



Science Week 2010 Project

What on Earth is going on!

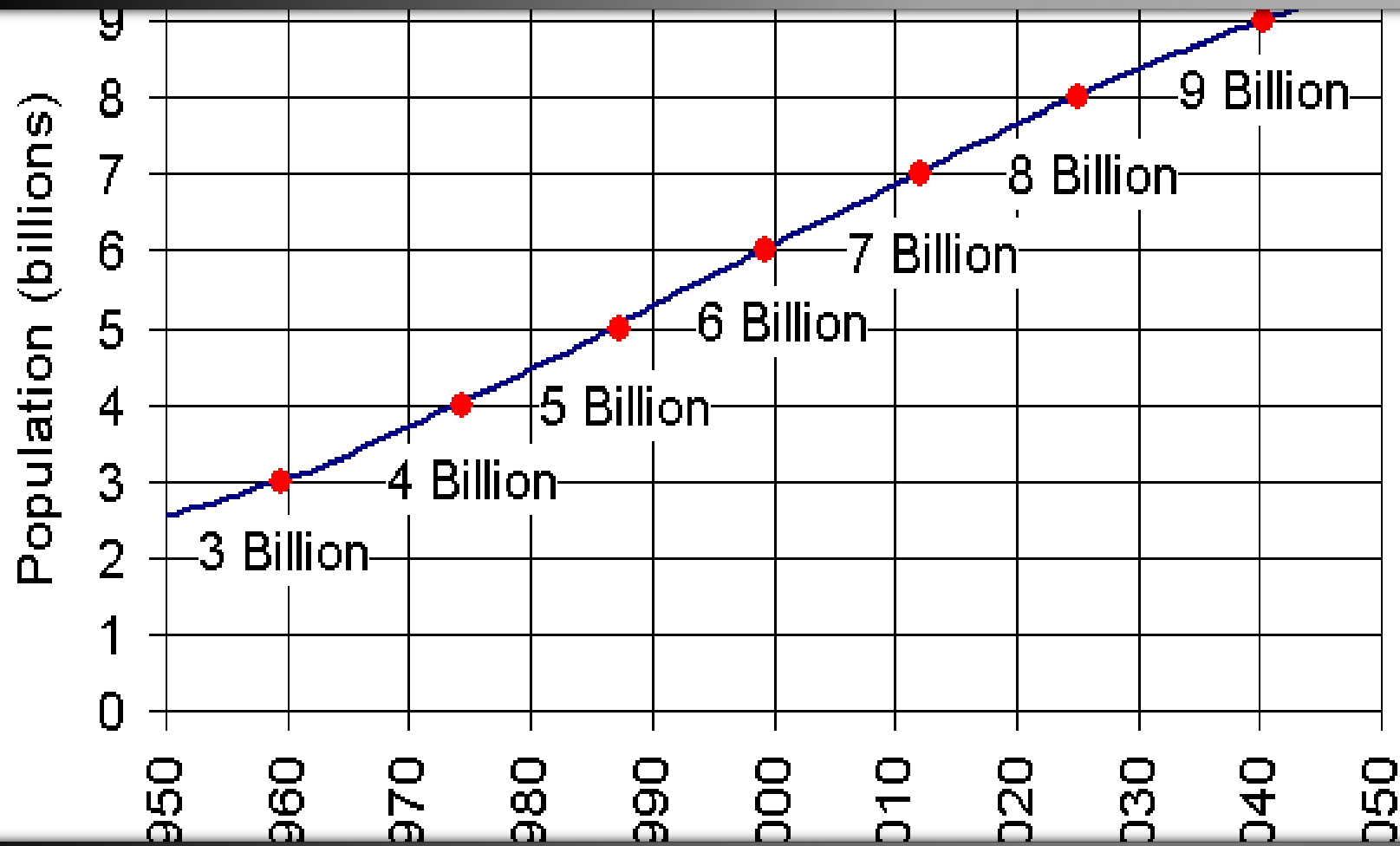
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Population Growth

Over the last 60 years the population has grown dramatically due to the strong birth rate and the decreasing death rate as medical science has improved.

