

## 20 IMPORTANT THINGS TO KNOW ABOUT *POPULATION*

1. Present world population = 6.6 billion United States = 301 million WA = 6.4 million
2. The three most populated countries on earth: China (1.3 billion), India (1.2 billion), and the United States of America (301 million)
3. **Growth Rate** of a Population: births plus immigrants minus deaths plus emigrants divided by the total population.
4. **Doubling Time** of a population: Divide the growth rate into .7 or 70% depending on whether or not the growth rate is in the form of a decimal or percentage.
5. **Fertility Rate**: the number of births per woman (world average 3.0; developed countries 1.6; developing countries 3.4) Needed for zero population growth is 2.1
6. **Age Structure Diagrams**: High growth rate = a pyramid with a widely spreading bottom; Slow growth rate = a tower with a slightly wider bottom than top; No growth = a tower with the top and bottom the same width; Negative growth rate = a tower where the top is wider than the bottom
7. **R-strategists** produce many offspring with little or no parental care whereas **K-strategists** produce just a few offspring with lots of parental care.
8. Highest fertility rates are in Africa and the Middle East; lowest fertility rates are in Europe and North America.
9. Population Density: number of individuals per unit of area
10. Population Dispersion can take three forms: clumped (clusters or groups), uniform (spread out evenly), or random (no discernable pattern of distribution)
11. **Limiting Factors** control the growth of a population: density-dependent limiting factors include factors pertinent to the population itself such as competition for food whereas density-independent factors are things that occur outside the population such as drought.
12. 20% of the world's population (1.2 billion ) live in developed countries whereas 80% (4.8 billion) live in developing countries.
13. **Demographic transitions** occur in four stages: **pre-industrial** stage where both the birth rate and death rate are high; then the **transitional** stage where the death rate drops but the birth rate remains high; then the **industrial** stage where both the birth and death rates fall, and finally the **post-industrial** stage where the birth rate falls very low and the population, as a whole, may go into a decline.
14. **Biotic potential**: the maximum numbers a population could reach if there were no limiting factors and unlimited resources.
15. **Environmental resistance**: all factors acting jointly to limit the growth of a population
16. **Population cycles**: stable (small fluctuations); cyclic (large, regular fluctuations); and irruptive (erratic)
17. **Growth rates**: world =1.4% U.S.A. = 1.1%
18. **Survivorship curves**: late loss (most have a long life); early loss (most die young); and constant loss (steady loss over time)
19. **Carrying capacity**: upper population limit in an ecosystem
20. **Exponential growth**: a steep J-curve of an ever increasing rate of growth (never sustainable in the long run)

