#  **The Linguistic Culture**

# The course is called “The Linguistic culture” and is mostly devoted to the English Language.

# The English language nowadays comprises (охватывает) a very large number of people across the globe. Nearly one quarter of the world’s population, or between 1.2 and 1.5 billion people, are already fluent or competent in English. The British Council estimates that about 375 million people speak English as the first language, another 375 million speak it regularly as the second language, and about 750 million more people speak English as a foreign language.

# Today, English is considered the universal language for business, international communications, entertainment, tourism, trade and technology. The majority of all resources on the internet are in English, affecting people to learn English to take full advantage of it. Above all, learning English is important for being able to exchange views and make friends with people all over the world.

# English has an official or special status in more than 70 countries. In Great Britain, the United States, Canada, Australia and New Zealand the English Language is the native one. Because of the lack of the time I’ll have to concentrate on the English language of Britain and the United Sates.

# In the first part of the course I’ll try to introduce the main geographical, economic and cultural aspects of the life of Great Britain.

# The second part of the course is devoted to the history, political structure, education, science and culture of the United States. We’ll also speak about the difference of the British and American variants of the English Language.

# **After the first and the second parts of the course you’ll have a test and you will write a composition. The final result (зачет) is put into your check –book.**

# **All questions should be asked in writing.**

# **You can find in full all the facts and events I’ll speak about in the book “The United Kingdom and the United States of America in Past and Present (2009) in the library of the faculty**.

# To study the English Language is impossible without learning at least some aspects of history, geography, culture and customs of Great Britain, as well as the daily activities of the British people. It is but natural that it will be quite difficult to communicate with the Britons without knowing and understanding the background and cultural content of their country. For example, many students still confuse such notions as England, Great Britain and The United Kingdom. .

 The full name of the country is **the United Kingdom of Great Britain and Northern Ireland. The UK** consists of four parts: **England, Wales, Scotland and Northern Ireland**. The island of **Great Britain** consists of three main parts: England (the southern and middle part of the island), Wales and Scotland (the northern part of the island).

 The UK is a highly developed industrial and economic country. It is known as one of the world’s largest producers and exporters of iron and steel products, machinery and electronics, chemicals and textile, aircraft and navigation equipment. One of the chief industries of the country is shipbuilding. Only 7 per cent of the population is engaged in farming.

  **GEOGRAHPY AND CLIMATE**

 The British Isles are surrounded by the Irish Sea and the North Sea, the Norwegian Sea, the North Channel and the Atlantic Ocean. Owing to the shape of the country, any point in Great Britain is no more than 70 miles from the sea.

 The total area of the British Isles is 325 000 square km. According to science the British Isles used to form a part of the continent. The rocky highlands of Scotland, for example, resemble the Norwegian coast. Evidence (доказательство) that the islands were the part of the continent is the shallowness (мель) of the English Channel between them and the mainland.

There are no high mountains in Great Britain. Highlands of Scotland are the tallest of the British mountains. Most of the rivers flow into the North Sea. The Thames is the deepest and the longest of the British rivers. Some of the British greatest ports are situated on the Thames.

Great Britain is not very rich in mineral resources; it has some deposits of coal and iron ore and vast deposits of oil and gas that were discovered in the North Sea.

 **London,** the capital of the United Kingdom was founded by the Romans in 43 A.D. (лат., нашей эры) and called Londinium. In 61 A.D. the town was burnt down and when it was rebuilt by the Romans it was surrounded by a wall. That area within the wall is now called the City of London. It is London's commercial and business and financial centre. It contains the Bank of England, the Stock Exchange (фондовая биржа) and the head offices of numerous companies and corporations.

There is a very popular saying (поговорка) “When a man is tired of London, he is tired of life”! There are hundreds of historic buildings, galleries and museums in London. Here is situated the Tower of London. The Tower was built by William the Conqueror in 1066. He was crowned at Westminster Abbey. During the Tudor period (l6th century) the Londoners of the Elizabethan period built the first theatres. Nowadays the theatre land is stretched around Piccadilly Circus. Not far from it one can see the British Museum and the Covent Garden Opera House. During the Victorian period (19th century) London was one of the most important centers of the Industrial Revolution and the centre of the British Empire.

