Population Throughout History

In just the last 40 years, the number of people living on Earth has doubled – from three billion to over six billion. Nothing like this has ever happened before

The Great Wall of China was built during the Qing Dynasty around 220 BCE to keep foreign invaders from capturing food and other resources. Photo by ClickArt.

Back in the Stone Age, there were maybe five million people on the entire planet. They lived as hunter-gatherers in small tribes. They followed the migrations of animals and the seasonal growth of plants. The population didn't grow very fast. Almost as many people died as were born, and most people probably didn't live past their mid-20's.

About 10,000 years ago, that started to change. The amount of food people could find in nature wasn't enough to feed the growing population. So people learned to grow plants and raise animals themselves.

Farming can produce up to 100 times as much food as will grow wild on the same amount of land. So when people learned to raise animals and crops, they produced a lot more food.

When there's plenty of food available, population tends to grow. As people turned to agriculture, population started to grow a lot faster.

Shifting from hunting and gathering to farming caused cultural changes, too. People learned how to build walls and large buildings to store and protect their extra food. After a while, people began to live inside those walled settlements.

With extra food, not everyone was needed to work the fields, and some people became soldiers, artists, priests, and engineers.

As societies became more complex, writing, counting, and measuring developed. People could now keep track of their extra food and money. As economies grew and more food was produced, population grew even faster.

By the birth of Jesus Christ around 1 CE, there were around 250 million people on the entire earth – not quite as many as live just in the United States today.

(Historians today tend to use **BCE** - Before Common Era - and **CE** - Common Era, rather than **BC** - Before Christ - and **AD** - Anno Domini, Latin for "in the year of the Lord." So 3000 BCE is the same as 3000 BC, and 100 CE is the same as 100 AD.)

As towns and cities grew, more food was required to feed the expanding population. When more food was available, the population grew even more. Then they needed more food, which led to more people. And so on….

Impacts Of Growth

This upward spiral of population had both good and bad results.

On the positive side, larger populations led to advances in science and technology. Cities grew with roads, water systems, and monuments. Architecture, mathematics, literature, and art advanced.

But larger populations also caused environmental destruction, forced migrations and conflict. Typically, it went like this: Civilizations started in areas with lots of resources, like fertile soil, fresh water, and forests to provide wood for building. Using those resources led to prosperity, and prosperity led to growing populations. But as more people needed food, clothing, employment, and shelter, they used up the resources they depended on to create that prosperity. Forests were cut down, soils were eroded, and clean water became scarce. That often resulted in economic collapse, hunger, war, and mass migrations of people looking for new places to live.

Sometimes civilizations that outgrew their local resources would conquer weaker neighbors for their farmland and other resources.

Population through the centuries: How we got to six billion

Through most of history, the number of deaths has been nearly the same as the number of births.

The result? Slow population growth.

Then, in the last thousand years, the curve starts to move upward.

