

## Technology

### The history of technology

At the beginning of human history the only power was the **muscle** power and the only technology used by people were primitive **tools**. Later, the wheel was invented. Watermills and windmills were the first sources of energy.

After the invention of **steam engine** in the 18th century the quick **development** of technology and economy started in Britain. This sudden technological development is called the Industrial Revolution. The most important technological inventions of the 19th century were electricity and petrol-driven cars. In the second half of 19th and during 20th centuries a lot of discoveries and inventions appeared that changed human life: radio, television, telephone, photography, aircraft, spacecraft, nuclear energy, computers...

### Modern discoveries and inventions

Electronics and microelectronics, space research and genetic engineering are the most progressive **branches** of present science and technology. They are changing very quickly and have the greatest **impact** on modern life and the future of mankind.

Modern science and technology can **solve** various problems, e.g.:

- **storage** and **disposal** of **nuclear waste**
- environmental protection
- discovery of medicine against **incurable** diseases (cancer, AIDS) and viruses
- discovery of alternative sources of energy etc.

### Current and future energy sources

Nowadays the most widespread sources of energy are: nuclear energy, coal, oil, gas and water (water powerplants). In the future people should use more alternative sources such as solar, wind, geothermal and **tidal** energies.

### Czech and world-known inventors and discoverers

Sir Isaac Newton – an English mathematician, discovered the law of gravitation

James Watt – a Scottish engineer, invented the steam engine

Thomas Alva Edison – an American inventor, invented over 1000 patents, e.g. the electric bulb

Alfred Nobel – Swedish physicist, invented dynamit

Albert Einstein – an American physicist (born in Germany, in 1910s lived and worked in Prague), developed the theory of relativity

Marie Curie – a Polish physicist, discovered radioactivity

František Křižík – a Czech engineer, invented carbon arc lamp

Jan Janský – a Czech doctor, discovered four blood groups

Otto Wichterle – Czech scientist, invented contact lens

Jaroslav Heyrovský – the Nobel Prize in Chemistry winner (1959)

### Mobile phones

A mobile phone is definitely a great invention. We can't imagine living without our mobile phone but it has both advantages and disadvantages.

The main advantage is connecting people. You can call your friends or relatives at any time and from any place. One phone call can save human lives. But mobile phones can do much more. Smartphones can completely **replace** computers, cameras, GPS navigators. If you have nothing to do, you can play games or just update your status on a social network.

Nothing is perfect, and the same applies to mobile phones. Telephone bills are sometimes too high. People can easily become addicted to mobiles. They keep texting or chatting on social media all the time, even while in a restaurant with their friends. Mobile phones can't replace face to face communication.

### My mobile phone details

- brand (iPhone, Samsung, Huawei,...)
- color, front(selfie)/back camera
- operating system (iOS, Android,...)
- provider (O2, Vodafone,...)
- prepaid credit (dobíjení kreditu) or postpaid tariff (paušál)
- monthly payments and services (amount of data in GB, unlimited calls and SMS, limited free minutes)
- favourite applications (Facebook, WhatsApp, Instagram, Skype, Twitter, FB Messenger, YouTube, Google Maps, Snapchat, Google Translate, Weather, Games, ...)

### Technology - questions

- Do you like technical subjects? Why? / Why not?
  - Do you buy gadgets? Tell me about it. / Why not?
  - Do you think traditional schools could be replaced by online studies?
  - Are you going to use technology in your future job? Tell me about it. / Why not?
  - When was the last time you learnt to operate a new machine? Tell me about it.
  - If you had enough money, what gadget / piece of technology / machine would you buy?
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- What is your favourite electronic device?
  - Why do you use it?
  - What is it good for?
  - Could you be without it for some time? How long? Tell me about it.
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- How would you characterize the age in which you live?
  - Can you name any inventions that changed people's lives? How did they change them?
  - Do you know any famous inventors? What did they invent?
  - Is there any type of modern technology that you can't imagine living without?
  - Can you imagine living without the civilization (e.g. on a desert island)? What would you miss the most?
  - What three things would you take with you if you were to spend two weeks alone on a desert island?
  - Do you understand the machines you use every day (TV, radio, car etc.)? Can you repair them if you need to?
  - Are there any negative effects of technological development?
  - Do you know any famous scientists?