 There are plenty of other historical and cultural cities and towns in England: Kent, Bristol, Bath, Brighton, Bournemouth, and many others. Chester is very important town in the north-west of England. In the past it used to be a Roman fort; its name comes from the Latin word “castra”, meaning «fortified camp». In Chester there is a famous museum which contains over 5000 ancient and modern toys. Cambridge and Oxford are the home of the oldest university of England.

 A lot of people and tourists come to the South of England just to see the ancient circle of stones, so-called Stonehenge, one of the most famous and mysterious archaeological sites of the world, built between 2500 and 1500 BC (before Christ, до нашей эры). It was used by the Druids for their ceremonies.

Not far from Stonehenge there stands Salisbury Cathedral. It is a splendid example of an English Gothic Cathedral; inside there is one of four copies of Magna Charta (the agreement made in 1215 between King John and feudal barons) and the oldest clock in England.

**Some information about other countries of the UK**.



  **Wales** is the country in the west of Great Britain. It is mainly a mountainous land with a chiefly agricultural economy and an industrial and coal-mining area in the south. The landscape is really beautiful. **Cardiff**, a large city in the south, was chosen as the capital of Wales in 1955, mainly because of its size. Since 1536, Wales has been governed by England and the heir to the throne of England has the title of Prince of Wales. The Welsh language is an ancient Celtic language, similar to Breton, spoken in Brittany, France.

 **Scotland** is in Highlands. The capital of Scotland is **Edinburgh**, well known for its castle. **Glasgow** is the industrial capital of Scotland. It is the third largest city in Great Britain. The typical products of Scotland are timber, whisky, and salmon. Golf is the Scottish natural sport and it seems to have originated in this country. Scotland is also the land of myths and mysteries; every castle has “its ghost”. And of course everyone knows about so-called “the Loch Ness Monster”. «Nessie» is said to be about six meters long, with a long, thin neck. The first report of the monster in Loch Ness was in 565 A.D.

One third of the population of **Northern Ireland (**Ulster) lives in and around the capital, **Belfast -** the most important port, commercial, industrial and cultural centre with theatres, orchestras, ballet and opera companies.

A lot **of British customs and habits as well as the language phrases are connected with the English weather.**

 The common ideas foreigners have about **the weather in Britain** are: "It rains all the time, it's very damp"; "There's a terrible fog in London, just like in Sherlock Holmes'...", 'The sun never shines in July or August". But contrary to popular opinion, it does not rain all the time. Indeed, the weather changes so frequently that it is difficult to forecast and it is not unusual for people to complain that the “weathermen” were wrong.

 Due to the geographic location of Great Britain **the type of the climate is oceanic.** There are no extreme contrasts in temperature in Britain because of the current of warm water flowing from the gulf of Mexico called the Gulf Stream. As Britain does not experience extreme weather conditions, it is never very cold or very hot. The temperature rarely rises above 32C (90°F) in summer, or falls below 10°C (l4°F) in winter. Summers are generally cool, but due to global warming they are starting drier and hotter. Winters are generally mild, with the most frequent and prolonged snowfalls in the Scottish Highlands where it is possible to go skiing. If it **does** snow heavily in other parts of Britain, the country often comes to a standstill. Trains, buses and planes are late.

England is known to have been “The mother of industrial revolution”. The dirt caused by London and Manchester smoke used to cause terrible fogs and smogs, described by many English classical writers and shown in old films where they added mystery and atmosphere to murder stories and thrillers. Now they are things of the past. Since the 1950s, most British cities have introduced clean air zones. Factories and houses cannot burn coal and must use smokeless fuel. Britain's countryside is famous for its deep green color. Britain in fact looks like one great park with its old trees, green meadows (луга) remaining green all the year round.

