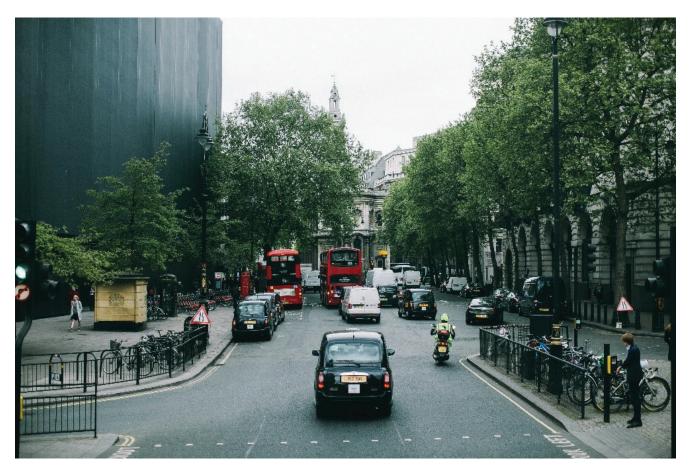# STEM from Home

City Planning

Introduction:

Have you ever visited a beautiful city and felt that everything is so well-planned and aesthetically pleasing? Or have you only experienced a city with huge traffic and pollution, unstructured roads, scarcity of public facilities like hospitals, banks, parks etc.? Even thinking about our own city makes us realise the importance of city planning in improving the quality of life of the residents.

Credits: Photo by Lina Kivaka from Pexels

Great civilisations like the Harappan, Mesopotamia and Greek are known for their city planning. Well-planned cities improved the quality of life during that era. Each of us plays a part in creating sustainable cities. Modern day cities face a lot of issues, such as traffic, pollution, waste disposal, transportation options, and water shortage. The layout of a community reflects the beliefs and values of the people who live there.

Lot of factors and constraints must be considered while planning a city design. The city design should be adaptable to the ever-growing demands of the increasing population. Besides this, ecological balance should be ensured while planning and construction of the smart city.

Sustainable Development Goal-11 also demands human settlement to be safe, resilient, inclusive fulfilling diverse needs of all living beings.

Main Activity: **My City My Rules**

Introduction: Step into the shoes of a city planner and create a layout depicting the land and position allocation for different infrastructural needs in a smart city. Conclude with explaining that city planners need to think about creating ideal or perfect cities that include what citizens need and what they want. City planners need to consider how each building will be used and how to make the whole city as efficient and effective as possible.

In this STEM Activity, you will use spreadsheet editor to create a blueprint of your city

What You Will Need

1. A desktop/laptop

2. Spreadsheet Editor (https://www.openoffice.org/download/)

What You Will Learn

1. Categorize places by their use-residential, industrial, commercial, institutional, and open space.

2. Visualize and Create a blueprint of a smart city.

3. Propose solutions for environmental friendly and sustainable cities.

Access the activity from here

Bonus Activities

Activity 1: Plan and Play

Introduction:

City planning with the different infrastructures can have multiple permutations and combinations. Different services can be interlinked with each other.

This bonus activity is a fun filled exercise to plan one or more services using the creative combination of the given infrastructures.

What You Will Learn

1. understand optimum utilization of space and resources.

2. develop problem solving and analytical skills.

Let's Get Started

What You Will Need

1. Cut outs of play cards from Activity Sheet

2. PC/Laptop

3. Any Paint Tool

Challenge Activity: Combating Calamities

Calamities arrive unexpectedly but every city should be prepared for unforeseen circumstances. To ensure this, careful mapping of possible disasters according to the regional and climatic conditions should be done. The infrastructure and services should be prepared to tackle any of these calamities.

What You Will Need

- Historical data of disasters occurring in your city like – cyclone, earthquake, blizzards, floods, land-slides.

- Any presentation tool (Open Office https://www.openoffice.org/download/, Google Sheets, Microsoft Sway, Adobe Spark)

What You Will Submit

A presentation including a video of team members explaining the challenges and solutions to combat the relevant calamities.

Resources:

- www.nbm.org

- https://sdgs.un.org/goals/goal11