# Media

## Introduction

Nowadays there are 4 main mass media: press (newspapers, magazines), radio, television and the Internet. Media are very important for us. They give us information and help us have good knowledge of things. If you are well informed, you are able to make good decisions.

Media **focus** our attention on various problems and form **public opinion**.

Electronic media (especially TV and the Internet) make the world much smaller. When you turn on the TV or a computer you can see the whole world like it was in the next village. Such a world is also called “the global village”.

There are not only good media effects. Firstly, media highly **influence** us, but not all news is reliable and objective and we have to be careful about it and should select it. Secondly, there is the danger for children and teenagers of being influenced in a bad way (for example lots of pornography on the Internet, lots of violence on TV). Thirdly – if you are a famous person, media can easily destroy your privacy.

## Newspapers

Newspapers are the oldest kind of mass media. Many newspapers have their electronic editions now and you can read them online.

There are 2 main kinds of newspaper:

### 1. quality papers (broadsheets)

- Large pages, not too many photos, more difficult language, they bring more details and facts, longer articles about serious topics (politics, culture, business...)
- read by businessmen, people with higher education, people who don't like **gossip**
- examples: The Times, The Independent, The Guardian (the UK), The New York Times, The Washington Post (the US), Hospodářské noviny

### 2. tabloid

- smaller pages, dramatic headlines, plenty of photos, short articles, simple language, gossip
- more popular than quality papers, read by all classes of society
- examples: The Sun, The Daily Mirror, The Daily Express (the UK), Blesk

## Radio

Radio (**wireless transmission** of signals) is the second oldest kind of media. It spread widely in 1920s.

Advantages:

- you can listen to it nearly everywhere (e.g. in a car, at the hairdresser's, at fitness,...)
- as it is mostly used for listening to music it is very good for relaxing
- it can bring the news quicker than TV: people are informed about weather forecast, traffic jams etc.

Disadvantages:

- it is very often used as a background sound in public space (restaurants, shopping centres) which creates an uncomfortable “audio smog”

### Television

TV **broadcasting** started to be popular in 1950s. TV can influence mostly older people. Thanks to satellites and cable TV we can choose from numerous channels (news, movies and entertainment, children's programmes, sport, documentaries, music). Public TV in the CR (Česká televize) is financed by licence fees as well as by **commercials**. Commercial TV channels (Nova, Prima,...) are financed by commercials only. To earn more money, they broadcast commercials very often, which is sometimes annoying for **viewers**.

### The internet

It was developed in 1970s in the US and **spread widely** around the world in 1990s. The internet (= *international network*) is a revolution in communication, "a network of networks", a **worldwide network** of connected computer networks, which brings huge number of information and also services such as e-mail or online chat. E-mail (in full "electronic mail") system allows computer users to send online messages with text, graphics, sound and images to each other. Users of the Internet must pay for the **access** to the network.

- **Pros (advantages)**
  - communication became global and cheap
  - the internet saves our time (e.g. internet banking)
  - most information is **available** online, you can learn a lot on the internet
  - social media support contacts between people
- **Cons (disadvantages)**
  - has decreased personal privacy
  - the internet addiction
  - dangerous (fake news, false identity, child pornography)

### Media - questions

- What types/kinds of media do you prefer and why? How much time do you spend on the internet or watching TV?
- What types of TV programmes do you like and dislike and why? (news/travel documentaries/sporting events/nature films/quiz shows/cooking show/reality show/**soap operas**/sitcoms)
- What do you think of commercials on TV? Do you mind **interrupting** programmes by commercials?
- Which type of mass media is most reliable? Which is quickest? Which is most fun? Which is most up-to-date? Which one is easiest to use?
- Do you think that the government should control the media? Why or why not?
- How do you think people will get information in the future?
- How did people get information in the past?
- What's your favourite website? Why do you like it?
- What sort of information can be found on the Net?
- What else can be found there?
- How do you look for information on the Net?
- Can you always rely on the information you find?
- What are the positives and negatives of the Internet?
- How do people get connected to the Internet?
- Is it difficult to publish something on the Internet?