**1 Answer the following questions:**

1. What parts does the United Kingdom consist of?

2. What’s the difference between the names Great Britain and United Kingdom?

3. What is the climate of Great Britain like?

4. Do you know any English phrases, connected with the weather?

 5. Have you ever been to England?

6. Which pictures do you imagine when you think of this country?

7. What do you know of Stonehenge?

 **THE HISTORY OF THE ENGLISH LAGUAGE**

About 2.000 years ago the British Isles were inhabited (населены) by the Celts who had been arriving from Europe from the 8th century BC. , mixed with the peoples who were already there. During the next 1.000 years there were many invasions(набеги). The Romans came in 43 AD, calling the country “Britania.

in the 5th century

**The history of the English language really began in the 5th century with the arrival to the British Isles** of three Germanic tribes (племена): the Angles, the Saxons and the Jutes, who crossed the North Sea from what today is Northern Germany. Most of the Celtic speakers were pushed west and north by the invaders - mainly into what is now Wales, Scotland and Ireland. The Angles who came to England gave birth to the language called “English”.

The invading Germanic tribes spoke similar languages, which developed into what is now called **Old English**. Old English did not sound or look like English today and English speakers of today would have great difficulty in understanding it. Nevertheless, about half of the most commonly used words in Modern English have Old English roots. The words **be, strong** and **water**, for example, are derived from Old English. Old English was spoken until around 1100.

 In 1066 the Duke of Normandy (Northern France), invaded and conquered England after a well-known the Battle of Hastings. As a result of this the Norman leader became the King of England “William the Conqueror”. The Normans brought with them the French language, which became the language of the Royal Court (королевского двора), and the ruling and business classes. For about 300 years there was a kind of linguistic class division, when the lower classes spoke English and the upper classes lords and barons spoke French. The English are the descendants (потомки) of all the invaders, and learners of English can find many words in the English language which originated fro French.

 In the 14th century so-called **Middle English** became dominant in Britain. It was the language of t**he great poet Chaucer (1340-1400).** Towards the end of Middle English, a change in pronunciation (the Great Vowel Shift) started, with vowels being pronounced shorter. Since the 16th century the British had contacts with many nations from around the world. This, and the Renaissance (Bозрождение) of Classical learning, meant that many new words and phrases entered the language.

The invention of printing brought standardization to English spelling and grammar. Books became cheaper and more people learned to read. In 1604 the first English dictionary was published. A southern English accent (the dialect of London) became generally accepted and most easily understood.

 Hamlet's famous "To be or not to be" lines were written in **Early Modern English by Shakespeare**. The main difference between **Early Modern English** and **Late Modern English** (1800-Present) is vocabulary. Late Modern English has many more words, arising from two principal factors: firstly, the Industrial Revolution and technology created a need for new words; secondly, the British Empire at its height covered one quarter of the earth's surface, and the English language adopted foreign words from many other countries.

Answer the following questions.

1. What were the origins of **Old English?**

2. What is the Great Vowel Shift?

3. What definition can you give to English as the global language?

 **THE POLITICAL STRUCTURE AND ELECTIONS**

**Great Britain is a constitutional monarchy**. Britain is administered from the Palace of Westminster in London. This is also known as the Houses of Parliament which is made up of two chambers (палаты) — the House of Commons and the House of Lords.

The House of Commons has 651 seats which are occupied by Members of Parliament (MPs) who are elected by the British public in general elections which are held every five years. The country is divided into 650 constituencies (избирательные округа) each of which elects one Member of Parliament (MP). The party which wins the elections gets the most seats in the House of Commons and forms the Government. Its leader becomes the Prime Minister.

Britain does not have a written constitution, but a set of laws. Most legislation (законодательство) originates in the Commons. Besides legislation the functions of Commons are security of government activities. The House of Commons is presided over by the Speaker. The government party sits on the Speaker's right while on his left sit the members of the Opposition.

 The House of Lords comprises about 1 200 members. The members of the House of Lords are not elected: they sit in the House because they are aristocrats who have inherited their seats from their fathers, people with titles and bishops (эпископы) of the Church of England.

