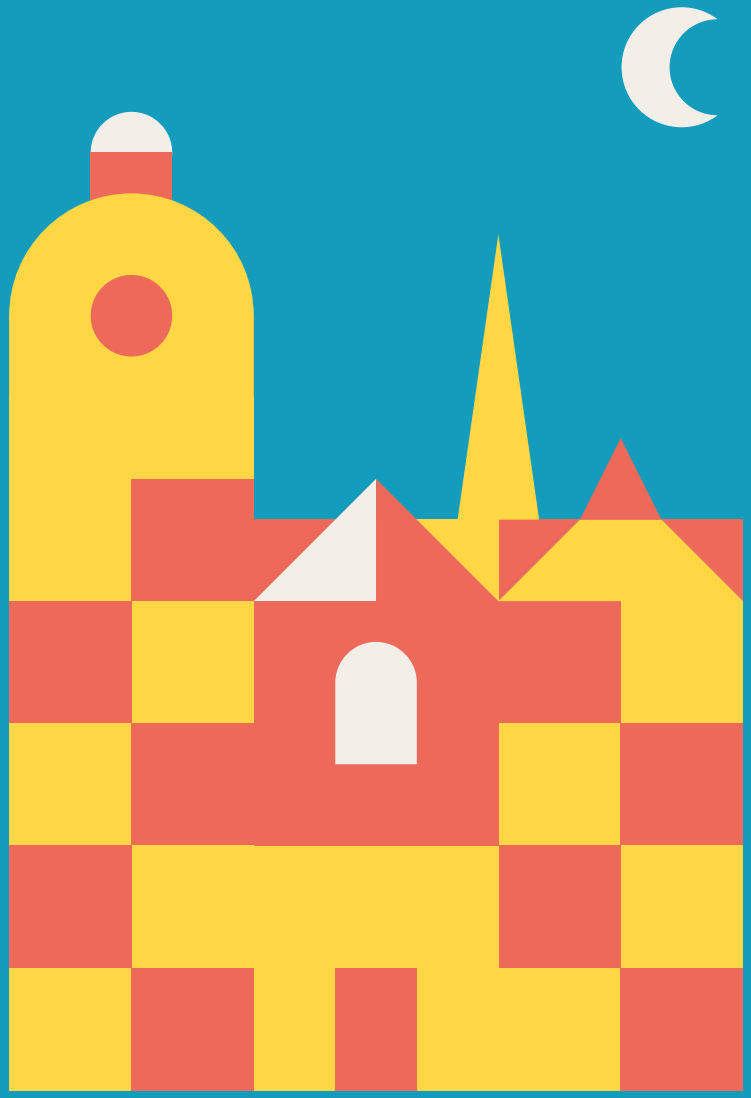
- In a classroom setting, Minecraft Education can be used as a tool to support learning and teaching a variety of subjects, such as urban planning, architecture, history, geography, coding, and computer science.

- In after-school programs and youth groups, Minecraft Education can be used to engage students in creative building activities and to promote teamwork and collaboration.

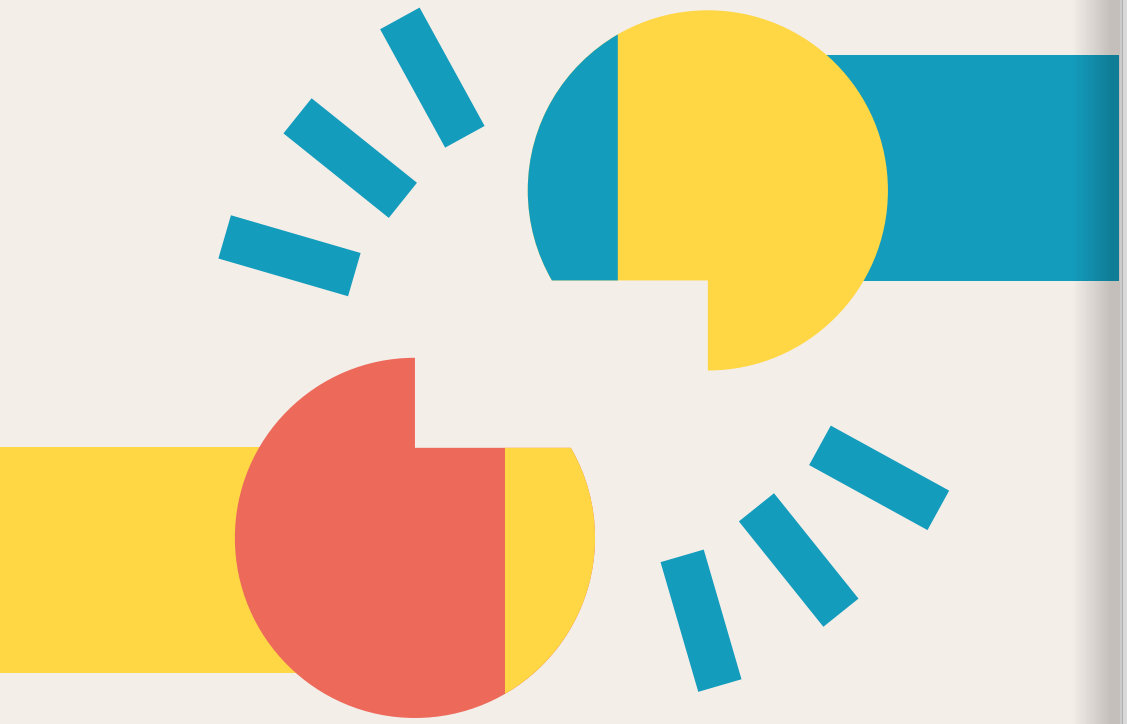
- In libraries and community centres, Minecraft Education can be used to provide informal learning opportunities for students and to promote community engagement and participation.

- In museums and cultural institutions, Minecraft Education can be used to create virtual replicas of historical sites and landmarks, which can be used as educational resources for visitors and students.





# 4.2.1
# Minecraft Education for young poples' education and participation





**Already a popular video game, Minecraft is well-known among young audiences, which makes it an effective tool for engaging youths in various activities and projects. It is proven to be a fun and interactive way for young people to learn and participate in common online actions.**

Minecraft Education goes further and provides a space for youth to express themselves creatively. In the game, players can build and design anything they can imagine, from simple structures to complex worlds. This freedom of expression allows youths to feel empowered and to take ownership of the projects they are working on. It provides an opportunity for them to express their thoughts and ideas in a safe and non-threatening environment. Also, being a collaborative tool, it encourages teamwork and social skills. Indeed, players can work together to build, create, and solve problems, fostering cooperation and communication. This type of interaction is especially important for youths who may not have opportunities to participate in group activities in other areas of their lives. It can also be used as a platform to teach young people about teamwork and conflict resolution.

This hands-on approach to learning can be especially engaging for youth who may struggle with traditional classroom instruction. A very important element is that Minecraft Education can be used as a platform for youth engagement and activism. Players can use the game to create projects that raise awareness about important issues, such as environmental conservation or human rights. This type of participation encourages youths to become active and informed citizens, so that they can have the chance to make a positive impact on their communities.

Whether through creative expression, teamwork, learning new skills, or activism, this game provides a platform for young people to feel empowered and to make a positive impact. By using Minecraft Education for youth engagement, we can help to cultivate the next generation of active and informed citizens.

**Here are a few practical ideas for using Minecraft Education for youth participation:**

1. **Urban Planning:** Young people can work together to design and build a virtual model of a sustainable city using Minecraft. They can learn about urban planning, environmental conservation and community engagement while having fun.

2. **History and Social Studies:** Minecraft allows young people to explore and recreate historical events and places, such as ancient civilizations or historical landmarks. They can learn about the past in a fun and interactive way.

3. **Language Arts:** Minecraft can be used to create interactive stories and role-playing scenarios, allowing young people to practise their writing and storytelling skills while engaging in creative activities.

4. **Science and Technology:** Minecraft can be used to teach young people about a variety of scientific and technological concepts, such as renewable energy, electricity, and coding. They can apply their knowledge in a virtual environment and see the immediate results of their actions.

5. **Arts and Creativity:** Minecraft can be used as an artistic tool, allowing young people to create virtual 3D sculptures, murals, and other forms of digital art. They can also use it to create music and animations.



6. **Citizenship and community engagement:** Minecraft can be used to create virtual models of the community, young people can then use it to identify problems and come up with solutions, simulate scenarios and plan events.

7. **Entrepreneurship:** Minecraft can be used to teach young people about business, finance and entrepreneurship. They can create virtual businesses and manage them using the game's resources.

8. **Career-oriented skills:** Minecraft can be used to teach young people about different careers, such as architecture, engineering, and computer science. They can use the game to learn about the skills and knowledge needed for these careers and explore different job opportunities.

