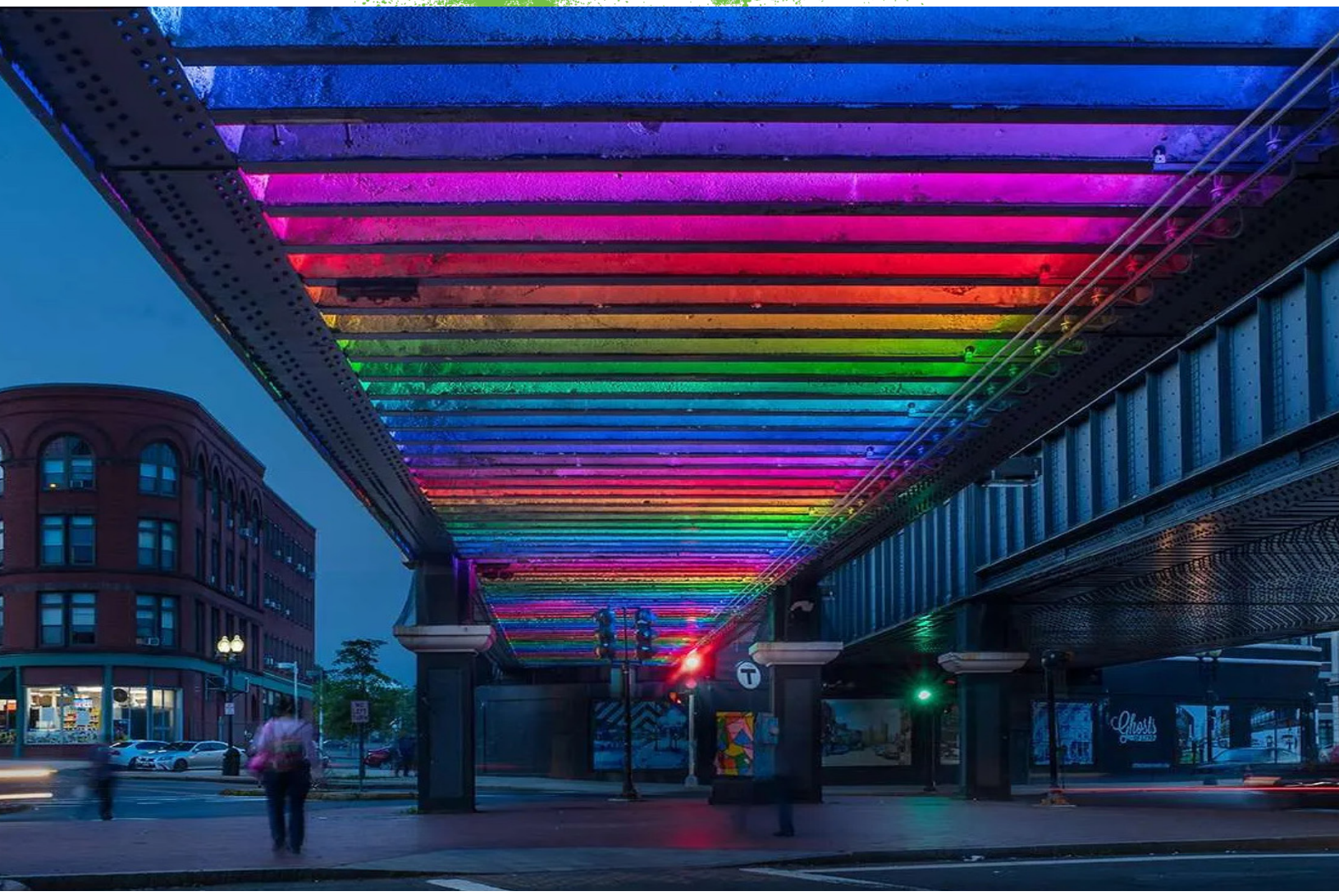
BEYOND WALLS

Classroom to the Streets



Creative Problem Solving And Urban Design

Unit Guide for Teachers

About this Unit Guide

This document is meant to act as a unit guide for teachers and instructors. This document contains in depth background information on unit topics, questions and pointers to help guide class discussions, links to videos and PowerPoints to show in class, and lesson worksheets, among other things.

