SUBJECT AREAS:

Natural science

ACTIVITY DESCRIPTION:

Lecture, discussion, observation, brainstorming.

OBJECTIVES:

Students will be able to explain the benefits of trees in urban environments, the challenges trees face in cities, and solutions to promote healthy urban forests.

MATERIALS:

Pictures of cityscapes with and without trees, markers, internet access, paper and art supplies for creating posters.

GRADE/LEVEL:

Secondary school (15-18)

DURATION:

Preparation time: 20 min.

Activity time: 25 min.

PLACE:

Classroom, school yard, school neighborhood

AUTOR:

Civil Society Organization Eco Logic - Republic of North Macedonia

The Role of trees in Urban Environment

INTRODUCTION:

The teacher starts the lesson with a brief brainstorming session. Ask the students "What are some of the benefits we get from nature in cities" List students' answers on the board. Ask a follow up question: "How do you think trees contribute to these benefits"? Connect to prior knowledge: "Have you ever felt cooler standing under a tree on a hot day?" Imagine a city without any trees. How walking would feel on a hot summer day? State the lesson topic.

BACKGROUND:

Cities are covered in concrete and buildings, but they also have hidden forests – trees lining streets, in parks, and even growing in backyards. These urban trees play a crucial role in creating a healthy and sustainable environment for city dwellers.

Benefits of Trees in Urban Environments:

Air Quality Improvement: Trees act as natural filters, absorbing air pollutants and releasing oxygen. They also help reduce smog and dust.

Climate Regulation: Trees provide shade, lowering surrounding temperatures and mitigating the urban heat island effect.

Water Management: Tree roots help absorb rainwater, reducing stormwater runoff and preventing soil erosion.

Habitat and Biodiversity: Trees provide food and shelter for a variety of birds, insects, and small animals, contributing to urban biodiversity.

Aesthetics and Wellbeing: Trees increase the beauty and livability of cities, reduce noise pollution, and promote mental and physical well-being.

Challenges Faced by Urban Trees:

Limited Space: Trees in cities often have limited space for root growth due to sidewalks, buildings, and underground infrastructure.

Pollution and Stress: Air and soil pollution, along with harsh weather conditions, can stress trees and make them more susceptible to diseases and pests.

Improper Care: Trees in cities may not receive adequate water, pruning, or maintenance, hindering their growth and health.
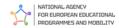
Solutions for Healthy Urban Forests:

Planting new trees in suitable locations, providing regular watering, pruning, and pest control, raising awareness and encouraging community involvement.

green

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FUN FACTS:

➢ *A single mature tree can absorb up to 60 pounds of air pollution per year.*

➢ *Trees properly placed around buildings can reduce summer air conditioning needs by 20-30%.*

➢ *Studies have shown that living near trees can improve mental health and reduce stress levels*

ASSESSMENT:

Short quiz about the benefits of and challenges faces by urban trees.

Summative assessment: Creating posters to promote tree planting.

EVALUATION:

Reflect on the effectiveness of the lesson by considering student engagement, understanding of the concepts, and completion of the assessment tasks.