

Land Use Totals



Essential Question: If everyone on the planet lived the way I do, how much land area would humans need?

Overview

In the last activity, you considered how much space is required in a school for a growing population. But a school is only one of the things that a community needs. The next few lessons focus on the other resources required when the population grows in communities like the one in Florida that needs a new school. We will also look at how population growth in specific communities adds up to a growing global population.

When a population grows, they do not just need new schools. They also need homes, farms to grow food, roads, restaurants, shopping areas, and other services that take up land area. We know there is a limited amount of land available on the planet. So, it is important to measure the resources we use based on the amount of space they take up. In this lesson, we look at the land required to support one person. You. In the next lesson, we will look at the land required to support population growth at the level of countries and the entire world.

Materials

For each group:

- calculator

Procedure

The chart on the next page contains estimates of how much land is required to produce the materials to support common activities. For example, the land required to support diet is the land required to produce the food. The land required for home construction includes the land required to grow the lumber. The estimates are based on averages for Americans.

1. From the chart, select the categories (food, living space, roads, landfills, mining for consumable goods, clothing, etc) that apply to you.
2. Add up the land area that is necessary to support your lifestyle. You can subtract the numbers if you only use part of that resource. For example, if you and your brother share a car, you can cut the numbers for fuel consumption in half.