This unit guide contains individual lesson plans that can be taught either in the context of, or independently from, the unit guide.

You can find all related documents to this unit, the individual lesson plans, and the virtual student worksheets on the Beyond Walls webpage.

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Massachusetts Curriculum Frameworks

Science and Technology/Engineering

Engineering Design

- Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution. Include potential impacts on people and the natural environment that may limit possible solutions. **(6.MS-ETS1-1)**
- Create visual representations of solutions to a design problem. Accurately interpret and apply scale and proportion to visual representations. **(6.MS-ETS1-5(MA))**
- Communicate a design solution to an intended user, including design features and limitations of the solution. **(6.MS-ETS1-6(MA))**
- Given a design task, select appropriate materials based on specific properties needed in the construction of a solution. **(6.MS-ETS2-2(MA))**

English Language Arts

Text Types and Purposes

- Write narratives to develop experiences or events using effective literary techniques, relevant descriptive details, and well-structured sequences. **(W.6.3)**

Production and Distribution of Writing

- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **(W.6.4)**

Comprehension and Collaboration

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly. **(SL.6.1)**
- Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study. **(SL.6.2)**

Knowledge of Language

- Use knowledge of language and its conventions when writing, speaking, reading, or listening. **(L.6.3)**



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Lesson Objectives

Students will be able to...

1. Discuss the purpose of urban design and tactical urbanism and its importance
2. Identify a problem and design a creative solution
3. Develop public speaking, team work, and problem-solving skills

Vocabulary

1. Urban design
2. Designed response
3. Tactical urbanism

Materials

Crayon/colored pencils/markers
Poster board or large sheets of paper



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Lesson Plan Procedures

Intoduction

To start this lesson, gauge the classroom on their understanding of environmental issues the world faces today by creating a list on a whiteboard. Afterwards, have students identify and circle the items on the list that directly pertain to nature and natural environments. While learning about and interacting with nature is often seen as the primary way to develop awareness of environmental issues, not much attention is given to urban environments.

In this lesson, students will work in groups to identify a problem in their community and design a solution that utilizes a creative lens. By engaging in this lesson, students will gain an appreciation for both their community and the issues it faces. Students will also grow their problem-solving skills while building civic-action oriented mindsets.

Urban Design and Tactical Urbanism

At this point, ask students what type of environment they walk on the most in their daily lives. Dirt paths? Grassy fields? Concrete sidewalks? Painted crosswalks?



About 80% of all Americans live in cities, and it is estimated that by the year 2030, more than 60% of people around the world will live in urban areas. In other words, the entire world is city-focused. Because concrete and crosswalks are more common in our everyday lives, it is important that when we talk about environmental issues and sustainability, that we keep cities at the forefront of our efforts.

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According to the United Nations, "The world's population is constantly increasing. For all of us to survive and prosper, we need new, intelligent urban planning that creates safe, affordable and resilient cities with green and culturally inspiring living conditions." In response to this need for "inspiring living conditions", there has been a surge in urban design, specifically in the fields of tactical urbanism and designed responses.

At this point, ask students if there are any urban, outdoor areas in their city or local community that they like to visit. Have students describe the area and explain what it is they like about the space. Afterwards, inform students that those outdoor, public spaces they spend time in are intentionally created by urban designers to be both beneficial and engaging to the community.



"1st and U NW tactical urbanism sidewalk extensions" by BeyondDC is marked with CC BY-NC 2.0.

Urban design is the creation of city features based on plans. It includes everything from public space (such as plazas, parks, beaches) to infrastructure (such as roads, bridges, transportation lines, water and sewage, and electrical grids). The job of an urban designer is to create eye-pleasing, functional spaces that focus on user experience. They use their creativity to get the most out of the space for everyone who will use it.

An exciting new area of urban design is called tactical urbanism, also known as designed responses, which are quick, cheap (and sometimes temporary) projects that aim to make a small part of a city more livable or enjoyable.

