# Science and technology

One of human natural character is laziness. This character is main thing, which motivate people to invent new things.

## First tools which made human life more easy

In the past, people tried to multiple their **muscle power**, which was the only kind of power they had. First tools, which made human life much easier, are **wedge** (klín), **lever** (páka) or **pulley** (kladka). Big invention was also the **wheel**. First time, it was used probably sometimes around 300 B.C. Wheel is very helpful for moving weighty items because it minimalist **friction** (tření), which would make that much more difficult without wheel. Wheel was also main component for watermills or windmills which was invented lately in 12th century.

## Steam engine

Much bigger invention made **James** **Watt**. He developed and then improved steam engine in 18th century. It changed whole industry and agrarian (zemědělství) economy. Steam engine evoked **industrial** **revolution**. Human power started to be useless and too expensive. First time, when companies started to use steam engines, people were destroying machines, to made machines unreliable and force companies to use more human power again. The steam engine was originally developed for **draining** **mines** but by the time, it was used everywhere, where it was possible. Steam engine also made big evolution in **transportation**, when it was used in trains.

## Electricity

First demonstration of electricity made **Michael** **Faraday** with his dynamo in 1831. The electricity was massively used little later in 1880. It was used for powering engines and also as light. Electricity was transformed into light in **carbon** **arc** **lamps** (oblouková) which was developed by František Křižík and in **light** **bulb** which was developed by Thomas Edison. Both this invention was developed in 1880.

Biggest advantages of electric energy are that it is **easily** **transformable** into other kinds of energies. For example warm (radiators), mechanic (motors), light (bulbs or fluorescent tubes). Other big advantage is, that is quite **easy** **to** **deliver** it everywhere we want, because it radiates thought wires.

## Combustion engine

Another big invention was **internal-combustion engine** which was invented by German scientist Nicholas Otto in 1876. Thanks to this invention, few years later was made first **petrol-powered motorcar**. Car was biggest invention in transportation, because it made it much faster and also comfortable. When people saw car first time, they called it **devils** **machine**, because they can’t believe, that something can move by itself without horse.

## Materials

The earliest materials used by human were **wood**, **stone**, bone, horn and shell. Metals were very hard to obtain and they also have no tools to work up them. Lately, people were able to use **bronze** and **iron** but it was very difficult to do that. Even at 15th century, people were able to work up iron more effectively because of **blast-furnace**. In the present, we are able to work up perhaps every material on the Earth. We are also able to made high quality new materials, by combination of some others. One of these is for example **steel**. In our age, there is also big trending with synthetics materials such us **plastic**.

## Automation

There is also big trend to automat everything possible. With invention called transistor, it is easier now because we are able to put very much of them into little integrated chip and even with small chip, we get big calculation output. Previously, all computers were realized using electron tubes (elektronka), which required much more space.

**Examples of automations** we can see everywhere in our ordinary life. For example we in **eating** **room**, we have automatic machine, which check, if we paid for lunch and there is also automatic machine, where we can choose between two meals, which one we want. Another example is in transportation. There is automatic **selling machine for tickets** and also automatic machines in the buses which print time-step on our ticket.

## Space flights

Space flights are still quite new for us. Even few special trained cosmonauts are allowed to fly to space. First man, who was out of the spacecraft, was Russian **Yuri Gagarin**. First spacecraft, which reach Moon, was **Apollo 11** and first people whose were walking on the Moon were **Neil Armstrong** and **Edwin Aldrin**. It was on 20th July 1969.

## Other shits

In last years, people starting to use **nuclear** **energy**. There were also many protests about it. For example Austria people protested against our nuclear power plant Temelín. But I think that it is much better for our environment then creating electricity from coal for example.

There is also tending to use more **alternative** **sources** **of** **energy**. Scientists are trying to get more effectively energy from alternative sources of energy. It is very important, because we have to protect our environment or else we will have no place to live soon.