**Science and Technology**

**Mankind has come a long way during its existence.**

**Pre-historic times:**

**In early human history, the only power available was MUSCLE POWER. People hunted for food, and made tools from stones and simple clothes to protect them from the cold. The only tool they had was *the human hand*.**

**Step by step, people started changing the world, trying to make their lives easier and comfortable.**

* ***The invention of the wheel* (about 300 B.C.) was followed by**
* **the *watermill* and *windmill* (12th century A.D.).**

**Important discoveries, exploration and inventions came in**

**the 15th and 16th centuries:**

* **the discoveries and exploration of new continents by Europeans**
* **the invention of the printing press**
* **development in the true sciences like astronomy, philosophy, medicine and biology**

**in the 17th century:**

* **the** **first public autopsy was demonstrated in the Czech Lands by Jan Jesenius, 1620.**

**in the second half of 18th and 19th - THE INDUSTRIAL REVOLUTION:**

* **The steam engine: Important discoveries in the 18th century appeared in the form of the first STEAM ENGINE developed and improved by James Watt.**
* **The electrical motor:Michael Faraday’s demonstration of the dynamo in 1831 put the basis of electrical engineering.**
* **The petrol-driven car: Gottlieb Daimler and Karl Benz created it in 1885. It made transport faster, more comfortable and shortened travel time.**
* **Electricity: on a commercial scale was available from the early 1880s and was used:**
* **for electric motors to power all kinds of machinery,**
* **for lighting,**
* **for heating.**
* **Telephone: patented by Alexander Graham Bell, Scottish inventor, in 1876.**

**Thanks to these inventions, small manufacturing businesses changed into large factories and hand-made goods were replaced by machine-made products.**

**MATERIALS**

**Traditional materials (wood, bones, horns, shell, stone, silver, gold, copper, bronze, iron) were still used but as technologies improved new and cheaper materials were introduced, such as rubber, glass, leather, paper, bricks, porcelain, later, after mid-1880s, new synthetic materials appeared: dyes, plastic and celluloid, synthetic fibres.**

* **The first attempt at automation: the moving assembly line appeared in 1870.**

**At present, electronic computers control fully automated plants (ROBOTICS).**

**in the 20th century:**

**The rapid development of science and technology: plenty of inventions and discoveries have influenced and changed human life, such as aircraft, radio, television, telephone, X-ray machines, radar, air-cushion vehicles, electric velding, photography, birth-control methods, test-tube babies, penicillin, vitamin C.**

**Undoubtedly, the transistor, integrated circuit (microchip) and laser were the three inventions that have had the greatest impact on modern life.**

**Electronic and microelectronic industries, space research and genetic engineering probably represent the branches where progress has continued most rapidly.**

**In the 3rd millennium:**

**We have witnessed a rapid development of new technologies.**

* **In communication:**
* **phones, satellites or computers have a deep influence on our lives:**
* **online discussions**
* **teleconferences**
* **online shopping from home by mail order**
* **financial transactions**
* **In medicine:**
* **the laser used in surgery or microsurgery**
* **cloning**

**New Technologies are everywhere, even surrounding us at home. Our households are equipped with modern appliances which have made our lives much easier and more comfortable.**

**What life will be like for our great grandchildren and what wonders will science and technology come up with for them?**