

# UNIT 8 BRITISH EMPIRE

George III

1760-1820

1820-1830

George IV

1830-1837

William IV

Victoria

1837-1901

1<sup>st</sup> Industrial Revolution

First industrial use of machines. The factory system was born in England.  
Better nutrition and medical progress: increase in population.  
From agricultural to industrial society: migration to the cities.

1770-1870

2<sup>nd</sup> Industrial Revolution

1870-1914

Invention of the steam engine.  
Dramatic improvement in transport and communications.  
Roads, canals and railways are built.

1 a. Read the text and look at picture one. Find a title for that text.



The teapot instructions manual  
Combustion engines  
Steam engines

Before combustion engines, people used steam engines to move trains and boats. The steam engine was the most important invention of the Industrial Revolution. It was the energy behind the most advanced textile inventions.

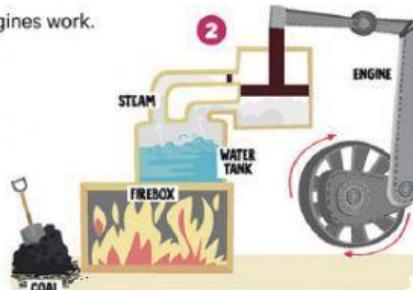
5 Have you ever watched a teapot bubbling? You probably noticed lots of steam coming out of the teapot. Watching a teapot can help you understand how a steam engine works.

↑ Tobin Declan, Easy Science For Kids (2017)

b. Look at picture two.

Reorganise the sentences (1-5) to explain how steam engines work.

- As the water boils, it produces steam.
- The coal burns at 1,400 degrees Fahrenheit.
- A fireman loads coal into the firebox and burns it.
- The steam pressure builds up and can be used to power a locomotive or other machines.
- The heat from the coal causes the water to boil.



c. What do a tea pot and a steam engine have in common?

water

heat

boiling

steam

pressure

d. Read the text.

Select the appropriate advantages of steam engine.

The steam engine helped to power the Industrial Revolution. Before steam power, factories and mills were powered by water, wind, horse, or man. Water was a good source of power, but factories had to be located near a river. Both water and wind power could be unreliable as sometimes rivers could dry up during a drought or freeze during the winter and wind didn't always blow. Steam power allowed for factories to be located anywhere. It also provided reliable power and could be used to power large machines.

Throughout the 1800s, steam engines were improved. They became smaller and more efficient. Large steam engines were used in factories and mills to power machines of all types. Smaller steam engines were used in transportation including trains and steamboats.

efficient machines

free location

quick and safe merchandise transportation

mass production

freedom from weather conditions

www.ducksters.com (2017)