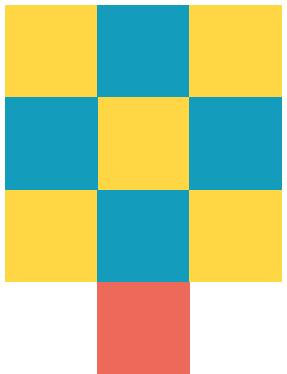
**Minecraft has been used for youths' participation in a number of different locations around the world. Here are a few examples:**

In 2016, the Museum of London used Minecraft to mark the 350th anniversary of the great fire of 1666 and to enhance it by commissioning a team of expert Minecraft builders to render for them a virtual replica of the city of London before the blaze. (83)

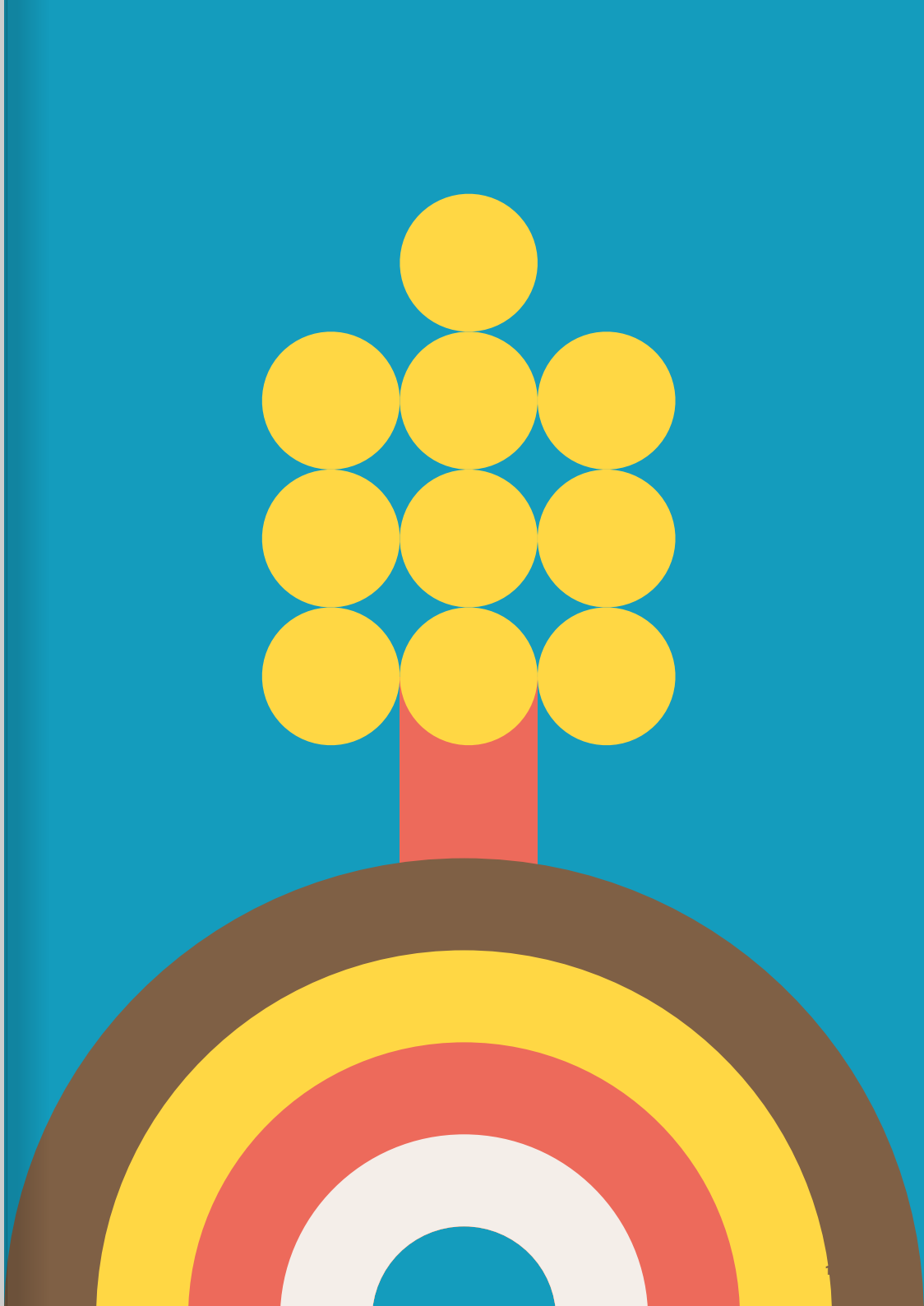
The Block by Block (81) initiative is a collaboration between Mojang, Microsoft, and UN-Habitat to empower communities to reconfigure neglected urban spaces into vibrant places. Their first experiment was held in Nairobi, Kenya (84), in 2012. It concentrated on solving issues of unsustainability and conflict of interest among different stakeholders. It uses Minecraft as a tool for visualization and collaboration, especially with young people.

Ecocraft, an initiative funded by EduGIS Foundation and UN-Environment, used Minecraft to experiment with planning issues such as energy, waste management and transportation. This initiative promoted a weekend-long workshop (85) that gathered 500 young participants in Amsterdam Arena stadium.

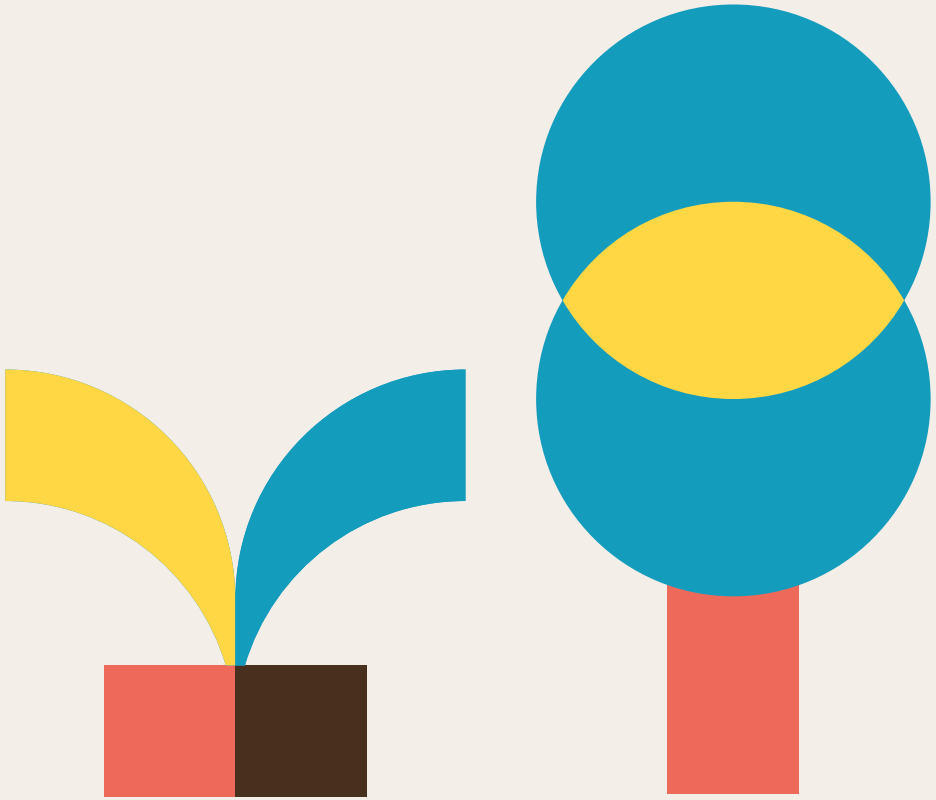
These are just a few examples, but Minecraft has been used in many other locations as a tool for youth participation in community planning and development and for educational purposes.



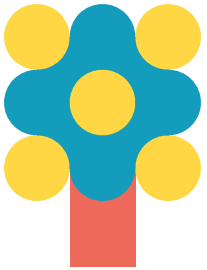




# 4.2.2 Minecraft Education for city projects using co-creation







**Minecraft Education Edition can be an effective tool for city co-creation projects, as it provides a fun, interactive, and challenging way to engage citizens in the planning and development of their own community. Some reasons why Minecraft Education might be used for city co-creation include:**

1. **Visualisation and Planning:** Minecraft allows citizens to visualise and plan their community in a virtual environment, they can use it to create models of buildings, streets, parks, and other public spaces. This can be particularly useful for engaging citizens in the planning and development process, as it allows them to see the potential impact of different design choices.

2. **Collaboration and Engagement:** Minecraft allows citizens to work together on projects and assignments, fostering collaboration, communication and problem-solving skills. This can be especially beneficial for engaging citizens in the co-creation process, given that it allows them to share their ideas, feedback and concerns in a highly interactive way.

3. **Accessibility:** Minecraft Education is available on a variety of platforms, making it accessible for citizens of all ages and backgrounds. This can be beneficial for city co-creation projects, since it allows people from different communities to participate in the process regardless of their location or technological skills.

4. **Empowerment:** Minecraft Education Edition allows citizens to take ownership of the co-creation process, giving them autonomy and control over the virtual environment. This can be particularly beneficial for city co-creation projects, as it allows citizens to feel invested in the development of their community.

5. **Creativity and Innovation:** Minecraft Education can be used to encourage citizens to think creatively and come up with innovative solutions for the city's problems. It allows people to explore different possibilities and test them in a virtual environment.

6. **Relevant to the digital age:** Minecraft Education Edition is a very popular game among people of different ages: It's a digital tool that is relevant to their interests and daily lives, which makes it more likely that citizens will engage with it.

7. **Cost-effective:** Minecraft Education Edition is cost-effective compared to other methods of co-creation. For example, it, can be used to create virtual models of the city without having to invest in physical materials and resources.

8. **Data Collection and Analysis:** Minecraft Education Edition can be used to collect data and analyse it, usefulfor decision making and future planning in the city.

**Minecraft has been used for urban planning in a number of different locations around the world. Here are a few examples:**

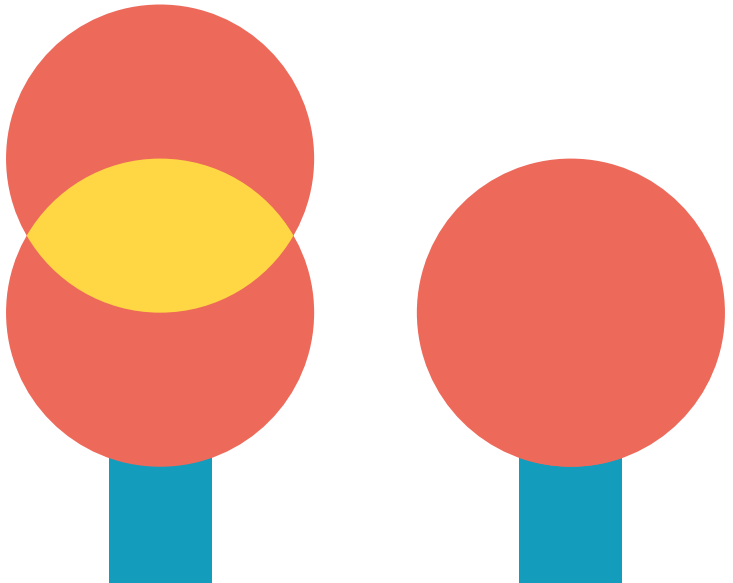
- **In the United States**, the city of Boston used Minecraft to create a virtual replica of the city as part of its Imagine Boston 2030 plan. The virtual city was used to gather input from residents and stakeholders on proposed developments and public spaces, and to promote transparency and inclusivity in the decision-making process.



