

GIRLS' HIGH SCHOOL & COLLEGE, PRAYAGRAJ

WORKSHEET – 2

SESSION – 2020-21

CLASS – 6 A, B, C, D, E & F

SUBJECT – CHEMISTRY

Chapter 1- What is chemistry about?

Topic – The Founding Fathers of Modern Chemistry

[Parents are requested to guide and help their child in solving the questions related to the passage given below. For details you are suggested to search for topic related details on internet and you tube.]

Read the following passage to answer the questions-

Robert Boyle

Robert William Boyle was born to a noble family on 25 January 1627 in Ireland. He carried out his research in various subjects- physics, chemistry, oceanography, gemology, blood science, and so on. He was the first scientist to have prepared a substance simpler than water, which was later established to be hydrogen. He rejected Aristotle's theory that water is an element. Thus, modern chemistry can be said to have begun with him.



He studied the behaviour of gases. He discovered that, at a fixed temperature, the volume of a gas-

- decreases with increasing pressure, and
- increases with decreasing pressure.

This is called Boyle's law.

Robert Boyle died on 31 December 1691.

Antoine Lavoisier

Antoine Laurent de Lavoisier was born to a wealthy noble family in Paris on 26 August 1743. His most fundamental contribution to chemistry was that he changed the nature of the subject from qualitative to quantitative. He proved that by weight, one part of hydrogen reacts with eight parts of oxygen to form nine parts of water. Thus water is, in fact a compound, as we know today. Thus, it is considered that Lavoisier was the father of modern chemistry.



Lavoisier made other contributions, too, as outlined below-

- He identified hydrogen and oxygen. Hydrogen was first obtained by Robert Boyle and oxygen, by Priestley.
 - He proved that a substance burns only in the presence of oxygen. And also that, while burning, a substance combines with oxygen.
 - He suggested the metric system of weights and measures.
 - He established that sulphur is an element and not a compound.
 - He predicted the existence of silicon.
 - He suggested a better system of naming elements and compounds.
- He suggested that matter may change its form and shape but not its mass.

The end of this great scientist was extremely tragic. After the French Revolution, the political situation changed, and Lavoisier was declared a traitor. On false grounds, he was tried and guillotined at the age of 50 on 8 May 1794 in Paris.

Q1 - List any five contributions of Lavoisier in the field of chemistry?

Q2 - Who is known as the father of modern chemistry?

Q3- What does Boyle's Law explain?

Q4 – List any three subjects in which Boyle carried out his research.

Q5- Fill in the blanks-

- a) Hydrogen was first obtained by _____ .
- b) Boyle's Law explains the behaviour of _____ .
- c) _____ predicted the existence of silicon.
- d) Modern chemistry can be said to have begun with _____ .
- e) _____ established that sulphur is an element.

The end