The Industrial Revolution (IR) was seen as the growth of British economic power. It took place in the 19th century and covered about a century.

**Introduction:**
As the Great Britain (GB) was at the end of the 18th century: Britain was predominantly rural and produced almost all of its own food. Only about 20% of the population lived in cities. The rest lived in small villages. Industry was just at its beginning and was mainly based around the manufacture of wool (laine). There were no factories but small workshops (ateliers) in cottages. People mainly produced for themselves, but sometimes, they sold it as well. The transportation system was well-expanded and in particular, there was quite a few canals. The problem was that the transport was really slow and the roads were a bad quality. Yet, compared to its European neighbors, Britain was a well-developed place.

**I. The first age of the IR**
The term “Industrial Revolution” was not to have been used until 1848 and it was only in the 1890s that it gradually became used a lot (common used). Also, historians have been debating on the date it began. There is a consensus: in the 1780s. Problem with historians: some see the take off of the IR in the late 1740s, in the form of the cotton, iron and coal industries. Other place upon the change from primary to secondary activities and date the IR as happening in the second half of the 19th century.

4 main factors are commonly put forward to explain the changes that occurred at the time:

1) Britain’s large navy fleet (flotte maritime) which gave it enormous advantage in development of oversees trade. This profitability of oversee trade was linked to the growth of the British Empire. Britain had colonies (Caribbean, Asia, Africa, Australia, North America). The development of the Atlantic slave trade also provided money for investment in new industries. Colonies were important not only for defense, but as suppliers of raw materials as well as consumers of those manufactories. The second acquisition happened at a time of rapid population growth. It was because Britain had the agricultural capacity to support this rising population that its industrial economy was able to develop.

2) Advance agriculture was another factor: in the 1740s, there was a practice named as the enclosure movement: peasants used to have common grounds and they were chased by rich landowners who bought, divided and privatized those grounds. This is important because people were deprived of their lands. This enclosure movement boosted the agricultural production and led to an agricultural revolution.

3) A new legislation (piece of law) that was passed by Parliament on patents (brevets) and enabled people to apply for invention more easily. This led to many new inventions including the steam engine or the water frame (see p 3 of the brochure). Steam power gradually replaced the power of animals and was namely used in the cotton industry for example in Lancashire and its region; it was mostly used for cotton, which generated more than 70% of the value of all exports by the 1830s. Because Britain was creating clothes, it was nicknamed “the workshop of the world”.
4) Also, the existence of a cheap and extensive transportation system, which was first on the form of toll-paying roads and canals, to be replaced by railways. By 1870, Britain had the most extensive railway system in the world.

Another extra factor is the fact that Britain was constantly in contact with other countries, mainly with France (Napoleon) => it boosted the demand for more good and weapons, uniforms...
Another extra factor is a government policy which added the development of the economy in the country. This government policy was in fact named as “free trade” and it was a policy based on liberal ideas, which were introduced to Britain by the famous Scottish economist A. Smith (see p. 17-18). Smith’s ideas are based in “laissez-faire” and were taken up by Ricardo. A free trade treaty was signed between France and England in 1860 = the COBDEN treaty. Also, some acts passed in the 1830s/40s allowed the creation of joint stock companies (sociétés par action) and liability companies (sociétés anonymes).

In 1848, to mark this passage from the primary to the secondary sector, the bank charter act was voted; it established banking as it is now today in Britain. In the 1740s, everything changed. In terms of changes, the main was the landscape because usually there were fields and factories grew up overnight. Human resources were gradually replaced by machines. Usually people worked about 16h a day. Female work started to develop and a lot of children used to be working in factories as well. Children were mainly used for the machines, cleaned them etc. Children moved to the factories when their parents did so. There were a lot of accidents. It was not until 1838, when a Factory Act was voted and which prohibited children under the age of 9 from working in factories. The IR expanded opportunities for work but also led to problems: exportation of workers, industrial accidents, social divisions between workers and employers...

Quite a few historians saw in the first part of the 19th century the making of the British working class (among them: Marx, Engels).

The IR also led to impoverishment. One of the major reaction of the time was luddism (= the fact when workers were fed up with machines (because they led to unemployment), they were angry and broke the machines (> Ned Ludd).

II. The second age: the age of the railway and economic maturity (1825-1970)
The age of the railway is sometimes considered as the second Industrial Revolution. And yet it seems that the railway supporters
About 18 million pounds a year by the late 1816. As a consequence, the miles of track available went from just 1500 miles in 1840 to 13500 miles in the 1860s => impact of the railway in 20 years. The impact of the railway was significant in most areas of Victorian reign, and especially in the fields of employment and industrialization, as well as in financing and organization. (p22/23)