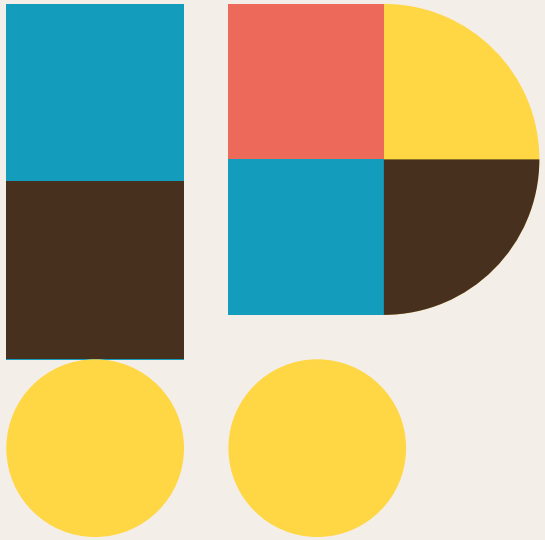
- **In Australia**, the city of Melbourne used Minecraft to create a virtual replica of the city as part of its Future Melbourne plan. The virtual city was used to gather input from residents and stakeholders on proposed developments and public spaces, and to promote transparency and inclusivity in the decision-making process.

- **In the Netherlands**, the city of Utrecht used Minecraft to create a virtual replica of the city as part of its Smart City Utrecht plan. The virtual city was used to gather input from residents and stakeholders on proposed developments and public spaces, and to promote transparency and inclusivity in the decision-making process.

As you can see, Minecraft has been used in many other cities, towns, and regions as a tool for urban planning and community engagement, including (as we saw above in Education) in many schools and educational institutions,, where teachers use it as a tool to educate their students on urban planning and other related subjects. Have a look at our Youth 4 Bauhaus video about Minecraft Education here.



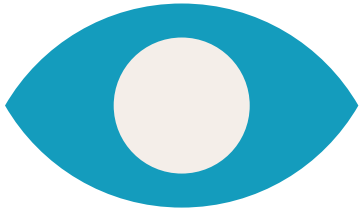
# 4.3
# How to use Minecraft Education

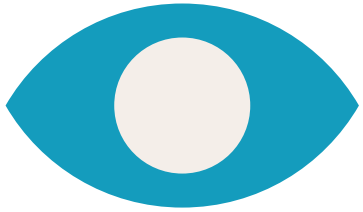




## Before you start:

- It's worth noting that you need to have an active Office 365 for Education account to be able to use Minecraft Education.
- Any organisation can purchase licences for Minecraft Education, including eligible academic institutions, other organisations (like camps, clubs, and homeschools), and even individuals. If you are a teacher, you need to have access to a special licence to use the education edition of Minecraft. You can choose and buy the right type of licence on Minecrat Education website. (86)
- Minecraft Education is not compatible with other versions of Minecraft such as Java or Bedrock, etc.



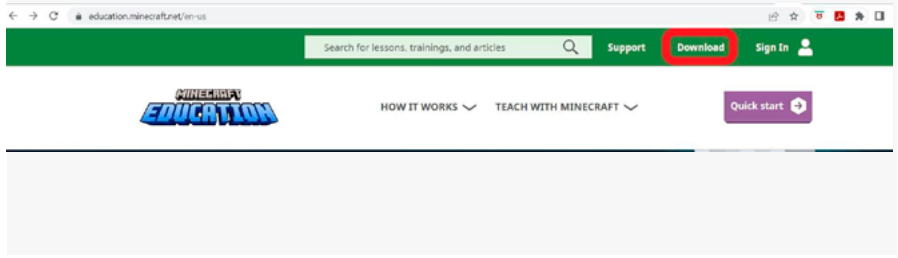


# 4.3.1
# Get started: install Minecraft Education

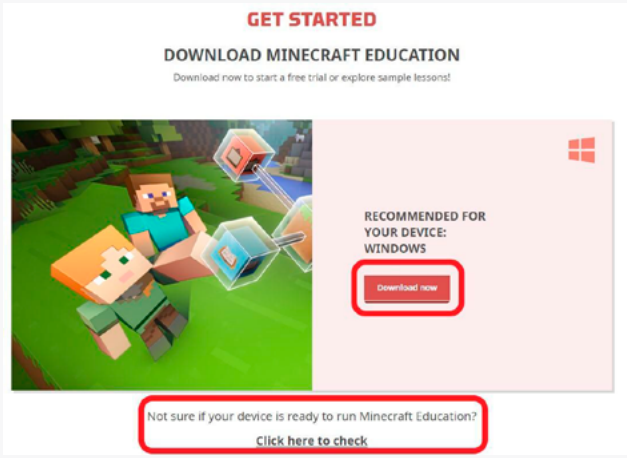


**Installing Minecraft Education on a Windows or Mac computer is a fairly straightforward process. Here is a step-by-step guide on how to do it:**

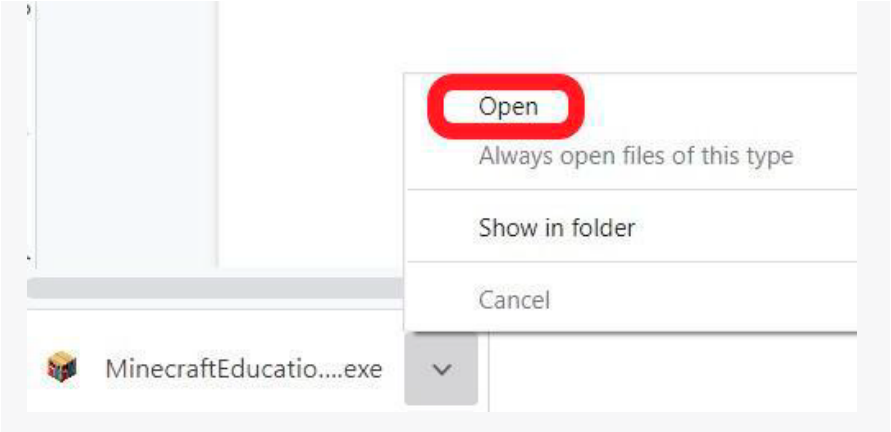
1. **Go to the official Minecraft:** Education Edition website https://education.minecraft.net/ and click on the **"Download"** button.



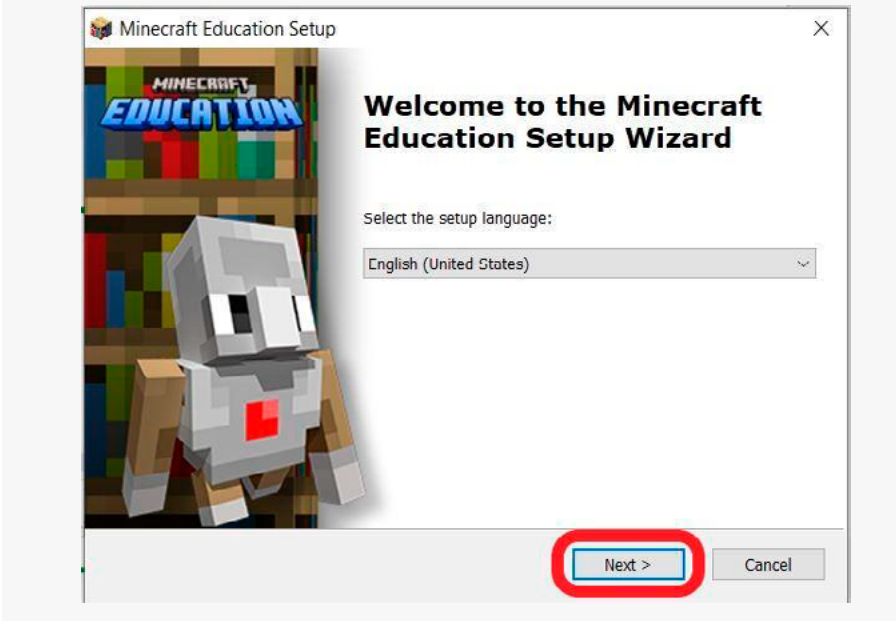

2. Click on the **„Download for Windows"** or **„Download for Mac"** button, depending on which type of computer you are using.



