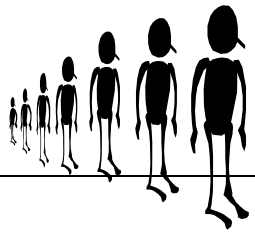
The Human Population Game



This game is a simple but effective activity in which students strive to create a sustainable civilization. In the process, you can learn how birth and mortality rates affect population growth and how population affects the availability of resources.

The future of civilization and the biosphere depend partly on what is accomplished in the classroom today. Population, resource use, and population's impact on the environment are often studied separately and passively. In life, however, these variables are intertwined, so it's useful for learners to see how these variables are connected.

"The Human Population Game" was created to promote thinking about the choices humanity makes, whether by intention or neglect. The game asks you to think about how much population, consumption of resources, and impact on the environment should be allowed. When you make personally meaningful choices and see the consequences, much can be learned.

Population and Resources

The Human Population Game is a simple but accurate mathematical exercise, exploring population and resources. Players choose birth rates ranging from 0.5 to 3 children per fertile person (1 to 6 children per fertile couple). A roll of the die determines child mortality rates in a range from 0.0 to 0.2, corresponding to real life mortality rates of 0, 100, or 200 deaths per 1000 live births. The adult mortality rates range from 0.2 to 0.4, corresponding to 200, 300, and 400 deaths per 1000 population over the course of a generation. "Resources" represent availability of land, food, water, energy, minerals, and so on. (Advanced players are challenged to create a more complex version of the game, for example, differentiating between types of renewable and nonrenewable resources, levels of consumption, and kinds of technology.)

How to Play

The game requires no equipment other than pencil or paper and one die and is non-competitive. The game can be played alone, or by many players, and can be played for as short or long a period as desired. As play proceeds, check your own understanding of the concepts involved and remember that you are modeling human civilization. Think about the strategies you employ and how well the strategies sustain the civilization.

- What advice would you give humankind?
- What is the optimal level of population compared to available resources?
- Does more population mean more happiness?
- Should population be as large as possible, as small as possible, or in some specific balance with resources?
- What birth rate achieves zero population growth?
- What portion of nature should be set aside, in perpetuity, and never exploited?"
- Draw graphs of the variables over time.
- Write a short narrative-a demographic history of the civilizations you modeled.