

Chapter 18

An Indian Scientist

Homi Bhabha was born in Mumbai in the year 1909 in a wealthy Parsi family. He received his early education at the Cathedral and John Canon High School and the Institute of Sciences, Mumbai. After a brilliant academic career in India, with a degree in Electrical Engineering, he joined Carins College at Cambridge where his interest gradually shifted to Theoretical Physics. He completed his Ph. D in Theoretical Physics at Cambridge in the year 1934.



He continued his research in Theoretical Physics and worked with world famous scientists. He had won international fame as a physicist before he came back to India to serve his motherland in 1940.

On his return to India, Bhabha joined as a Reader in Theoretical Physics at the Institute of Sciences, Bangalore. He was appointed professor in 1942. His research made him a world known figure in the sphere of science. He worked with two great Indian scientists, Professor C.V. Raman and Vikram Sarabhai. Later, he joined the Tata Institute of Fundamental Research at Mumbai which he had helped to establish at Bombay in 1943. At that time there was no institution in the country which had facilities for original research work in science. Under his able guidance at this institute, India produced a group of brilliant and devoted scientists. Bhabha always encouraged development of original techniques and helped his co-workers to try them. The work of this group on air showers enjoys a very high reputation even today.

Pandit Jawaharlal Nehru, the first Prime Minister of India, was very much interested in the development of science in this country. He was highly impressed with the achievements of Bhabha, the great scientist. He appointed

Teacher's Note: Ask the children to talk about their favourite Indian Cricket player.

him the chairman of the Atomic Energy directly under the Prime Minister. He enjoyed the confidence and support of Pandit Nehru. This enabled him to push forward the atomic energy programme in this country.

Bhabha gave first priority to survey of natural resources, particularly materials directly associated with the atomic energy, such as uranium and thorium.

But after sometime he turned his attention to basic sciences like Physics, Chemistry and Biology. He was well aware that no purposeful programme could be carried out without good instruments. He, therefore, imported all the equipment which could not be produced in the country. He also gave a lot of encouragement to Indian Electronics Industry without which this Atomic Energy Programme could not make much head way.

In the year 1955 the first International Conference on the Peaceful uses of Atomic Energy was held at Geneva. Homi Bhabha was chosen as President of that memorial gathering in recognition of his work in this field. It was during this conference that, very generous offer from Canada was made to India of the gift under the Colombo Plan of a reactor, natural uranium and heavy water system. In this way the programme of the development of atomic energy for peaceful purposes made great progress in India. With Pandit Nehru's firm support, Bhabha could usher in an atomic age in India which resulted in a successful test explosion on May 18, 1974 in the desert of Rajasthan at Pokhran.

Alas ! Bhabha died in an air-crash on January 24, 1966. He was on his way to Vienna to attend a meeting of the Scientific Advisory Committee of the International Atomic Agency. His death shocked the scientists all over the world, particularly in India. Though he is dead, he will continue to live in the hearts of his country men. His example will continue to inspire future generations of Indian scientists.

Words to Learn

brilliant
memorial

academic
inspire

fame
generations

reputation

● Skill Test ●

WORK OUT

A. Answer the following questions :

1. When and where was Homi Bhabha born ?
.....
2. Where did Bhabha receive his early education ?
.....
3. When did Bhabha return to India ?
.....
4. What did Bhabha do to push the atomic energy programme in the country ?
.....
5. What did Canada offer to India under the Colombo plan ?
.....

B. Complete these sentences in your own words :

1. Homi Bhabha was born
.....
2. Sachin played his first test match
.....
3. He is lovingly called
.....
4. He has received the great honour
.....

GRAMMAR

Divide the sentences into subjects and predicates :

1. *Homi Bhabha / Was born in Mumbai.*
Subject Predicate
2. Professor C.V. Raman and Vikram Sarabhai joined the Tata Institute of Fundamental Research.
3. Bhabha gave first priority to survey of natural resources.
4. His death shocked the scientists all over the world.

VOCABULARY

A. Where would you find these people ? Match the terms with the places :

Example : A *crowd* is a number of people.

- | | |
|-----------------|------------|
| 1. Audience | playground |
| 2. Students | stadium |
| 3. Spectators | auditorium |
| 4. Team | ship |
| 5. Crew | classroom |
| 6. Congregation | church |

B. Who is a scientist ?

A **scientist** is a person who studies and investigates scientific subjects.

Now tell who are these people :

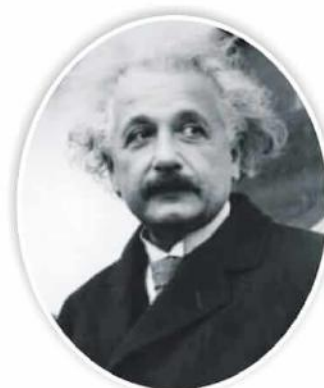
- | | |
|--------------|-------|
| 1. Priest | |
| 2. Librarian | |
| 3. Botanist | |
| 4. Optician | |
| 5. Nurse | |
| 6. Conductor | |

C. Match the opposites :

- | | |
|------------|-------------|
| Wealthy | late |
| early | indirectly |
| complete | purposeless |
| won | export |
| directly | light |
| first | incomplete |
| purposeful | poor |
| import | last |
| heavy | lose |

COMPOSITION

Look at these photographs of some famous scientists :



Try to recall the names of these scientists and invention/discoveries which they made. Write about them here :

1.
2.
3.
4.
5.
6.