This House has no real power but acts as an advisory council for the House of Commons. The House of Lords may take a part in legislation, but it cannot permanently block a bill (законопроект) passed by the Commons.

The House of Lords is presided over by the Lord Chancellor (Лорд канцлер или председатель суда) and is the highest court of appeal.

Technically British Parliament is made up of three parts: the House of Commons, the House of Lords and the Monarch (at the moment the Queen Elizabeth 11 who has been n power since 1953).

The Queen, who is the Head of State, opens and closes the sessions of the Parliament. All new laws are debated (discussed) by MPs in the Commons, then debated in the Lords, and finally signed by the Queen.

The English monarchy has been interrupted only once during the Revolution and the Cromwell republic. Succession (наследование) to the throne is hereditary (наследственное). Formally the monarch has a number of roles. The monarch is expected to be politically neutral, and should not make political decisions. Nevertheless (тем не менее), Queen Elizabeth 11 still performs some important executive and legislative duties (исполнительные и законодательные обязанности) including opening and dissolving Parliament, signing bills (законопроекты) passed by both Houses and fulfilling international duties, visits to foreign countries, and especially those to the Commonwealth (Содружество наций), whose interests and welfare (благосостояние) are very important to her. She started the tradition of the "walkabouts", when she walks among the public crowds and stops to talk to some people. The annual Christmas broadcast made by the Queen on radio and television has become a traditional. The Queen's husband is Duke of Edinburgh and her heir (наследник) is Charles, Prince of Wales, who was born in 1948, married Lady Diana Spencer who died in a car accident in August, 1997, and has two children, Prince William and Prince Harry. August, 1997. The Queen's other children are Princess Anne, Prince Andrew and Prince Edward .

 **Government**

T**wo main parties in the UK are the Conservative party, descended from the old Tory party, and the Labour party, which was organized in 1906 and is moderately socialist. The Liberal Democrats, which is a weaker third party, was formed by the merger (слияние) of the Liberal party and the Social Democratic party.**

Both Scotland and Wales have nationalist parties whose goal is the independence.

 The party which wins the most seats in the General Election forms the government in Britain. The leader of the winning party becomes Prime Minister(PM). The PM chooses a committee of ministers called the Cabinet (about 15-25 members or ministers). This is made up of a selection of senior MPs (members of parliament) from the House of Commons and some members of the House of Lords.

Each member of the Cabinet is a minister responsible for a government department such as Home Affairs, Foreign Affairs, and the Exchequer (treasury). The Secretary of State for Education and Science is responsible for all the schools, universities and teachers in Britain. The Cabinet of ministers runs the country (управляет страной). The Cabinet meets at the Prime Minister's house 10 Downing Street. Cabinet meetings are held in private and the details must remain secret for at least 30 years. Cabinet ministers cannot, however, do as they please! They are responsible to Parliament and must answer their questions. Even the Prime Minister must answer questions every Tuesday and Thursday in the Commons — this is called Prime Minister's Question Time. At the moment the UK is governed by the Conservative Party headed by Mr. David Cameron.

**Answer the questions:**

 2. Which political parties in the UK do you know?

 3. How do elections take place?

 4. How many Chambers (Houses) are there in the British Parliament? What is the difference between them?

 5. Who is the head of the Government?

 6. What is a cabinet?

7. Call any great political figures in the UK who you remember.

**Translate from Russian into English:**

Британский парламент состоит из двух палат

Проводить выборы

Выигрывать выборы

Образовывать правительство

Свод законов

Наследовать, наследники

Не иметь реально власти

Совещательный Совет

Принимать участие

Заблокировать законопроект

Высший Аппеляционный суд

Принимать политические решения

Исполнительные и законодательные обязанности

Открытие и роспуск парламента

Выполнение обязанностей

Благосостояние

Быть ответственным

Управлять страной

**Education in Britain**

 **School education.**

 Today there are a great number of schools in Britain. All **state schools** in Britain are free, and schools provide their pupils with books and equipment for their studies. Education is compulsory ( обязательное) from 5 till 16 years. Children start primer school at 5 and continue until they are 11.