Examples of tactical urbanism include:

- Guerilla gardening, or the act of gardening in an area where gardeners have no legal right to plant and grow plant species. It usually takes place in neglected places that no one takes care of.



"Mobile Guerilla Gardening" by stan is marked with CC BY-SA 2.0.

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"Pop-Up Park on George Street Edinburgh 04" by Friends of the Earth Scotland is marked with CC BY 2.0.

- Pop-up parks, which highlight the need for a redesign of city centers so that public spaces, walking, cycling, and transportation are given more priority
- Pop-up bike and walking lanes, which highlight the need for better pedestrian infrastructure to increase walkability and city-wide access.

Each of these methods are a way to identify and solve a small, but pressing community issue.

An alternative to this rather than explaining to students what issue each tactical urbanism method tries to address, ask the students what they think. Either individually or in groups, have students examine the three photos of tactical urbanism and, using their critical thinking skills, assess what civic issue is being tackled in each example.

MBTA Underpass Lighting and Retrolit

Next, students will do a case-study on a designed response created in downtown Lynn, MA. To start, have students watch the following video:

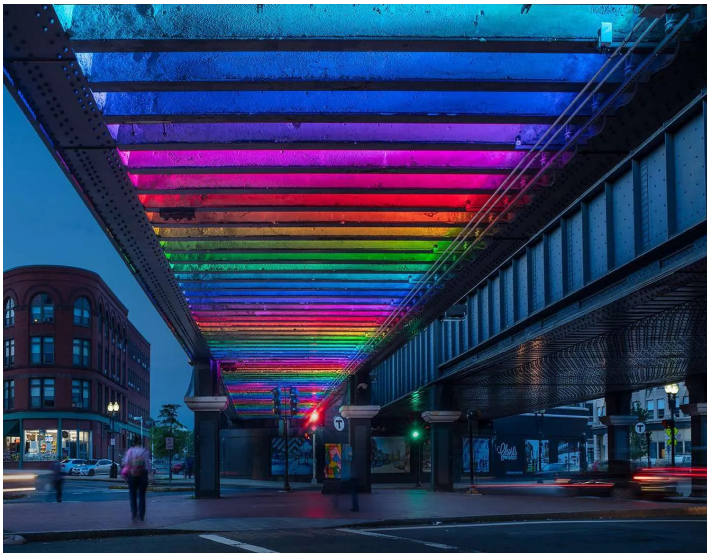
https://youtu.be/__n7dlxIHP8

While students watch the video, have them fill out the Lesson Form (included below and on the Beyond Walls webpage)

Afterwards, discuss the above questions as a class.

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In 2018, Beyond Walls, along with strategic partners and volunteers from Lynn, installed "Lynn Lights"--a designed response to community feedback for more lighting downtown. For this project, 600 linear feet of dynamic LED Lighting was installed under three MBTA rail underpasses. Poor visibility in the dark underpasses produced an unwelcoming environment with dangerous conditions; for example, motor accidents and crime rates were high in the areas under the MBTA bridges. Now the underpasses have color-changing, full-spectrum lighting that not only delights the eye, but attracts more people to the city, contributing to pedestrian safety and civic pride.





Not only did the "Lynn Lights" project involve the MBTA underpasses, but also included lighting up other areas around the city. To meet this need, vintage neon signs were installed on several buildings and storefronts in downtown Lynn. These vibrant artifacts of classic commercial Americana have been dusted off, spruced up, and now shine light onto the streetscape. These nostalgic pieces are evocative of the heyday of Lynn's commercial and industrial past. Additionally, these pieces bring more light and increase the walkability of downtown Lynn.

At this point, show students examples of the neon signs installed in Lynn, MA from the PowerPoint. Ask them if there are any signs they like the most. During this discussion, have students think about the designed response to lighting in Lynn– ask them if they think the response was both effective AND creative. Make sure students explain their answers.