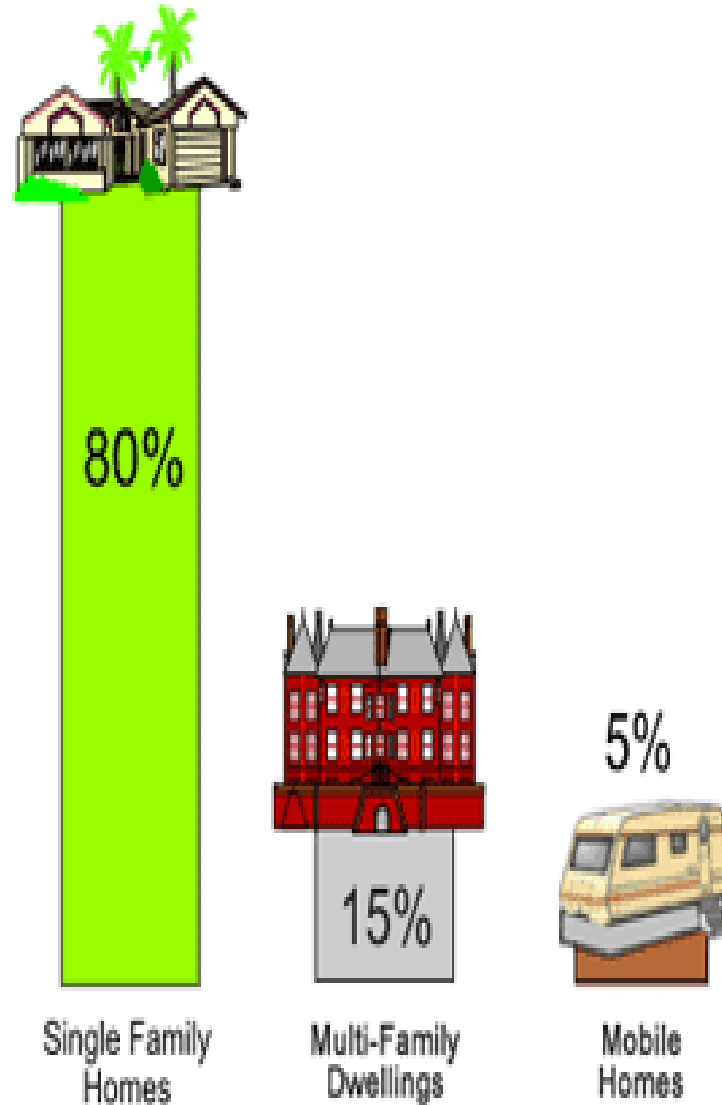
This means more people each using more fuel and energy. If we carry on, predictions say that by 2040 there will be over 9 Billion people in the world!