At 11 most pupils go to **secondary schools** called **comprehensives** (общеобразовтельные школы) which accept a wide range of children from all backgrounds.90% of secondary schools in England, Scotland and Wales are co-educational.

**At 16 pupils take a national exam called "GCSE" (General Certificate of Secondary Education)** and then they can leave school if they wish. This is the end of compulsory education. Some 16-year-olds continue their studies in the sixth form at school or at a sixth form college. The sixth form prepares pupils for **a national exam called "A" level (advanced level) at** **18.** They need "A" level to enter a university. Other 16-year-olds choose to go to a college of further education to study for more practical (vocational) diplomas relating to the world of work, such as hairdressing, typing or mechanics.

7% of British schoolchildren go to private schools called independent schools. There are 2.400 independent schools and they have been growing in number and popularity since the mid-1980s. Parents pay for these schools, and fees vary from about 2.000 pounds a term to 3.000 pounds a term or more for a secondary boarding school. Most independent schools are called prep (preparatory) schools because they prepare the children for the Common Entrance Exam which they take at the age of 11. This exam is for entry into the best schools. **The most famous schools** **are called "public schools**" and they have a long history and traditions. Children of wealthy or aristocratic families often go to the same public school as their parents and their grandparents. **Eton is the best known of these schools.** The majority of independent secondary schools, including public schools, are single-sex, although in recent years girls have been allowed to join the sixth forms of boys' schools. Independent schools also include religious schools (Jewish, Catholic. Muslim, etc.) and schools for ethnic minorities.

 **Higher education**

Students normally enter University from 18 and study for an Academic Degree. Apart from a single private university, all undergraduate education is largely state financed (with tuition fees set at a maximum index-linked £3,225 per year).

The typical first degree offered at British universities is the Bachelor's degree (Bachelor of Arts or of Science BA or Bess (typically three years). During the first degree students are known as undergraduates. Many institutions now offer an undergraduate Master's degree (Master of Arts or of Science (MA or MSc ) as a first degree, typically lasting four years. Some universities offer a vocationally-based Foundation degree, typically two years in length for those students who hope to continue to take a first degree but wish to remain to work.

Some students continue to complete a three-year period of original research for the degree of Doctor of Philosophy (PhD)

Oxford and Cambridge, founded in the 13 and 14 centuries, are the most famous of Britain’s universities. Today “Oxbridge”, continue to attract many of the best brains thanks to their prestige and the beauty of many buildings and surroundings.

Besides Oxbridge there are a lot of newer universities built in the 19th century as a result of the Industrial Revolution and the expansion of Britain’s overseas empire. With the expansion of higher education in the 1960s so-called “plate-glass” universities were established. Over 50 polytechnics and similar higher education institutes acquired university status in 1992.

**1 Answer the following questions:**

I. At what age do British children go to school?

2. What types of school exist in Britain?

3. What age do British pupils normally take exams?

4. How can they enter Universities and colleges?

5. Which types of British universities do you know?

6. What degrees do British students receive on leaving universities?

**2.Translate from Russian into English:**

Обязательное школьное образование

Государственнные , общеобразовательные, средние школы

Профессиональное образование

Оплата за учебу

Поступить в университет,

# семестр.

**Science and technology in the United Kingdom**



**A** [**Watt steam engine**](http://en.wikipedia.org/wiki/Watt_steam_engine)**, which powered the Industrial Revolution in the** [**United Kingdom**](http://en.wikipedia.org/wiki/United_Kingdom) **and played a key role in it becoming the world's first industrialised nation.**[**[1]**](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-1#cite_note-1)