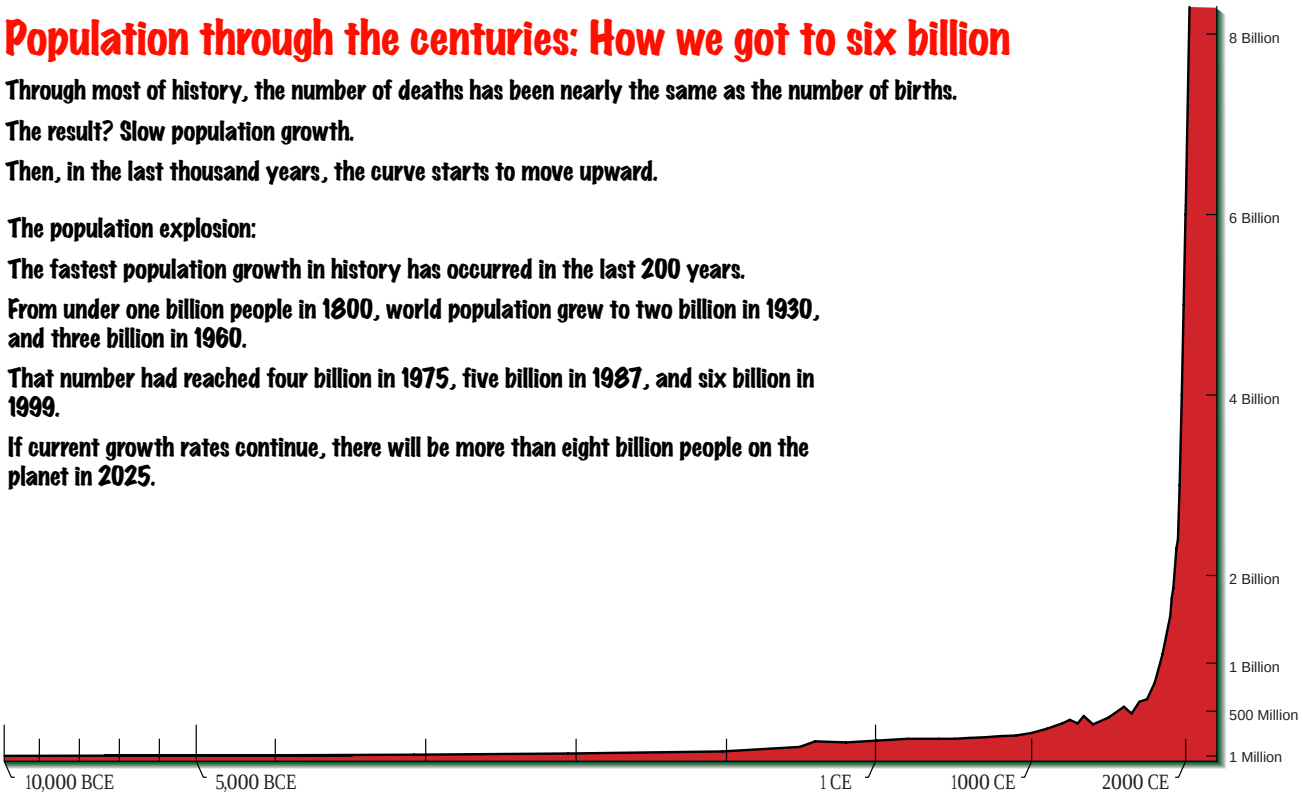
The population explosion:

The fastest population growth in history has occurred in the last 200 years.

From under one billion people in 1800, world population grew to two billion in 1930, and three billion in 1960.

That number had reached four billion in 1975, five billion in 1987, and six billion in 1999.

If current growth rates continue, there will be more than eight billion people on the planet in 2025.



Larger populations were an advantage to many civilizations. More people meant larger armies and labor for building projects such as canals and monuments like the pyramids at Giza. Photo by John Goekler.

Sometimes civilizations that were running out of resources were conquered by stronger civilizations nearby.

And sometimes, civilizations simply collapsed when resources became too scarce, and the people moved away.

World population didn't always increase at a steady pace. Disease, war, and hunger killed many people throughout history. As people began to live closely together in cities, diseases such as measles, smallpox, and bubonic plague broke out and millions of people died.

For example, it's estimated that the population of Europe was cut in half by a plague in the 6th century. When plague (the Black Death) returned in the 14th century, one-third of Europe's people died.

Famines also killed many people. When bad weather or crop diseases cut food production, many people starved.

But despite these setbacks, overall population continued to grow. By the time Columbus sailed to America, world population had reached 500 million.

Europe Takes Over

A lot of countries that outgrew their own resources invaded neighboring countries to get more. But by the Middle Ages, some European cultures began to conquer *distant* lands to get more resources.

By the 1500's, European countries had captured colonies in Asia, Africa and the Americas. This brought a flood of new resources to the continent. Gold, silver, and spices from the colonies made some nations rich. Some of the plants the colonists brought back to Europe, like the potato and maize, increased food supplies.

That increase in food and wealth triggered another burst of population growth. In the 250 years between 1500 and 1750, Europe's population grew as much as it had in the previous 1500 years.

