THE INDUSTRIAL REVOLUTION

Between 1780 and 1850, there was a major transformation of production systems: the Industrial Revolution. It started in Britain and then spread to Europe and the United States.

New energy sources, like coal and steam, and the introduction of machines replacing manual labour were the main changes.

The Industrial revolution was the result of a combination of different economic and technological changes that occurred in the late 18th century in Great Britain.

THE DEMOGRAPHIC REVOLUTION	THE AGRICULTURAL REVOLUTION
During the 18th century living conditions improved: - Advances in hygiene (soap) - Medicine (vaccine) - Richer and more varied diet All those conditions lead to a population growth.	A better productivity was possible by two main changes: - Enclosure acts: open fields and common lands were enclosed to create larger and more profitable farms. - Norfolk crop rotation system: no land remained fallow (unused) - New machinery - Fertilisers - The Rotherham plough.

1) Answer:

When and where did the Industrial Revolution begin?
Where did the Industrial revolution spread to afterwards?
What new energy sources were introduced?
What replaced manual labour?
Which factors lead to a demographic revolution?
Which elements lead to a revolution in agriculture?

2) Match these pictures to an idea related either to the Industrial Revolution, the demographic Revolution or the Agricultural Revolution:
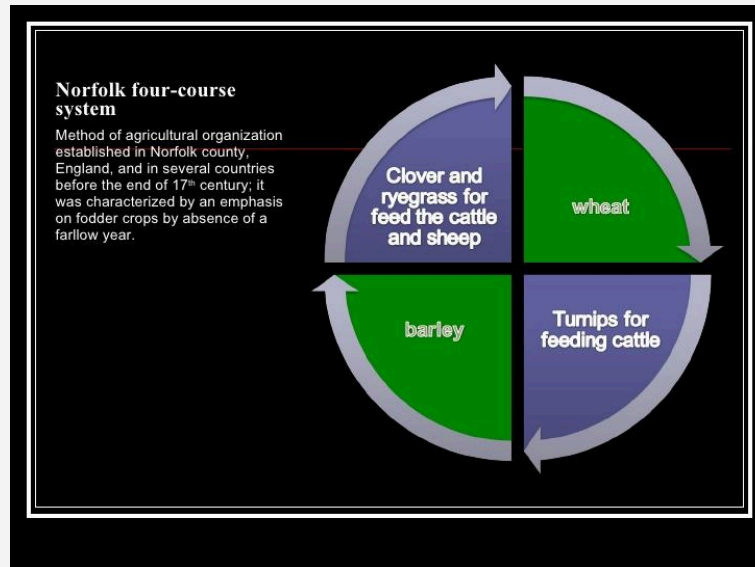
COAL, ROTHERHAM PLOUGH, VACCINATION, CROP, FALLOW, STEAM

a	b	c	d
e	f		

3) Write six sentences including the six words/ideas above.
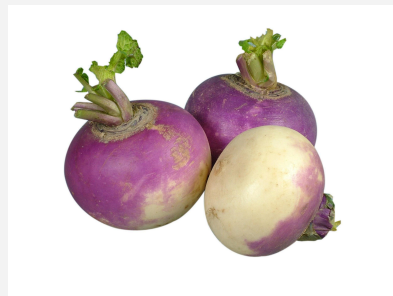
THE NORFOLK SYSTEM

It was a system in which four crops were rotated instead of three. This system ended the fallow field, and replaced it with turnips and clover. These made very good food for cattle and also enriched the soil with nutrients.

Norfolk four-course system

Method of agricultural organization established in Norfolk county, England, and in several countries before the end of 17th century; it was characterized by an emphasis on fodder crops by absence of a farllow year.

Clover and ryegrass for feed the cattle and sheep

wheat

Turnips for feeding cattle

barley

4) Identify the crops cultivated each year. Find Spanish translations for each word.

YEAR 1

YEAR 2

YEAR 3

YEAR 3

5) Answer:

How many crops were rotated in the Norfolk System?
How many crops were rotated in the previous system?
What is the best advantage to this new system?
What are turnips used for?
What are clover and ryegrass used for?