Science and technology in the United Kingdom has a long history, producing many important figures and developments in the field. Major theorists from the UK include [**Isaac Newton**](http://en.wikipedia.org/wiki/Isaac_Newton) whose [**laws of motion**](http://en.wikipedia.org/wiki/Newton%27s_laws_of_motion) and illumination of [**gravity**](http://en.wikipedia.org/wiki/Gravitation) have been seen as a keystone of modern science and [**Charles Darwin**](http://en.wikipedia.org/wiki/Charles_Darwin) whose theory of evolution by [**natural selection**](http://en.wikipedia.org/wiki/Natural_selection) was fundamental to the development of modern biology. Major scientific discoveries include [**hydrogen**](http://en.wikipedia.org/wiki/Hydrogen) by [**Henry Cavendish**](http://en.wikipedia.org/wiki/Henry_Cavendish), [**penicillin**](http://en.wikipedia.org/wiki/Penicillin) by [**Alexander Fleming**](http://en.wikipedia.org/wiki/Alexander_Fleming), and the structure of [**DNA**](http://en.wikipedia.org/wiki/DNA), by [**Francis Crick**](http://en.wikipedia.org/wiki/Francis_Crick) and others. Major engineering projects and applications pursued by people from the UK include the [**steam locomotive**](http://en.wikipedia.org/wiki/Steam_locomotive) developed by [**Richard Trevithick**](http://en.wikipedia.org/wiki/Richard_Trevithick) and [**Andrew Vivian**](http://en.wikipedia.org/wiki/Andrew_Vivian), the [**jet engine**](http://en.wikipedia.org/wiki/Jet_engine) by [**Frank Whittle**](http://en.wikipedia.org/wiki/Frank_Whittle) and the [**World Wide Web**](http://en.wikipedia.org/wiki/World_Wide_Web) by [**Tim Berners-Lee**](http://en.wikipedia.org/wiki/Tim_Berners-Lee). The UK continues to play a major role in the development of science and technology and major technological sectors include the aerospace, motor and pharmaceutical industries.

[Sir Isaac Newton](http://en.wikipedia.org/wiki/Isaac_Newton) (1643–1727), who is widely regarded as the founder of modern physics and mathematics[[2]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom%22%20%5Cl%20%22cite_note-2#cite_note-2)

England and Scotland were leading centres of the [Scientific Revolution](http://en.wikipedia.org/wiki/Scientific_Revolution) from the 17th century[[3]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-3#cite_note-3) and the United Kingdom led the [Industrial Revolution](http://en.wikipedia.org/wiki/Industrial_Revolution) from the 18th century,[[4]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-Europa-4#cite_note-Europa-4) and has continued to produce scientists and engineers credited with important advances.[[5]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-5#cite_note-5) Some of the major theories, discoveries and applications advanced by people from the UK are given below.