A) The creation of employment
Of course the development of railway was bound to create a huge demand for employment in associated fields such as the iron (tracks, locomotives) and coal (steam) industries. In addition, this new industry needed large numbers of workers to build the new lines. Those were called navvies. Train drivers, mechanics, engineers, station staff were also needed. At first there were some concerns about Irish immigration. Ireland was spread by the potato famine in the mid-19th century, which made that a lot of Irish people were getting afraid that they might steal their work. But in fact, the demand for manpower in the railway industry was so massive that these new workers went quickly sucked in. The increase in the number of
jobs available also had a direct political consequence: a large number of the working class found employment and were kept away from subversive political ideas spreading in the country at that time. The most important of them was Chartism. It spread in the UK between 1838 and 1848. It was named after a document called the people’s charter published in 1838. Chartism is often seen as the first mass working class movement in the world. It asked for political and social reforms notably the induction of universal male suffrage for all men of 21 and Chartism was responsible for organizing several strikes. In terms of jobs, lawyers were also increasingly needed to arbitrate land sales. This was particularly the case when entrepreneurs wanted to buy the land previously used for canals. In the same way, accountants were needed to keep record of the amounts of money that the railway mania had created. This was also the beginning of traders who were looking for the land available for industrial premises (new social landscape + new social class: entrepreneurs whose most famous name included George Hudson, also known as “the railway king” (p. 4)

B) Industrialization and financing
The railways stimulated an export boom. They were used in the colonies and had a big impact on the development of the London and provincial stock exchange (Bourse). At the beginning of the Industrial Revolution, the instruments that improved manufacturing were quite cheap. For instance, the spinning genie cost about 10 pounds a piece. But with the creation of new machines, things began to change considerably. A steam engine could cost 1000 pounds. Entrepreneurs had to borrow money. As a consequence, in the early 19th century, Britain was the country where banking had most flourished. The banking system supported the Industrial Revolution by lending money to industrial entrepreneurs.

→ The IR saw the birth of capitalism

C) Urbanization
Railway first increased the sizes of cities. They also changed their physical appearance, as some towns were specifically created for the purpose of servicing this new industry. Railway construction often displaced ordinary people as their houses were knocked down to make room. Moreover, much effort was spent on the construction of richly designed stations. The suburbs of the city increased their middle-class orientation as a result of an improved rail network. Another important spin-off was that railways broke down local isolation to bring more inter-regional connections. On the coast, for instance, they helped to create the holiday resort in such seaside cities (Brighton, Blackpot) -> this made advent of mass tourism possible. For instance it was in 1841 that Thomas Cook offered his first holiday ticket. Railways were also beneficial for the food and retail industry as items were transported, quickly, cheaply and safely. As a result, more shops opened in the country and the consumer had a wider choice at lower prices = “consumers revolution”. Railways were also responsible for a commission revolution as they led to the development of the postal service. Printing was also improved and newspaper printed on London could now be sent through the railways throughout the country. From then on, everybody shared the same news and ads -> beginning of marketing techniques.

D) Britain’s economy and society
Railways contributed towards stabilizing growth in the economy. However, because of the railway mania, large booms were always followed by substantial slumps. Railways also promoted various changes in society: the population was more mobile, and whereas in 1801 the great majority of British people still lived in the countryside, by 1851, the proportion between rural and urban dwellers was equal. Finally, by 1880, more than two thirds of the
population lived in towns. On the social level, a two-tiered society was nevertheless emerging and the gap between the haves and the have-nots was deepening constantly. The merchants (= the factory owners) lived in large houses with gardens and servants, while the workers had to put up with filthy and cramped houses and suffered from diseases (the most common was cholera). One basic problem was specifically the rapid increase in the population of Britain. Much of the population was concentrated in industrial towns which had grown too quickly for people to be housed conveniently. In Bradford for example, the population increased eightfold from 1801 to 1861. Faced with this other problem, some even lived in attics (greniers) or cellars (caves). Because it was an age of laissez-faire, the government... It was assumed that individuals would find their own solution without any intervention from the state. Even poor people were taken care of by local parishes. These appalling conditions in which most British persons lived were violently criticized by political writers such as the German social scientist Friedrich Engels. Several government reports were published, which produced some shocking statistics about life expectancy. Example given, a lawyer in a rural country could live to be on average 52 while a factory worker in a Manchester slum would be lucky to survive until 17. Such discrepancies gave birth to four main movements for social reform:

1) The first of them was Chartism
2) The second one was cooperative movement, which was designed to provide mutual assistance for workers in a given company. For example, discounted food, credits on housing, access to education for workers and their children. The father of this movement was Robert Owen. He opened the first cooperative in the cotton factories of New Lanark in Scotland (p15).
3) The third movement was trade unionism (= syndicalisme)
4) The Labour party

The period from the 1850s to the 1860s is traditionally considered as the high point in the development of the British economy and industrial power. Some of the reasons for this success were the complete absence of any serious rival either in Europe or elsewhere, a good banking system, a splendid geographical position to exploit international trade, notably in the colonies, an excellent transportation network, as well as a growing home market (all this = assets of Britain at the time). However, warning signs of impending decline could gradually be seen:

1) The lack of investment in new technologies
2) There was a decline in entrepreneurship
3) The poor educational system
4) A poor housing and a poor water and sanitation system

Although vital invention was still being made, British industry was also ageing (sur le déclin) and there was a certain amount of reluctance to change. There was eventually two great dependences on world trade as well as on a few staple industries such as textile. Britain started to be copied by other countries.