The graph shows the growth in population

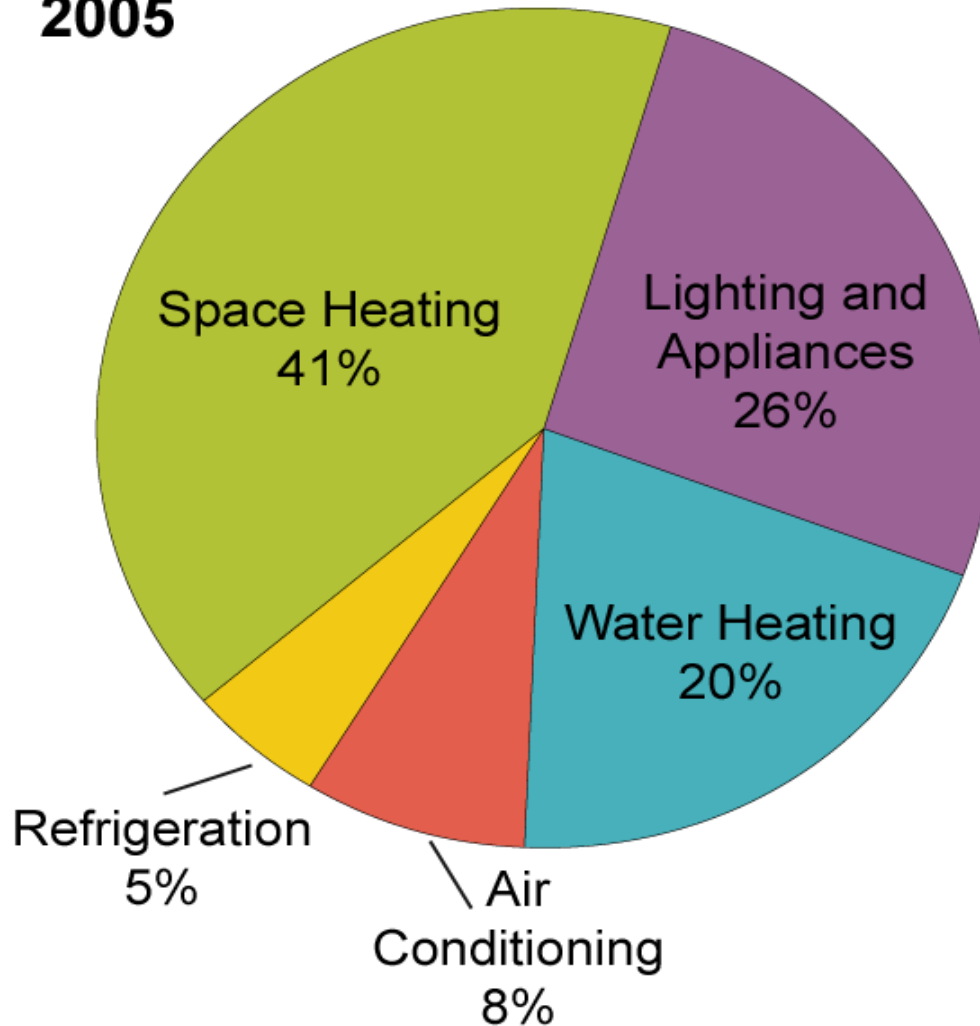
World Energy Growth

As the population grows people need more energy and they look towards the cheapest source. Most energy is used in the home. The picture shows the usage in different types of home in the USA.





How Energy is Used in Homes, 2005



Source: Energy Information Administration, 2005
Residential Energy Consumption Survey.



Figure 7. World Marketed Energy Consumption, 1980-2030



Sources: **History:** Energy Information Administration (EIA), *International Energy Annual 2003* (May-July 2005), web site www.eia.doe.gov/iea/. **Projections:** EIA, *System for the Analysis of Global Energy Markets* (2006).



Fossil fuels

- ▶ We have a serious problem!
- ▶ It is only possible to mitigate global warming if the world-wide consumption of fossil fuels can be drastically reduced in the next 10 to 15 years.
- ▶ A wise man once man said “The more we have, the more we want”.



Can fossil fuels run out?

- ▶ If we carry on this way we are going to run out of fuel. This will happen in approximately 80 years time.

**We have to change
our ways or face
the Problem !!!!!!!**



Types of non fossil fuels

- ▶ Bio fuel
 - ▶ Solar
 - ▶ Wind
 - ▶ Geothermal
 - ▶ Hydropower
- ▶ All of these should help save the planet so I ask you, which one of these would be the most useful to us?



What is a Bio fuel

come and discover Pros and Cons
Part 2





A Bio fuel is a fuel made from plant matter rather than fossil fuels. Ethanol and biodiesel are examples of bio fuel.

All bio fuels are a carbon neutral fuels made from plants.



The Pros of bio fuels



- ▶ All types of bio fuel are carbon neutral.
- ▶ Bio fuels are much more environmentally-friendly than any other known form of fuels.
- ▶ Bio fuels are very cheap to afford.
- ▶ Bio fuels are a perfect replacement for oil products like petrol and diesel.
- ▶ Bio fuels can help to save some more money apart from the amount saved on its cost.
- ▶ Bio fuels can also help the economy (especially for countries who aren't oil-rich), as it reduces their dependency on imported, foreign oils.



The Cons of bio fuels



- ▶ The land will be used to produce bio fuels rather than crops.
- ▶ The farmers may start to grow crops meant for bio fuel production rather than the ones that can be used as food.
- ▶ This could raise food prices and cause starvation.
- ▶ The process of bio fuel production has been termed “non-sustainable”.



What is Solar Power

Part 3



What is Solar Power

- ▶ Solar Power is the conversion of the energy of sunlight. This can be direct to electricity as with photovoltaics (PV), or indirect to heat as with concentrating solar power(CSP), where the sun's energy is focused to boil water.
- ▶ Solar power has the potential to provide over 1,000 times total world energy consumption in 2008, though it provided only 0.02% of the total that year.



What are the Pros of Solar Power?

- ▶ You are able to produce solar power for your home through increasingly easier and cheaper methods related to this natural energy source.
- ▶ One of the main advantages of a solar power system for your home is the lack of pollution given off by solar panels when generating electricity.



What are the Cons of Solar Power?

- ▶ The major disadvantage is the initial cost.
- ▶ Large areas of solar panels are needed to catch the sun's energy.
- ▶ In some countries like the UK we don't get much sunlight in winter when we most need energy!



The Future

- ▶ We do not know the answers but we hope we are starting to begin to understand the problem