3. Once the download is complete, **open the installer file.**




4. Follow the prompts to install Minecraft Education on your computer.





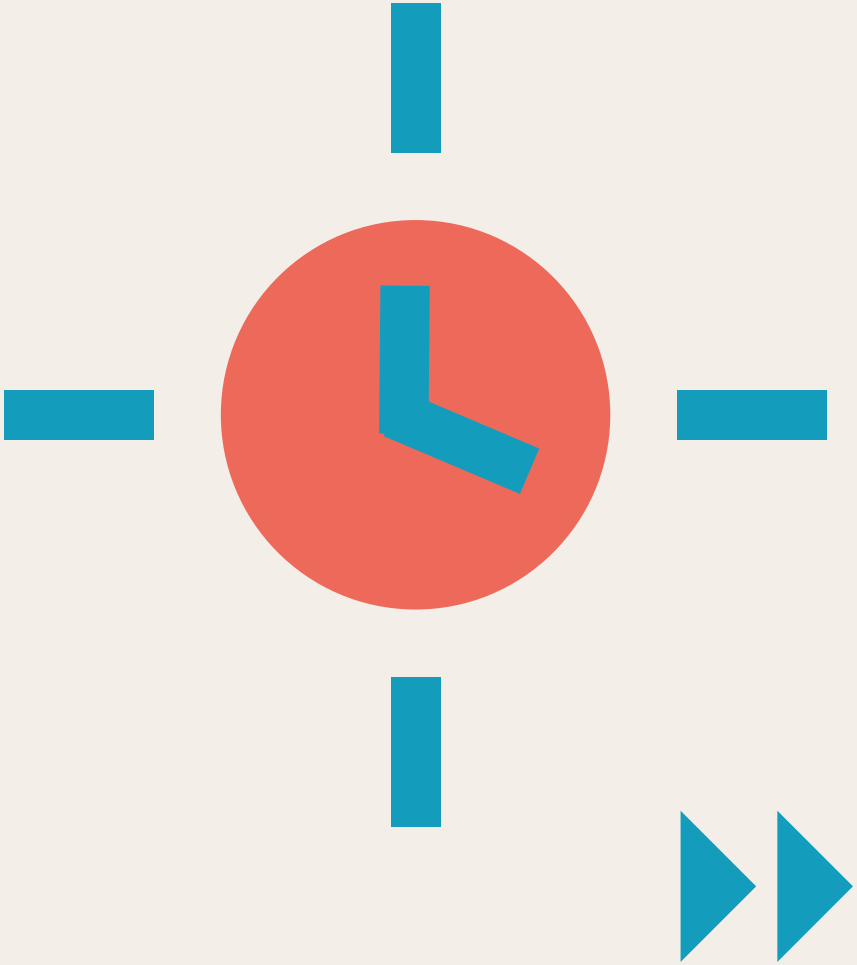

5. Once the installation is complete, open the game and **sign in** with your Microsoft or Office 365 Education account.


6. After you sign in, you will be prompted to enter a code that you will have received from your school or teacher. If you want to disable this option, get in touch with your account administrator for that.

7. Once the code has been entered, you will have access to all of the features of Minecraft Education.

8. You can now start creating and exploring in Minecraft Education with your classmates or students!

# 4.3.2 Quick overview of the game





- Once you are signed in, you will be taken to the main menu where you can create a new world or open an existing one. To do so, select the **"Play"** option.

- Create a new world or open an existing one. The file extension for a Minecraft Education world file is .mcworld. This file format is used to package together all of the elements of a Minecraft world, such as the terrain, blocks, entities, and other data, into a single file that can be easily shared and imported into the game. Once a .mcworld file is imported into Minecraft Education, the world can be opened and explored as a new Minecraft world.

- To customise the world settings, click on the **„World Options"** button in the top right corner.

- To add or remove players from the world, click on the **„Players"** button in the top right corner.

- To access the in-game tutorials and resources, click on the **„Education"** button in the top right corner.

- Use the various tools and blocks in the game to build, create and explore your world.

- To save your progress and share your world with others, click on the **„Save"** button in the top right corner.

- To access different game modes, click on the **„Game Mode"** button in the top right corner.

- Press the **"Esc"** key to exit the game.

**Have fun and enjoy the Minecraft Education experience!**

## Good to know:

### What is the difference between survival and creative mode?

In survival mode, players have to gather all their materials to build, craft items and tools and gain experience points. There is a hunger and armour bar, an inventory and, when underwater, an oxygen bar. If you die you go back to your spawn point.

In creative mode the player has access to an infinite amount of almost all blocks and items available, and can destroy them instantly. Players are invulnerable and do not have health, armour, or hunger, and can fly. The player has access to items not available in Survival mode, e.g. spawn eggs.

### What is adventure mode?

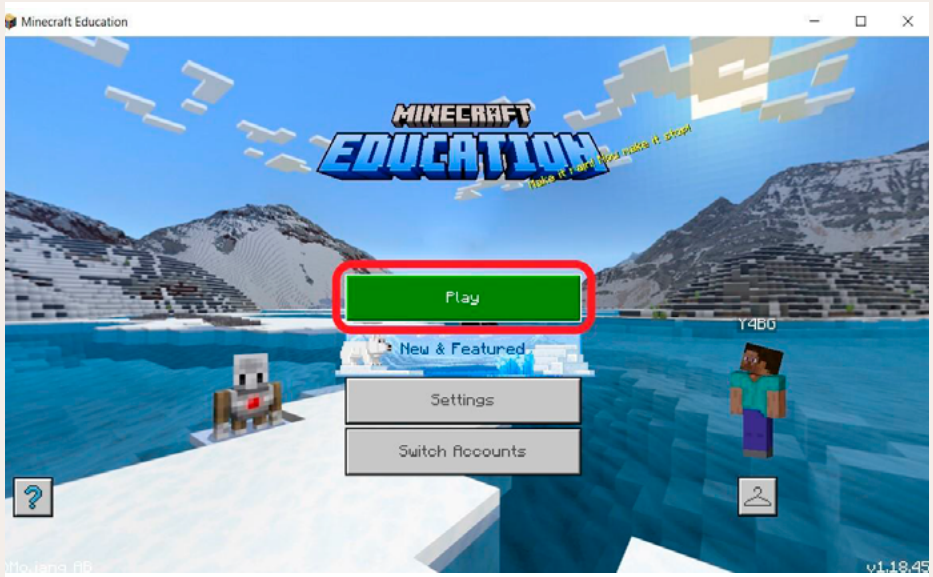
Adventure mode is a game mode intended for player-created maps, limiting some of the gameplay in Minecraft. In this mode, the player cannot directly destroy any blocks with any tools or place any blocks, in order to avoid spoiling adventure maps or griefing servers. Adventure mode is accessible only with commands.

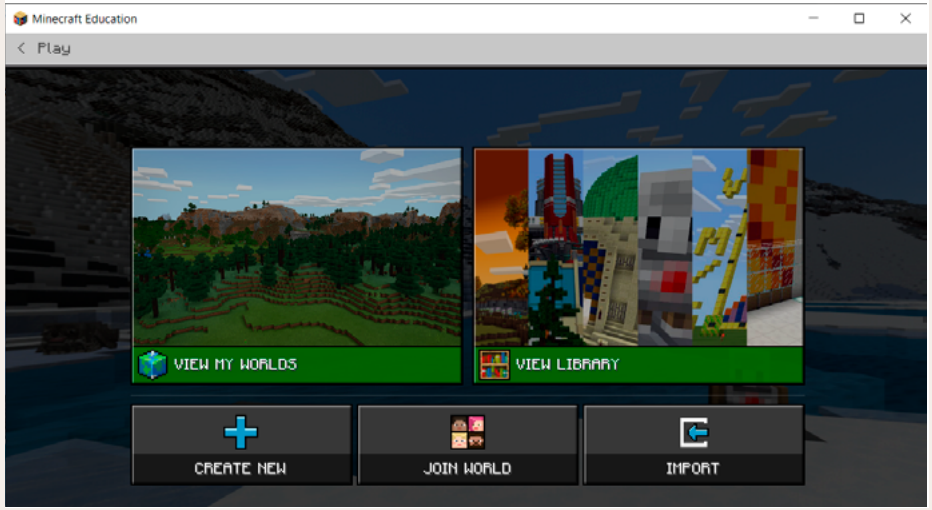
### Can I code in Minecraft: Education Edition? How does it work?

Yes, you can! Press **„c"** on your keyboard for it to launch. Code Connection [87] is a separate companion app that is compatible with the Bedrock edition of Minecraft. Both options allow educators and students to explore, create, and play in an immersive Minecraft world – all by writing code.



# 4.3.3 Open a World






A **world** is an individual Minecraft „universe“. To access a world there a different possibilities, through the world selection screen found on the main menu:

- **“Create new”:** this option allows you to create your own world completely from scratch. Select the options you would like applied to your new world and start building!

- **“View library”:** a collection of pre-existing worlds with a variety of categories: lessons, monthly build challenges, biomes and worlds, or training material to help you grow your teaching practice with Minecraft Education.

- **“Join world”:** this is a multiplayer function that connect players through picture-based join codes so they can play together at the same time in the same Minecraft Education world.

- **“Import”** other worlds:

  - From the Minecraft start screen, click **“PLAY“**

  - Click the icon that reads **„IMPORT“** on the Play screen

  - Find the .mcworld file on your computer and select it to import.

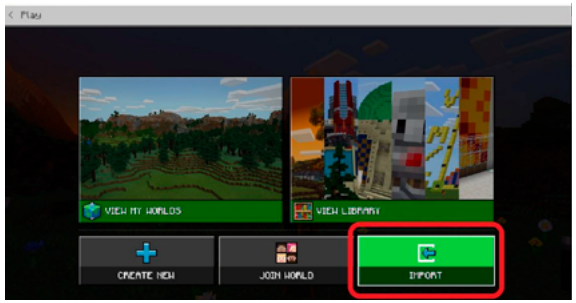
# Exercise 1: Import the Youth 4 Bauhaus worlds

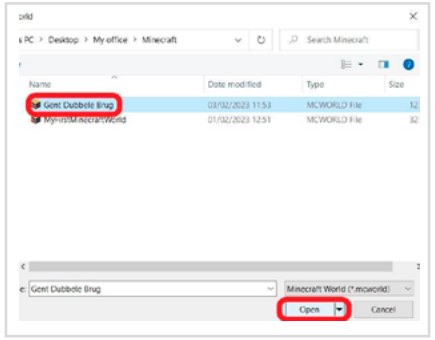
If you wish to join our Youth 4 Bauhaus adventure, you can import the worlds we created to redesign unused spaces in Belgium, Portugal, Romania and Slovakia. Share your ideas to co-create public spaces that are safe, inclusive and accessible.