* The [laws of motion](http://en.wikipedia.org/wiki/Newton%27s_laws_of_motion) and illumination of [gravity](http://en.wikipedia.org/wiki/Gravitation), by [physicist](http://en.wikipedia.org/wiki/Physicist), [mathematician](http://en.wikipedia.org/wiki/Mathematician), [astronomer](http://en.wikipedia.org/wiki/Astronomy), [natural philosopher](http://en.wikipedia.org/wiki/Natural_philosophy), [alchemist](http://en.wikipedia.org/wiki/Alchemy) and [theologian](http://en.wikipedia.org/wiki/Theology), [Sir Isaac Newton](http://en.wikipedia.org/wiki/Isaac_Newton) (1643–1727).[[6]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-6#cite_note-6)
* The discovery of [hydrogen](http://en.wikipedia.org/wiki/Hydrogen), by [Henry Cavendish](http://en.wikipedia.org/wiki/Henry_Cavendish) (1731–1810).[[7]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-7#cite_note-7)
* The [steam locomotive](http://en.wikipedia.org/wiki/Steam_locomotive), by [Richard Trevithick](http://en.wikipedia.org/wiki/Richard_Trevithick) (1771–1833) and [Andrew Vivian](http://en.wikipedia.org/wiki/Andrew_Vivian) (1759–1842).[[8]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-8#cite_note-8)
* The [electric motor](http://en.wikipedia.org/wiki/Electric_motor), by [Michael Faraday](http://en.wikipedia.org/wiki/Michael_Faraday) (1771–1867), who largely made [electricity](http://en.wikipedia.org/wiki/Electricity) viable for use in technology.[[9]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-Boa2002p238-9#cite_note-Boa2002p238-9)
* The theory of [aerodynamics](http://en.wikipedia.org/wiki/Aerodynamics), by [Sir George Cayley](http://en.wikipedia.org/wiki/George_Cayley) (1773–1857).[[10]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-ackroyd-10#cite_note-ackroyd-10)
* The first public steam [railway](http://en.wikipedia.org/wiki/Railway), by [George Stephenson](http://en.wikipedia.org/wiki/George_Stephenson) (1781–1848).[[11]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-Davies-11#cite_note-Davies-11)
* The first commercial [electrical telegraph](http://en.wikipedia.org/wiki/Electrical_telegraph), co-invented by [Sir William Fothergill Cooke](http://en.wikipedia.org/wiki/William_Fothergill_Cooke) (1806–79) and [Charles Wheatstone](http://en.wikipedia.org/wiki/Charles_Wheatstone) (1802–75).[[12]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-12#cite_note-12)[[13]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-13#cite_note-13)
* First tunnel under a navigable river, first all iron ship and first railway to run express services, contributed to by [Isambard Kingdom Brunel](http://en.wikipedia.org/wiki/Isambard_Kingdom_Brunel) (1806–59).[[14]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-14#cite_note-14)



* [Charles Darwin](http://en.wikipedia.org/wiki/Charles_Darwin) (1809–82) whose [theory of evolution by natural selection](http://en.wikipedia.org/wiki/Theory_of_evolution_by_natural_selection)[natural selection](http://en.wikipedia.org/wiki/Natural_selection), by [Charles Darwin](http://en.wikipedia.org/wiki/Charles_Darwin) (1809–82).[[15]](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#cite_note-Hatt2006p46-15#cite_note-Hatt2006p46-15)
* The invention of the [incandescent light bulb](http://en.wikipedia.org/wiki/Incandescent_light_bulb) (лампы накаливания), by [Joseph Swan](http://en.wikipedia.org/wiki/Joseph_Swan) (1826–1914).
* The unification of [electromagnetism](http://en.wikipedia.org/wiki/Electromagnetism), by [James Clerk Maxwell](http://en.wikipedia.org/wiki/James_Clerk_Maxwell) (1831–79).
* The first practical [telephone](http://en.wikipedia.org/wiki/Telephone), patented by [Alexander Graham Bell](http://en.wikipedia.org/wiki/Alexander_Graham_Bell) (1847–1922).
* The discovery of [penicillin](http://en.wikipedia.org/wiki/Penicillin), by [biologist](http://en.wikipedia.org/wiki/Biologist) and [pharmacologist](http://en.wikipedia.org/wiki/Pharmacology), [Sir Alexander Fleming](http://en.wikipedia.org/wiki/Alexander_Fleming) (1881–1955).
* The world's first working [television](http://en.wikipedia.org/wiki/Television) system, and [colour television](http://en.wikipedia.org/wiki/Color_television), by [John Logie Baird](http://en.wikipedia.org/wiki/John_Logie_Baird) (1888–1946).
* The first meaningful synthesis of [quantum mechanics](http://en.wikipedia.org/wiki/Quantum_mechanics) with [special relativity](http://en.wikipedia.org/wiki/Special_relativity) by [Paul Dirac](http://en.wikipedia.org/wiki/Paul_Dirac) (1902–84) in [the equation named after him](http://en.wikipedia.org/wiki/Dirac_equation), and his subsequent prediction of [antimatter](http://en.wikipedia.org/wiki/Antimatter).
* The invention of the [jet engine](http://en.wikipedia.org/wiki/Jet_engine), by [Frank Whittle](http://en.wikipedia.org/wiki/Frank_Whittle) (1907–96).
* The invention of the [hovercraft](http://en.wikipedia.org/wiki/Hovercraft) (судно на воздушной подушке), by [Christopher Cockerell](http://en.wikipedia.org/wiki/Christopher_Cockerell) (1910–99).
* The [colossus computer](http://en.wikipedia.org/wiki/Colossus_computer), the first digital computer , by [Alan Turing](http://en.wikipedia.org/wiki/Alan_Turing) (1912–54).
* The structure of [DNA](http://en.wikipedia.org/wiki/DNA), by [Francis Crick](http://en.wikipedia.org/wiki/Francis_Crick) (1916–2004).
* The theoretical breakthrough of the Higgs mechanism to explain [electroweak symmetry breaking](http://en.wikipedia.org/wiki/Electroweak_symmetry_breaking) and why some particles have mass, by [Peter Higgs](http://en.wikipedia.org/wiki/Peter_Higgs) (1929-).
* Theories in [cosmology](http://en.wikipedia.org/wiki/Cosmology), [quantum gravity](http://en.wikipedia.org/wiki/Quantum_gravity) and [black holes](http://en.wikipedia.org/wiki/Black_holes), by [Stephen Hawking](http://en.wikipedia.org/wiki/Stephen_Hawking) (1942–).