6) Look at the chart and fill this table with the main differences between wheat and barley

Barley vs. Wheat

Summer
harvested in warm season
used in cereal and beer production
barley can be cooked whole
faces the ground

Winter
harvested in cooler season
used in making bread and flour
wheat has to be milled first
looks up to the sky

|	BARLEY	WHEAT
Spanish translation		
Time of the year when it is cultivated		
Uses		
Plant shape		

MACHINES, STEAM AND FACTORIES

The most important technological innovation during the industrialisation was the introduction of <u>machinery</u>. Machines helped to increase productivity and reduce costs.

Early machines were powered by humans and then later by hydropower. However, it was <u>the steam engine</u>, invented by James Watt, that became a symbol of the Industrial Revolution and triggered it. The steam engine used coal to heat the water and produce the steam needed to activate it.
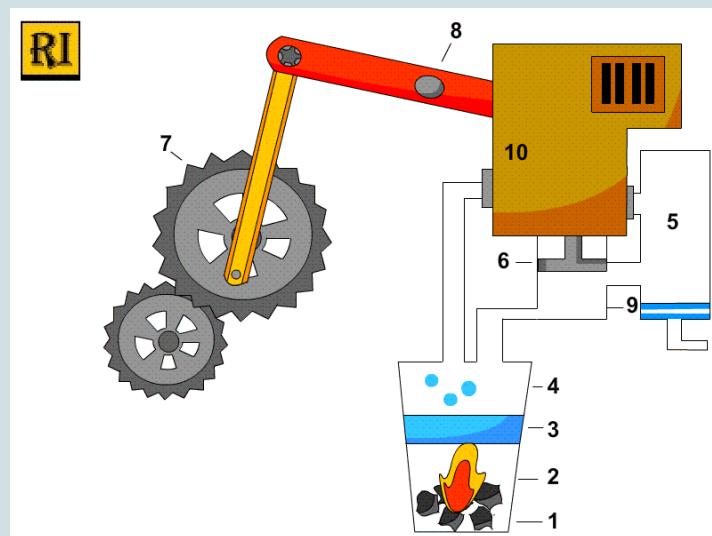
In the meantime, large buildings called <u>factories</u> were created in order to house the machinery and workers under one roof. Work in the factories was divided up and each worker carried out only a part of the production process.
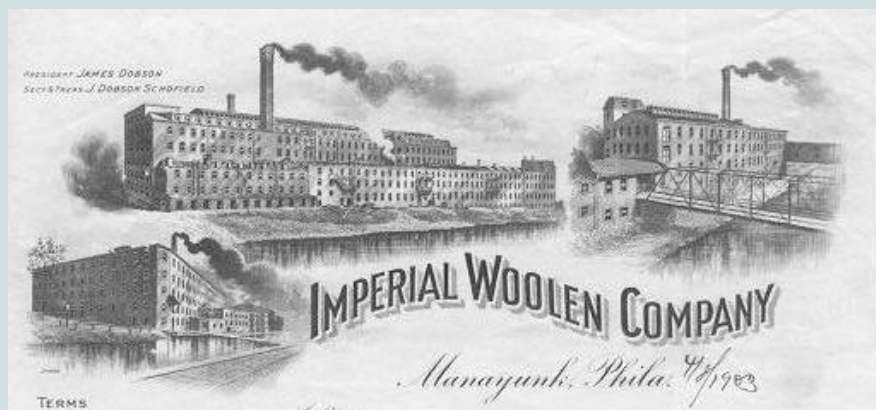
7) Answer:

What was the most important technological innovation of the Industrial Revolution?
How were machines helpful?
What energy did early machines use?
Who invented the steam engine?
How did the steam engine work?
Why were factories created?
How was the work in factories organised?

6) TRUE OR FALSE. Correct false statements to make them true.

Machines helped to decrease productivity and rise costs.
The steam engine triggered the Industrial Revolution.
The steam engine used oil to heat the water and produce steam.
Factories were small workshops where only a few workers worked manually.
Work in the factories was divided up and each worker carried out only a part of the production process.