**Here are the step-by-step instructions on how to do that:**

1. Download the world you want to work on from here.

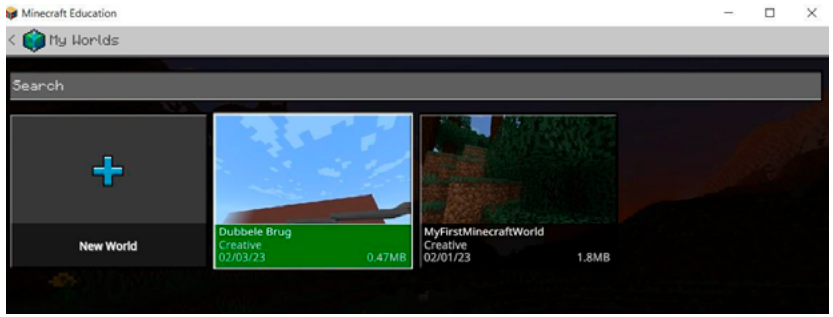
2. Find the .mcworld file on your computer and select it to import.

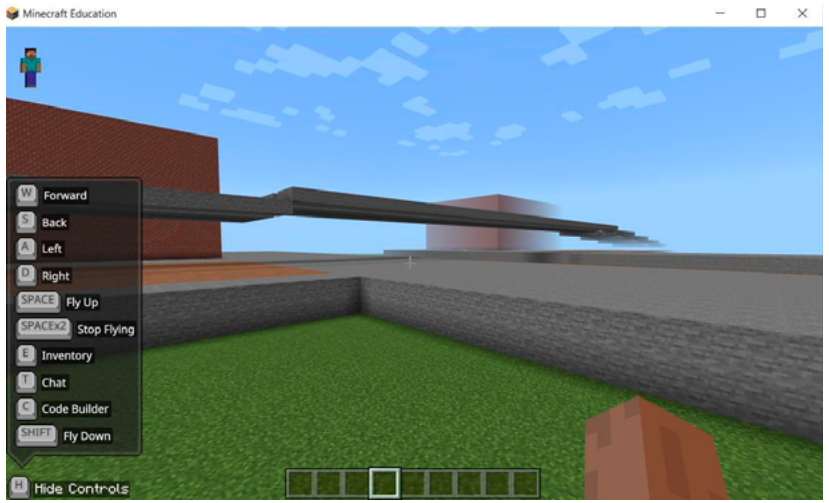


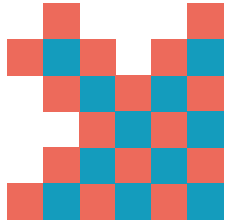






3. Find the world you just imported in **"View my worlds"** and select **"Play"** to start redesigning the area around an unused bridge that exists in the city of Gent, Belgium.

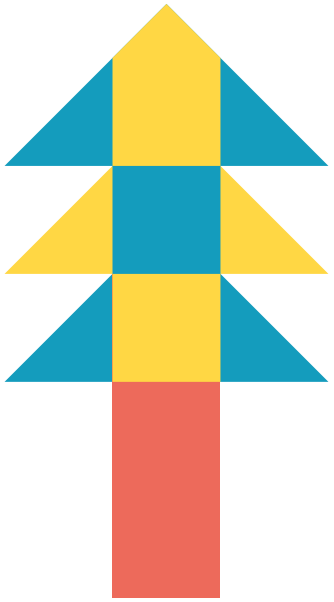


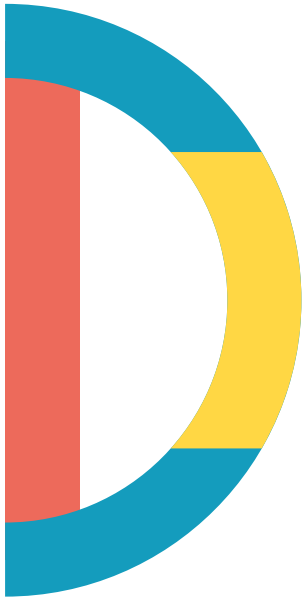



# Multiplayer mode: Host and Join a world

One of the most relevant features of Minecraft Education is the multiplayer mode, where students can join the same world and work on projects together. This is a powerful way to foster collaboration, communication and problem solving skills in the classroom. Multiplayer mode also lets teachers manage settings and monitor student progress from a central user interface. To use multiplayer mode, students need to have the same Office 365 tenant and the same version of Minecraft Education. You can find the information on How to set up a Multiplayer game, how to host the world and how to join the world on this link [88] and this link. [89] You can also see this video [90] for more details.





# 4.3.4
# Play and work in a World

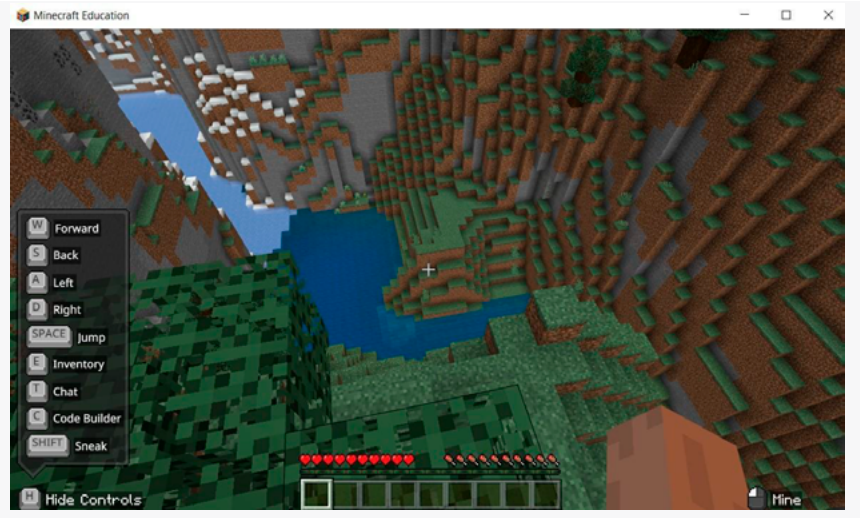


## Most used keybinds

Minecraft Keybinds allow the player to execute skills when certain keys are pressed on the keyboard. For example, when the spacebar is pressed on the keyboard in Minecraft, it will cause the character to jump.

In Minecraft Education, there are several keybinds you can use to navigate the game and interact with the environment. Here are some of the most commonly used keybinds:

- **W, A, S, D:** These keys are used to move forward, left, backward and right respectively.
- **Spacebar**: This key is used to jump.
- **If you press it two times and you hold the Spacebar pressed, you can fly:**



- **Left Shift:** This key is used to sneak.
- **Left Ctrl:** This key is used to crouch.
- **E: This key is used to open your inventory and crafting table.**


A **crafting table , also known as workbench,** is one of the most important items that you should always have in your Minecraft inventory. Crafting tables let you to create a number of complex items in the game including tools, weapons, and armour.

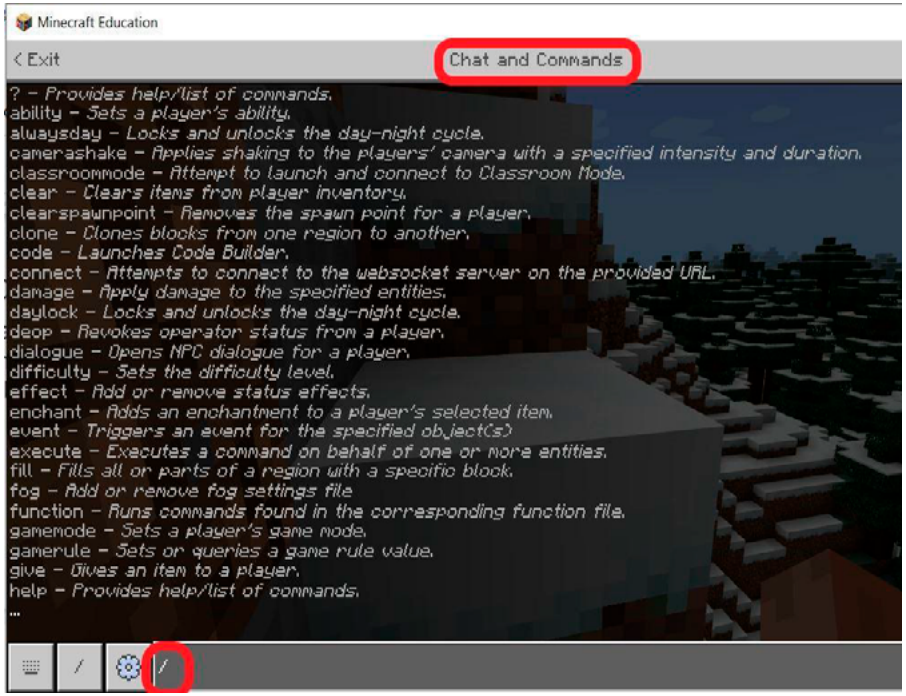



- **Q:** This key is used to drop an item from your hand.
- **Right-click:** This mouse button is used to interact with blocks and entities.
- **Left-click:** This mouse button is used to place blocks and attack entities.
- **Scroll wheel:** This mouse button is used to switch between items in your hotbar.
- **T:** This key is used to open the chat window and send messages to other players.
- **Tab:** This key is used to open the player list and see the usernames of other players.
- **F3:** This key is used to open the debug screen, which shows your coordinates, biome, and other information
- **F5:** This key is used to change between first-person and third-person view.
- These are some of the most commonly used keybinds in Minecraft Education, but keep in mind that you can also customize your keybinds in the game's settings. You can also use a gamepad or controller, too, and the buttons may vary depending on the device you are using.

