**SCIENCE AND INDUSTRY**

**SCIENCE**

sciences × humanities, sciences – astronomy, geography, geology, biology, botany - botanika, genetics, chemistry, mathematics, physics, computer science

**astronomy:** astronomer, black hole, constellation – souhvězdí, eclipse, galaxy, orbit, solar system, planets – Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus , Neptune, space research, the Earth revolves around the Sun, launch into orbit – vypustit na oběžnou dráhu, space exploration

**geography:** equator, latitude, longitude, altitude, northern / southern hemisphere, Tropic of Capricorn, Cancer

**biology:** GM genetically modified, GMO - genetically modified organisms, genetics, genetic code, structure of DNA, cell, bacteria, virus

**chemistry:** chemical compound - sloučenina, chemical reaction, chemist, element - prvek, molecule, periodic table, split the atom, solution - roztok, test tube, acid, epidemic

**mathematics:**  mathematician, equation – rovnice, quadratic equation, formula - vzorec, multiplication table, add - sčítat, addition, multiply - násobit, multiplication, subtract - odčítat, subtraction, divide - dělit, division, x² = x squared, x³ = x cubed, $√$2 = square root of two, two plus two is/equals four, two times OR multiplied by two equals four, four divided by two equals two.

**physics:** atom, electron, gravity, negative, positive charge – nabití, physicist, quantum theory, the speed of light, velocity - rychlost, velocity of light

**SCIENTISTS AT WORK**

area of research - oblast výzkumu, scientist, scientific, scientifically, scientific development, advances, scientific breakthrough - významný objev, achievements - vymoženosti, scientific progress, develop - vyvinout, discover - objevit, discovery, hypothesis, confirm hypothesis - ověřit hypotézu, survey - průzkum, analyse findings, analysis, examine, study, explore, evidence - důkaz, carry out an experiment, collaborate on a project, demonstrate, do research, researcher, research laboratory, sample- vzorek, investigate, try out, prove, statistical data, publish a report/study, apply, patent, reject an idea – zamítnout

**INVENTIONS / DISCOVERIES**

invent, inventor, invention, gadget - důmyslný přístroj, šikovná věcička, wheel, iron, gunpowder, steam engine - parní stroj, spinning jenny - spřádací stroj, printing press - knihtisk, electric bulb, lightning conductor-hromosvod, petrol driven cars, engine - motor, locomotive, assembly line - montážní linka, conveyor belt - běžící pás, mass production, aircraft, radar, radio, television, telephone, X-ray machine, penicillin, antibiotics, pasteurization, contact lenses, test-tube babies, birth-control pills, photography, laser, compact disc, blood groups, computer, world wide web

**COMPUTING**

computer literate, computer illiterate - negramotný, PC – personal computer, palmtop, laptop, mouse, mouse pad, keyboard, VDU- video display unit = monitor, LCD – liquid crystal display, printer, scanner, flash drive, floppy disk – disketa, hardware, software, RAM – random access memory, installation, pre-installed, toolbar – panel nástrojů, spreadsheets (e.g.Excel),

modem, internet access, on-line, browser – prohlížeč, search engine (e.g.Google), surf the internet, log on to the Internet, log out, broadband, blog, download, upload, firewall, virus, bug, hacker, my computer crashed, www-world wide web, http-hypertext transfer protocol, web page, sites, chat room, web cam

scroll up / down the page, make a back-up copy – zálohovat, run a program, highlight part of the text, click on an icon, drag the icon, burn data to a CD, open, close, copy and paste – kopírovat a vložit, delete, save as, cut – vyjmout, print, insert a flash drive, a presentation slide show (e.g. Powerpoint), photo editing, word processing (e.g. Microsoft Word)

**INDUSTRY**

product, production, manufacturing

**key industry**, **primary industry** (extraction of the raw material from the earth): agricultural industry, fishing industry, mining, forestry industry

energy, energy production, coal, natural gas, oil, ore – ruda, fuel – palivo, raw material – surovina, natural resources - přírodní zdroje, steel - ocel, mines, miners, deposit – ložisko, renewable energy – solar, wind, tidal power, solar panels, wind turbines, wind farms, power station, nuclear power plant, factory

**secondary industry** (converting the raw material into finished goods): chemical industry, textile industry, building industry, metallurgy, wood-processing industry, pharmaceutical, food industry, automobile industry

**tertiary industry** (involved in public service): banking, health services, education, delivery services, catering (restaurants, pubs, ...), tourist industry, film industry...

**BANKING**

bank, bank clerk, till - pokladna, bank note, coins, change, exchange money, exchange rate, cheque book, current account - běžný účet, open a current account, term deposit account - termínovaný účet, money transfer - převod peněz, interest rate - úroková sazba, offer one of the lowest interest rates on the market , pay interest, deposit money, withdraw money, withdrawal, credit card, debit card - debetní karta, take out cash from a cash machine/cash point, ATM- automatic teller machine - bankomat, take a personal loan, apply for a loan - žádat o půjčku, mortgage - hypotéka, take a mortgage, invest (in stocks, shares, bonds) - investovat ( do akcií, dluhopisů )

**Questions:**

- What does modern industry depend on?

- Do you know some inventors and scientists?

- Are you interested more in science or humanities?

- Do you know anybody who works in a factory? What do they do? What is their working day like?

- What are the current and future energy sources?

- What inventions and discoveries changed human life and how?

- Do you know of any abuses of scientific achievements?

- Which of modern gadgets would you NOT be able to live without?

- How much time do you spend at your computer?

- What do you use it for?

- What is more important for you - a computer or a mobile phone?

- Are you good at dealing with money? Do you think you are well informed about the risks of

 borrowing money, taking a mortgage etc.?

**Main talking points:**

Discuss the most strategic industries nowadays

Name some kinds of industry, what do they produce?

History of scientific research, the most important inventions and discoveries

Science in medicine

Space exploration

Environmental problems and industry