

## VISIONMAKER MODULE 4: INTRODUCTION AND BACKGROUND INFORMATION FOR TEACHERS

Module 4 focuses on the population EPI. The population EPI represents the human data within Visionmaker NYC. Population parameters include the number of people living, working, and visiting New York City as well as the number of miles travelled and trips taken by and for those people. The number of pets kept is also included in this EPI. For the purpose of the sample lessons, we are exploring ways in which human population influences the environment both through our numbers as well as our lifestyles. Students will explore the patterns and implications of urbanization, and use Visionmaker to find balance among the tradeoffs associated with urbanization. Additionally, students will explore the implications of their own lifestyles and think about ways to minimize their impact on the environment.

In Lesson 1, students will engage in discussions and a variety of activities to help make concrete the concept of population density. They will then compare 6 cities across the US, matching the population density to a variety of data for that city including percent of commuters who drive to work and amount of solid waste produced, with the goal of discovering some of the impacts of higher and lower population density. Next, students will investigate the spread of urbanization, by examining satellite imagery; the benefits and drawbacks of urbanization, by collecting data in Visionmaker; and the possible modifications to an urban environment to balance the pros and cons of urbanization, with a challenge to modify a Visionmaker vision.

In Lesson 2, students will create photo essays to depict the lifestyles of people living around the world to increase their familiarity with the concept of lifestyle and the diversity of lifestyles that exist globally. Next, students will use Visionmaker to analyze data in order to understand the impacts that differing lifestyle can have on the environment. Then, students will engage with an activity in which they must distribute resources among a population to highlight the relationship between lifestyle and population. Finally, students will complete an ecological footprint calculator to gain awareness of the environmental impact of their lifestyle, and choose one way that they could reduce this impact.

Through these lessons, students will engage with hands-on, multi-disciplinary explorations that will aid them in gaining insight into the consequences of our collective choices and our growing population. They will encounter the tradeoffs associated with modern living and begin to think about how they, as individuals, can contribute positively to their environment.