Find more here. [91]

# Minecraft Education Commands

**Commands**, also known as **console commands** and **slash commands**, are advanced features activated by typing certain strings of text. Commands are entered via the chat window, which is displayed by pressing the **slash** key **"/"**.



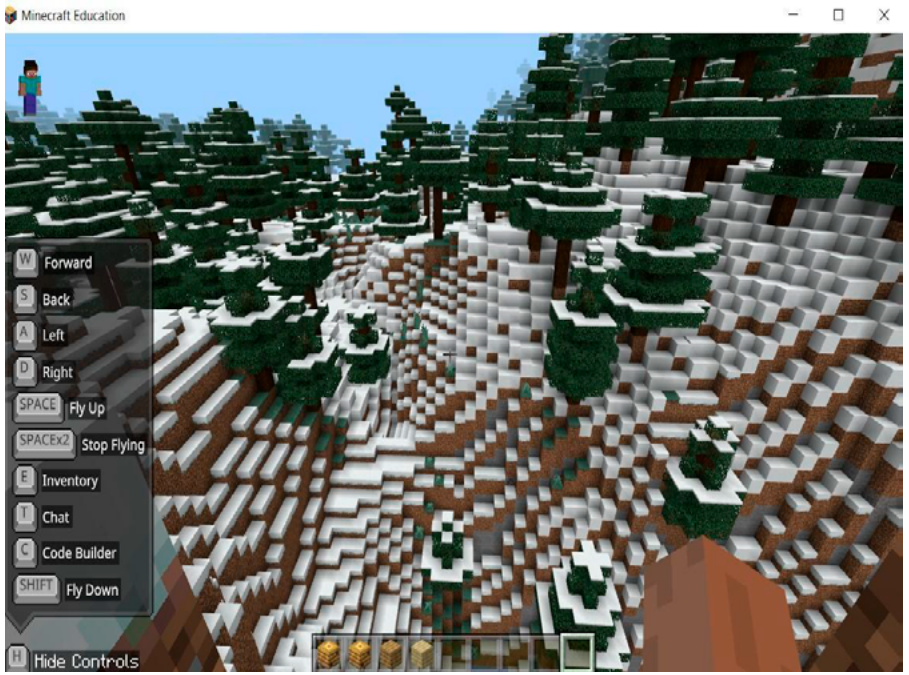

**There are many commands available in Minecraft Education. Here is a list of some of the most commonly used commands:**

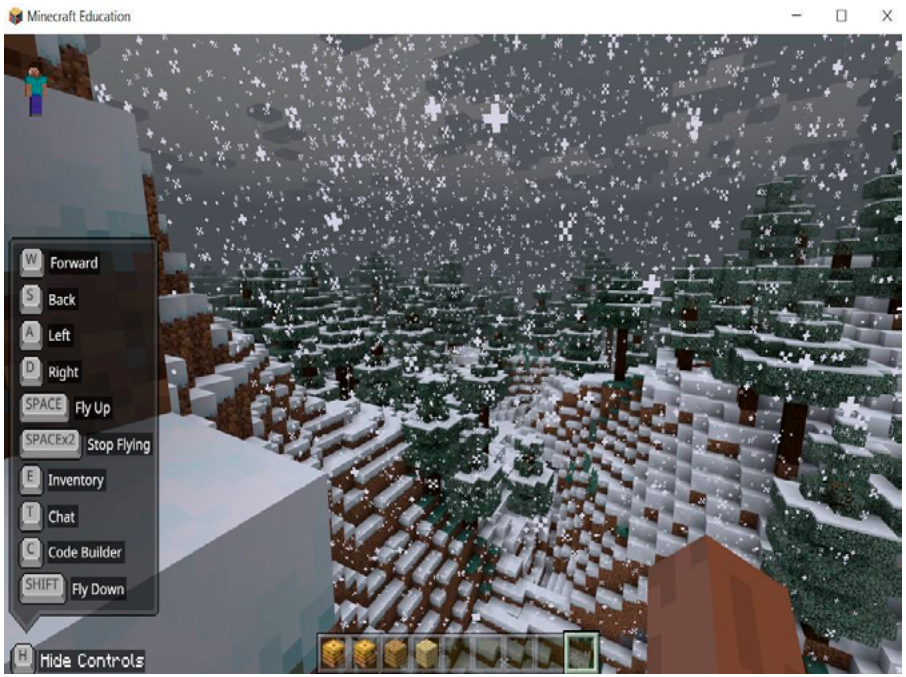
- **/give [player] [item] [amount]:** Gives the specified player the specified item and amount.
- **/spawnpoint [player]:** Sets the spawn point for the specified player.



- **/tp [player] [x] [y] [z]:** Teleports the specified player to the specified coordinates.
- **/tp [player1] [player2]:** Teleports player1 to player2's location.
- **/tphere [player]:** Teleports the specified player to the location of the command sender.
- **/weather [clear/rain/thunder]:** Sets the weather to clear, rain, or thunder.

**Here is our Minecraft world before and after giving this command:**






- **/time [set/add] [value]:** Sets or adds to the time of day.

- **/gamemode [survival/creative/adventure/spectator] [player]:** Sets the game mode for the specified player.

- **/difficulty [peaceful/easy/normal/hard]:** Sets the difficulty of the game.

- **/kill [player]:** Kills the specified player.

- **/xp [amount] [player]:** Gives or takes XP from the specified player.

- **/enchant [player] [enchantment ID] [level]:** Enchants the specified player's item with the specified enchantment and level.



- **/give [player] [item] [amount] [data value]:** Gives the specified player the specified item, amount, and data value.

- **/setblock [x] [y] [z] [block]:** Sets the block at the specified coordinates.

- **/summon [entity] [x] [y] [z]:** Summons the specified entity at the specified coordinates.

- **/fill [x1] [y1] [z1] [x2] [y2] [z2] [block]:** Fills the area between the two sets of coordinates with the specified block.

***Example: Cover the ground under you***

*Let's start by showing how to replace a region of blocks that are beneath where you are standing. For example, let's cover the ground below us in a 11x1x11 area with quartz block with the following command: /fill ~-5 ~-1 ~-5 ~5 ~-1 ~5 quartz_block*

*Type the command in the chat window. As you are typing, you will see the command appear in the lower left corner of the game window. Press the Enter key to run the command. This /fill command would replace 121 blocks beneath you with blocks of quartz.*

*You will see the message „**121 blocks filled**" appear in the lower left corner of the game window to indicate that the fill command has completed.*

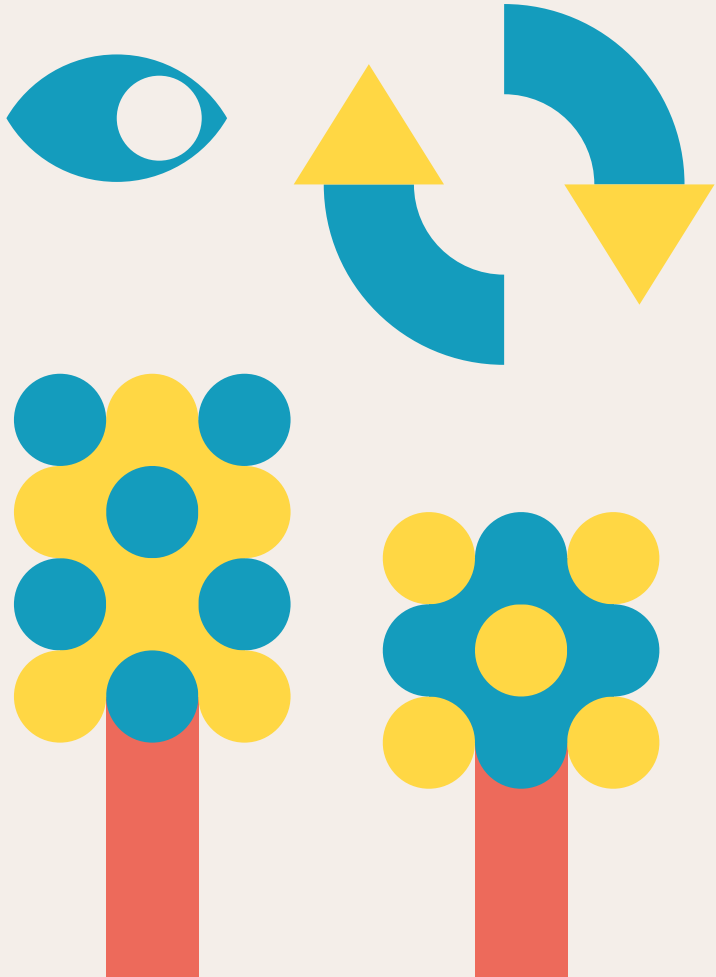

- /replaceitem [entity/block] [slot] [item] [amount]: Replaces the item in the specified slot for the specified entity or block.

This is not an exhaustive list, but it includes many of the most commonly used commands in Minecraft Education. Keep in mind that these commands have different parameters and usage, and you can consult the official Minecraft website for more information on each command.

Here is a link [92] to explore essential commands.

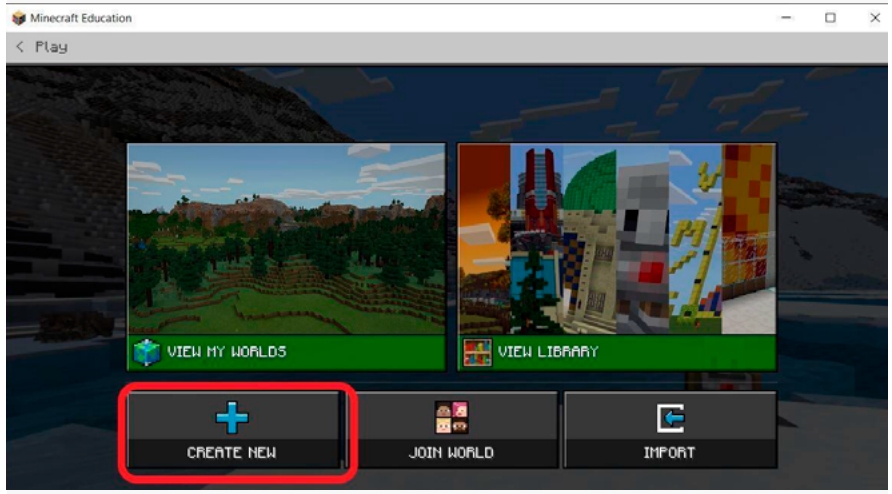
Here is a link [93] to explore in-depth commands, for more experienced players.

