

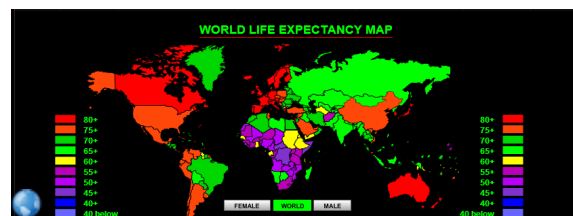
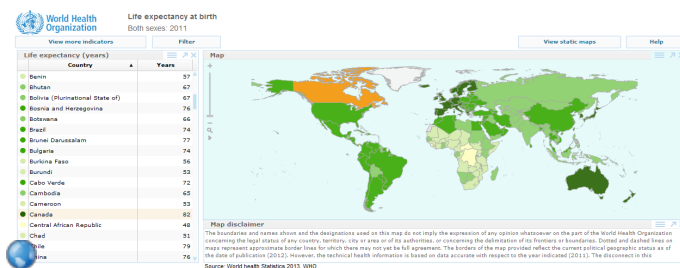
The screenshot shows the 'Poodwaddle World Clock' application. At the top left is a large analog clock with a circular calendar around it. Below it, the current date and time are shown: 'Tuesday Feb 18 11:43:44 AM'. A navigation menu on the left lists categories: Intro, Population, Mortality, Illness, Environment, Energy, Food, Economy, Crime, and a smiley face with the text ':) Smile It ain't all bad news'. The main display area shows 'World Population 7,214,370,187' with 'Births 18,751,865' and 'Deaths 7,852,265'. Below this is a calendar for 'February 2014' with the 18th highlighted. At the bottom, four smaller analog clocks show the time for 'New York' (10:37:52 AM), 'London' (3:37:52 PM), 'Moscow' (7:37:52 PM), and 'Tokyo' (12:37:52 AM).

Forecasting Population Size

- Age structure
 - > Distribution of various age groups
 - > Population pyramids can be made to show trends
 - > High growth rates have young populations
- Survivorship
 - > Determine how much of a population survives to a given age
- Fertility Rates
 - > Number of babies born each year per 1000 women
- Migration
 - > Movement of individuals in and out of a population
 - Immigration (into a country)
 - Emigration (out of a country)

Declining Death Rates

- Access to food, cleaner water, better medicine, safe sewage disposal have contributed to people living longer
- Global life expectancy has increased to 70 years
- In developed countries, it is upwards of 80 years



The Demographic Transition

- A model that describes how changes can occur to a country's population growth rate
- Stage 1
 - > Preindustrial condition (birth and death rate are high); population rate is stable
- Stage 2
 - > Population explosion occurs
- Stage 3
 - > Birth rate decreases (equal to death rate), population stabilizes; population much larger than before
- Stage 4
 - > Birth rate drops, population declines

Women and Fertility

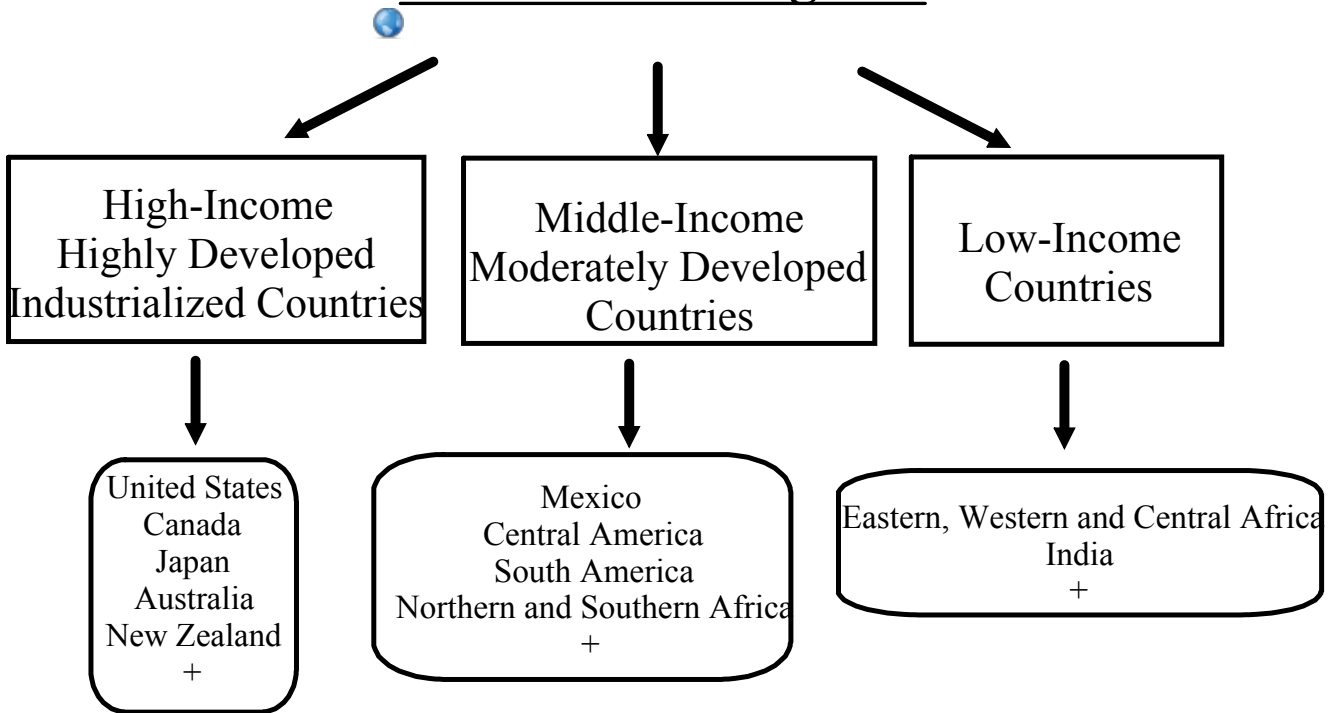
- Increased education and economic independence has contributed to birth decline
- Countries that want to reduce their birth rate typically put incentives in place to increase education of women

World Bank

- The World Bank is a vital source of financial and technical assistance to developing countries around the world.
- Its mission is to fight poverty with passion and professionalism for lasting results and to help people help themselves and their environment by providing resources, sharing knowledge, building capacity and forging partnerships in the public and private sectors.

- The World Bank divides the countries of the world into three main economic categories according to **gross national income (GNI) per capita** (per person).

Economic Categories



GNI per capita is the dollar value of a country's final income in a year, divided by its population. It reflects the **average income of a country's citizens**

Highly Developed Countries

20% of world's population
80% of world's wealth

Developing Countries

80% of world's population
20% of world's wealth

Environmental Impact \propto $\frac{\text{Population Size} \times \text{Affluence of Lifestyle}}{\text{Stewardship}}$

proportional to

Social Modernization

- **Social modernization** is a process of sustainable development that leads developing countries through demographic transitions.
- A **demographic transition** is a process of changing a population from a condition of high birthrate and a high death rate to a condition of low birthrate and low death rate.
 1. education - especially improving literacy and educating girls and women equally with boys and men
 2. improving health - especially lowering infant mortality
 3. making family planning accessible
 4. enhancing income through employment opportunities
 5. improving resource management

EVOLUTION & ADAPTION?



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Attachments

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