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Activity

For this activity, students will be acting as an urban designer that specializes in tactical urbanism. Students will work cooperatively in teams to identify an issue they believe their local city or community faces and design a creative solution to the problem. They will create a project proposal and then present the proposal to the class.

For the assignment, students will fill out a project proposal worksheet (included below) and create a visual aid for their presentation using PowerPoint, a large sheet of paper, poster board, etc.

Included below are project guidelines.



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Differentiation



This lesson plan accommodates each of the four learning styles: visual, auditory, reading and writing, and kinesthetic.

This lesson plan engages visual learners by having them engage with and analyze creative tactical urbanism examples and by watching interview videos.

This lesson plan engages auditory learners by having them listen to the lecture on tactical urbanism and by watching videos where individuals speak about their work.

This lesson plan engages reading and writing learners by having them fill out the accompanying Lesson Form and read the project guidelines.

This lesson plan engages kinesthetic learners by providing a tactile experience in which students get to make work collaboratively to create a project proposal and visual aid.

Assessment

Assessment is conducted regularly throughout this lesson through group discussions.

For alternatives, the link below will take you to a document with a comprehensive list of assessment options. Though they are geared more towards Visual Arts, they can be altered or used for other curriculums, such as ELA and Science/Technology.

https://uploads.theartofeducation.edu/2016/03/Ultimate-Assessment-Guide.pdf

Exit slips are also a great strategy for assessment at the end of a lesson. For these slips, have students respond to the following questions:

1. Write one thing you learned today
2. Write one question you have about today's lesson
3. Did you enjoy the lesson activities?

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https://parcitypatory.org/2020/07/31/tactical-urbanism/

https://www.terracastproducts.com/urban-planning-vs-urban-design-breaking-down-the-differences/

Contact Us

This lesson plan was created as a tool to help teachers inocroprate street art into their curriculum. If there is anything you liked or wish to see added, email us at admin@beyond-walls.org

Visit Us At

@beyondwallslynn

@beyondwallslynn

Or at our website beyondwalls.org

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Lesson Form

Name:

Date:

1. What was the problem identified by the city and the community?

2. In what ways did the problem impact the community?

3. What was the designed response created for the problem? How specifically did the designed response solve the problem?

4. According to Pedro Soto in the video, how was the solution "taken a step further?"

Project Guidelines Handout

For this activity, you and your team will be acting as a group of urban designers that specialize in tactical urbanism. You will work cooperatively in your teams to identify an issue you believe your local city or community faces and design a creative solution to the problem. Afterwards, your team will complete the project proposal below and present your project to your teacher and your classmates. You will need to create a visual aid that demonstrates what your creative solution will look like.

To start, each team should choose their team leader, known in the Urban Design field as a project manager. This individual will be responsible for making sure the group stays on task, that everyone in the team is assigned a specific role, and that the project gets done in a timely manner. Any problems the team runs into should be reported to the project manager to handle. An example of roles that the Project Manager can assign include:

1. Notetaker: This person takes notes on what the team discusses and also fills out the project proposal form.
2. Designer: This person draws up the creative solution the team decides on to use as a visual aid for the team's presentation. There can be multiple designers on a team!

Its important to remember that, even though each team member will be assigned a role, you are all wokring together on this!

Once you have your project manager selected, it is time to think about your local community and what problems exist! Follow the steps below to keep the team on track:

Step 1: Identify a problem in your community
Step 2: Describe the effects of the problem on the community
Step 3: Design a creative solution to the problem
Step 4: Describe how the creative solution will resolve the problem and its effects

NOTE: When thinking about your solution, make sure it is innovative and creative instead of simple. For example, if the issue I were to identify was litter, and my solution was to pick litter up, that would not be a creative or innovative solution. A good example of a creative, designed response to litter would be placing more trash cans around the city and then painting a design on each individual trash can. Doing this would help raise visibility and awareness of places to throw trash away for pedestrians.

Project Proposal

Names:

Make sure to write your responses in complete sentences. If you need room, write on the back of this sheet.

What is the problem?

What are the issues your community faces because of the problem?

What is the proposed solution to the problem?

How will the problem be solved by the proposed designed response?