# 4.3.5 Export your Minecraft Education world



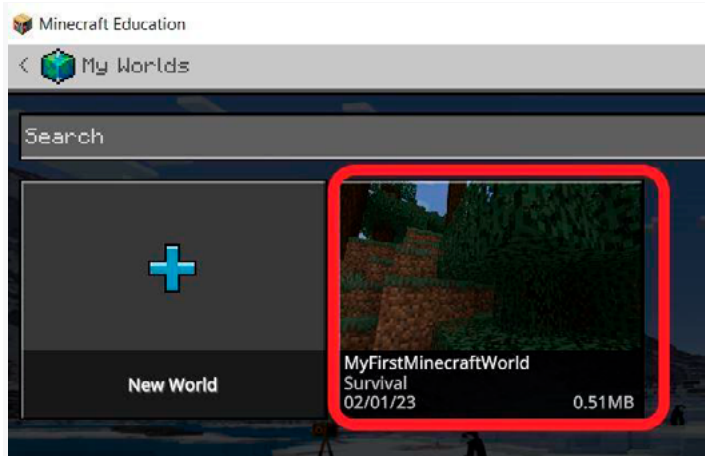


**To create a .mcworld file in Minecraft:** Education Edition, you will first need to create a world in the game and make any desired changes to it.

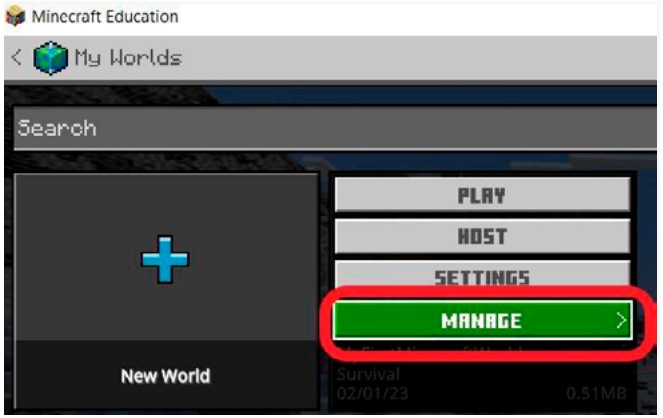



**Once you are satisfied with your world, you can export it as a .mcworld file by following these steps:**

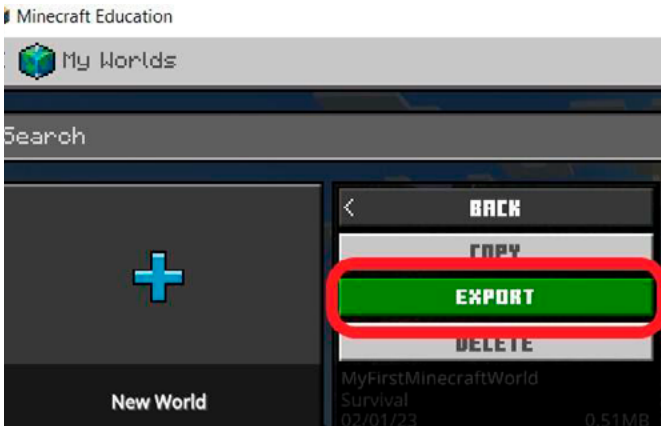
1. **Open Minecraft:** Education Edition and navigate to the world you want to export.



2. Click on the world and select the „**Manage**“ button among the options that appear, to open the world management screen.



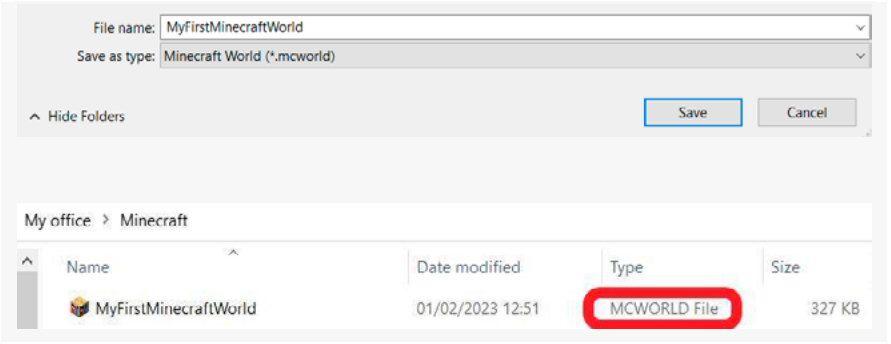

3. Click the „**Export**“ button.



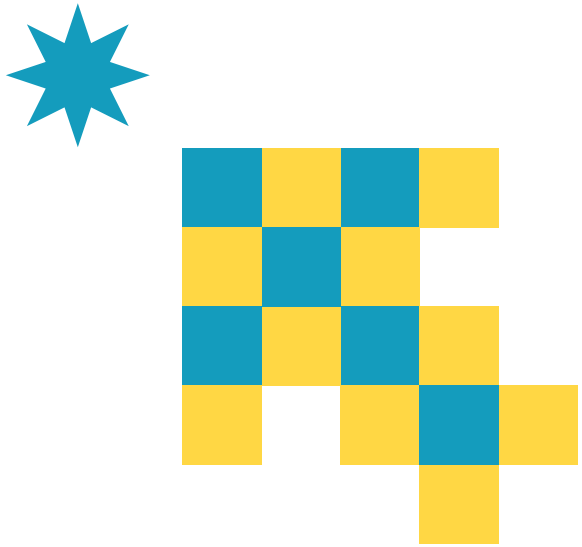

4. Select the location where you want to save the .mcworld file and give it a name.

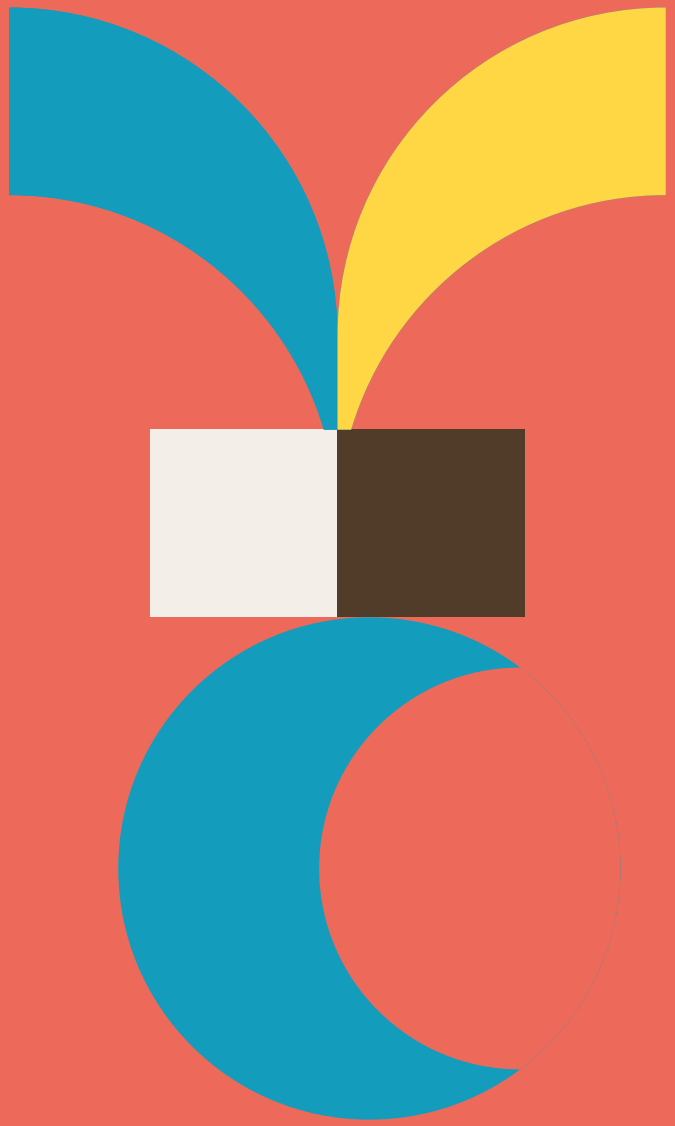


5. Click the „**Save**“ button to export the world as a .mcworld file.




Once the export process is complete, you will be able to share your world with other players via the **.mcworld** file. Keep in mind that this process only works for Minecraft: Education Edition, for the normal Minecraft the process is different and the extension for the world is **.zip**