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| **Стивен Уильям Хокинг** |
| Stephen William Hawking |
| Stephen Hawking.StarChild.jpg |

* The invention of the [World Wide Web](http://en.wikipedia.org/wiki/World_Wide_Web), by [Tim Berners-Lee](http://en.wikipedia.org/wiki/Tim_Berners-Lee) (1989).



The [Airbus A380](http://en.wikipedia.org/wiki/Airbus_A380) has wings and engines manufactured in the UK.

The UK plays a leading part in the [aerospace](http://en.wikipedia.org/wiki/Aerospace) industry, with companies including [Rolls-Royce](http://en.wikipedia.org/wiki/Rolls-Royce_plc) playing a leading role in the aero-engine market;

[BAE Systems](http://en.wikipedia.org/wiki/BAE_Systems) ( оборонная компания, занимающаяся разработками в области вооружений и информационной безопасности) acting as Britain's largest and the Pentagon's sixth largest defence supplier, and large companies including [GKN](http://en.wikipedia.org/wiki/GKN) (концерн, производящий компоненты автомобилей, вертолетов, сельхоз техники и др.)acting as major suppliers to the [Airbus](http://en.wikipedia.org/wiki/Airbus) project.

Two British-based companies, [GlaxoSmithKline](http://en.wikipedia.org/wiki/GlaxoSmithKline) and [AstraZeneca](http://en.wikipedia.org/wiki/AstraZeneca), ranked in the top five pharmaceutical companies in the world by sales in 2009 and UK companies have discovered and developed more leading medicines than any other country apart from the US.

The UK remains a leading centre of automotive design and production, particularly of engines, and has around 2,600 component manufacturers.

Scientific research and development remains important in British universities, with many establishing [science parks](http://en.wikipedia.org/wiki/Science_park) to facilitate production and co-operation with industry. Between 2004 and 2012 the UK produced 6% of the world's scientific research papers and had an 8% share of scientific citations, the third- and second-highest in the world (after the United States' 9% and China's 7% respectively). Scientific journals produced in the UK include [*Nature*](http://en.wikipedia.org/wiki/Nature_%28journal%29), the [*British Medical Journal*](http://en.wikipedia.org/wiki/BMJ) and [*The Lancet*](http://en.wikipedia.org/wiki/The_Lancet)*(ланцет, копье)*

Suggested themes for the projects (compositions) on the UK life ( 5-12 pp).

1. [Important scientific and technological advances made by people from the UK](http://en.wikipedia.org/wiki/Science_and_technology_in_the_United_Kingdom#Important_advances_made_by_people_from_the_UK#Important_advances_made_by_people_from_the_UK)
2. Scientific research
3. Cultural life.
4. Music.
5. Literature and writers
6. Museums and interesting sights
7. National life and characters
8. Personalities