Population: Advances & Setbacks Throughout History

10,000 BCE: The Age of Agriculture begins - world population 5 to 10 million

3000 BCE: The first Dynasty in Egypt - world population 100 million

1 CE: The height of the Roman Empire and the birth of Jesus Christ - world population 250 million

594: Plague peaks in Europe, killing half the inhabitants - world population 300 million

793: The Vikings put to sea, searching for more farmland - world population 350 million

1066: William of Normandy conquers England - world population 400 million

1237: Mongols conquer Russia - world population 450 million

1347: The Black Death kills one-third of the residents of Europe - world population 450 million

1492: Columbus "discovers" the Americas - world population 500 million

1620: Pilgrims land in North America - world population 600 million

1756: Britain declares war on France over settlement rights to Ohio Valley and Midwest - world population 750 million

1821: Simón Bolívar defeats Spanish army to secure independence for Venezuela - world population one billion

1865: U.S. Civil War ends - world population 1.3 billion

1929: Graf Zeppelin airship flies around the world in 20 days, 4 hours - world population 2 billion

1945: World War II ends, leaving over 60 million dead - world population 2.4 billion

1959: Widespread famine kills 25-30 million in China - world population 3 billion

1999: India's population reaches 1 billion; "Baby Six Billion" born in Bosnia - world population 6 billion

2000: U.S. population exceeds 280 million, growing faster than U.S. Census Bureau's "high" projection - world population 6.1 billion

2000: AIDS epidemic devastates southern and central Africa, accelerates in Asia - world population 6.1 billion

2001: Asia's population is on track to double in 48 years; followed by Latin America (38 years) and Africa (29 years).

The colonies brought new resources to Europe, but they also acted as a relief valve for population pressures. As Europe got more and more crowded and farmland became scarce, people moved to the colonies in North America, Africa, Asia and other places.

Times in European colonies were often violent. Native cultures across North and South America and Africa were pushed out of their ancient homes by the newcomers, and were often slaughtered in the process. Diseases introduced by Europeans also killed millions of native people.

The Industrial Revolution

Resources from the colonies and technological advances of the Industrial Revolution created an economic boom. Steam-powered trains and ships allowed goods and raw materials to be transported farther and more quickly than ever before. New machines allowed fewer workers to produce more food from the same amount of land.

Again, prosperity led to increased population. By 1830, there were more than one billion people on the earth. Advances in science and medicine meant people began to live longer. The discovery that germs cause disease improved medicine and sanitation as well. Better water and sewer systems cut back the death toll from communicable diseases. The invention of antibiotics and vaccines controlled many diseases that had been fatal in the past.

The Modern Era

After World War II, relief workers took these technologies to poorer areas of the world. Because of medicine, sanitation, and health care, deaths from hunger and disease fell and population growth rates

When there were too many people for their resource base, some civilizations - like the Anasazi, who built the cliff dwellings at Mesa Verde in the southwestern United States - abandoned their cities and dispersed. Photo by John Goekler.

The ruins of the Incan city of Macchu Pichu in Peru: European invaders used guns and horses to conquer native civilizations in the Americas. But it was the diseases they introduced, such as measles and smallpox, that killed tens of millions. Photo by John Goekler.

shot up. It took all of human history for the global population to reach one billion, but barely another century to reach two billion. The third billion was added in just 30 years and the next billion in only 15 years. Now, we're adding another billion people every 12 to 13 years. Nearly all this growth will occur in developing countries in Africa, Asia, and Latin America.

The choices we make in the next few decades will determine our future.

No one knows for sure what will happen if world population grows like it has in the recent past. But history gives us some clues. When population grows too fast or uses too many resources, the environment is damaged. When the environment can't support as many people, hunger, war, or disease may result. People may be displaced, and civilizations may even collapse. If we don't want to see those results, we need to figure how many people the earth can support.

And that's what the next chapter is about.

Let's get technical!

How many is a billion, anyway?

A billion is a pretty big number - 1,000 millions, or 1,000,000,000. But how many is that really?

Well, consider this. If you set off to count a billion people and counted ten every second, it would take you three years and two months. If you set off to count all the people in the world at that rate, it would take 19 years and four months to finish.

Except you wouldn't be done. By then, world population would have increased by another billion and a half people.