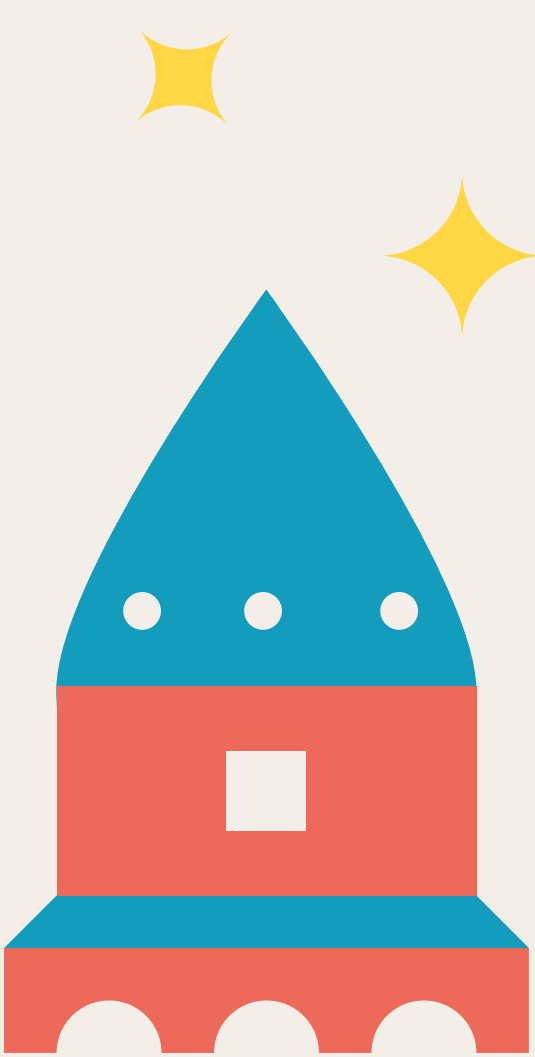






# LESSON PLAN

# TOPIC AND RATIONALE:





## 3D Creation of sustainable public spaces

Our NEBI Enabler toolkit seeks to provide youth with theoretical and practical guidelines on taking meaningful action to co-create and transform the cities they inhabit into more sustainable and inclusive places of the future. The toolkit's design reflects a logical path to achieving change on the ground. It first presents a background story, with theoretical concepts and a broader understanding of the topic to be explored. It then elaborates on this by providing the specific methodologies to be used for creating the modelling and 3D solution. The lesson plan here presents the NEBI Enabler toolkit, following this didactic progression.

## Learning objectives:

**Students will be able to:**

- Formulate and present individual opinion about the use of public space in the city within the spirit of the New European Bauhaus;
- Apply the working values and principles of the New European Bauhaus within the context of the wider European Green Deal;
- Use the values and ambitions of the NEB compass when designing ideas and projects;
- Understand what makes the building materials sustainable;

- Recognise constructed referential examples;
- Discuss the values of public space within the concept of a just and democratic society;
- Employ new terminology and vocabulary based on the New European Bauhaus theory;
- Critically assess and prioritise ideas for designing and conceptualising sustainable and inclusive public spaces;
- Collaborate using common design ideas;
- Design and translate a physical space into a 3D model using Minecraft;
- Differentiate between sustainable and non-sustainable design and public spaces and propose measures to transform non-sustainable design and public spaces into sustainable ones;
- Debate and justify their ideas and opinions;
- Present the results of their collaborative work;
- Recognize barriers to individuals with special needs and propose possible solutions;
- Have increased awareness of the need for new approaches to city planning.
- Analyse and diagnose the public space contexts, revealing strengths, weaknesses, opportunities and threats (SWOT).



**Group members:**

The lesson plan is aimed at high school students with interest in concepts of design and the use of public spaces. The total group size should be around 40 students divided into groups of 5 or 8 people with 2 skilled "minecrafters" per group. Each group should have at least 2 computers with Minecraft education licences. Split the students with different knowledge levels and skills between the groups, so each group can benefit from the diverse strengths of individuals. Include the students with different attitudes and abilities into one group, so they can practise listening to the other ideas and learn how to make compromises and tolerance.

## Minimal competences before the lesson:

**Participants should:**

- be able to understand the basic principles of urban planning;
- know how maps work;
- have a basic overview of materials used for construction;
- know the background of the city and the public space that will be re-designed within the lesson;
- have the overview of New European Bauhaus principles, values, goals, and functioning (Green cookbook);
- have the experience with Minecraft Education, its possibilities, have the basic overview of the game, know the most used keybinds.

**Duration:** 3 work days (approx. 24 hours)

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**Technical requirements:**

- At least 2 computers with Minecraft Education installed and licences for use per planned groups;
- Compatible computer mouses;
- 3D model of the space to be re-designed;
- stable wifi connection.

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**Materials:**

- Flip charts with flip chart papers;
- Pens;
- Coloured pencils and markers;
- Post-it papers;
- Tape and scissors.

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**Preparation before the lesson:**

- Select the relevant group of participants;
- Identify the public space to be redesigned by the group;
- Prepare the background information and provide it to the group;
- Use Generic 3D 4x4 model, adjust according to the relevant public space;
- Buy the licences for Minecraft Education usage;
- Use the Technical guide in order to install Minecraft Education and log in to the account;
- Set up the computers, install Minecraft Education (same versions for each computer) and activate licences.



# Lesson's activities and timeline

## Day 1

1. Ice-breaking activities, getting to know each other (30 - 60 min.)
2. Introduction to the whole lesson, presenting main topics, each individual part and the schedule (10 - 15 min.)
3. Energizer (5 - 10 min.)
4. Theoretical part where the concepts of New European Bauhaus will be explained (in the form of seminar, panel discussion, European cafeé format, individual research,...). (Green Cookbook) (120 min.)
5. Break (45 min)
6. Explaining next steps and procedures (10 min.)
7. Urban planning theory and introduction to the public space in the city to be re-designed (presentation, panel discussion by experts, individual research,...) (60 min.)
8. Site visit - physical visit of the public space that will be co-designed, presentation of the site within the context of the city. (180 min.)



## Day 2

1. Energizer (5 - 10 min.)
2. Explanation of the goals of co-creation and methodology, presentation of the good examples (15 min.)
3. Individual ideation of thoughts in drawings/maps/plans for the location visited during the previous day (Methodology part) (120 min.)
4. Break (45 min.)
5. Co-designing the sustainable solutions in groups of 8 or 5 people on paper, sharing the ideas, discussing, compromising. (90 min.)
6. Energizer (5 - 10 min.)
7. Selection of 1 idea per 1 group that will be designed, facilitating the discussion and shared solution (60 min.)
8. Introduction to the Minecraft usage for co-creation (120 min.)

## Day 3

1. Energizer (5 - 10 min.)
2. Facilitated designing in Minecraft program - 3D visualisation of the ideas of the group. Dividing the roles in the group (120 min.)
3. Energizer or break (10 min.)
4. Facilitated designing in Minecraft program - 3D visualisation of the ideas of the group. (90 min.)
5. Break (45 min.)
6. Finishing the designs (60 min.)
7. Energizer or break (10 min.)
8. Preparation for the final presentation of the designs, introduction to how to make a presentation, selection of the presenter(s) for each group (60 min.)
9. Final presentations (90 min.)

## Assessment method:

**Final group presentation. The quality of designed solution should be assessed:**

- All 3 principles of New European Bauhaus were applied
- Sustainable materials were used
- The solution should take into account public usage, including the ones with special needs
- Designed solution should be saved and downloaded

# Resources/knowledge/ future reading:

## Green Cookbook, Methodology, 3D model, Technical guide



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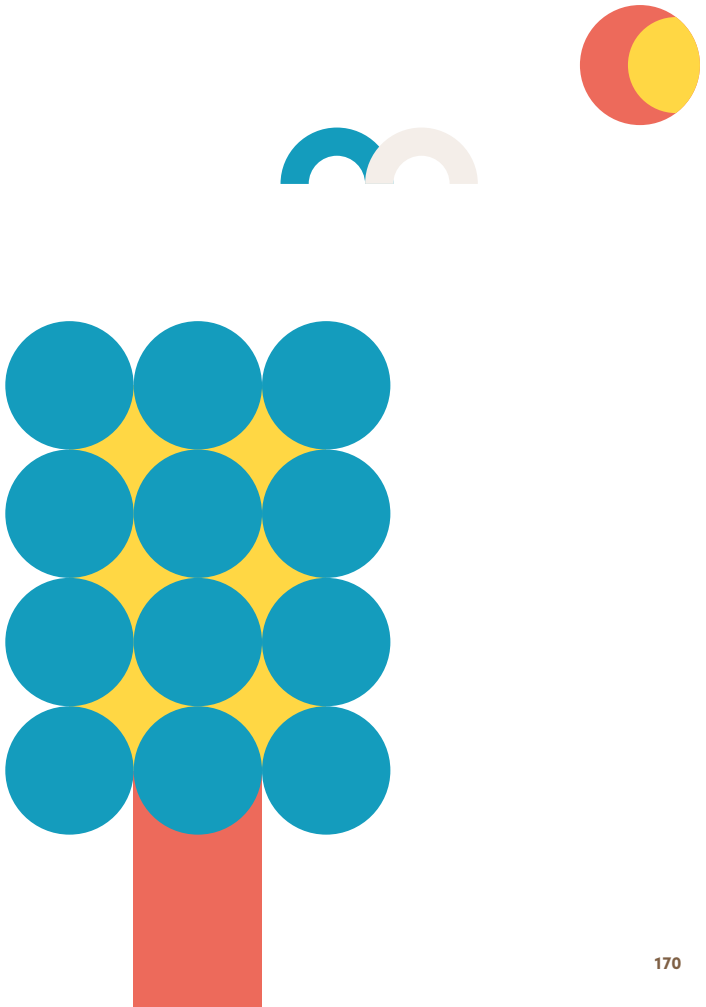

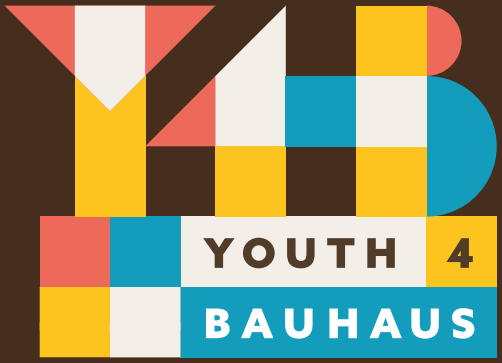


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