

## Chapter 3: Great Scientists

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### ENGLISH WORKSHOP [PAGE 54]

#### English workshop | Q 1.(a) | Page 54

**Write what is implied in the following sentence.**

But few know his inspirational life story, which is all about courage and fighting against the odds.

(What does it tell you about Faraday's life ?)

#### **SOLUTION**

Faraday was born into an extremely poor family. He had a speech defect that ended his formal education. He wanted to become a scientist. He came across a lot of difficulties and failures but through courage and determination, he achieved fame and name.

#### English workshop | Q 1. (b) | Page 54

**Write what is implied in the following sentence.**

Even then Davy did not have much hope for Faraday.

(What do the words 'even then' suggest ?)

#### **SOLUTION**

Davy hired Faraday as his Secretary. Faraday worked relentlessly and became indispensable to Davy. 'Even then' suggests that even though Faraday did everything to prove himself, Davy did not believe that Faraday was capable of doing anything great.

#### English workshop | Q 1. (c) | Page 54

**Write what is implied in the following sentence.**

People started telling Davy that of all his discoveries, the best was Faraday himself.

(What does it suggest about Davy's work?)

#### **SOLUTION**

The line suggests that the people felt that Davy had made discoveries which were good but Faraday's discoveries stood out in comparison to Davy's work.

#### English workshop | Q 2 | Page 54

Break the passage into convenient smaller sections. Give sub-headings or titles to each section.

#### **SOLUTION**

1st para: Michael Faraday, an inspiration

2nd para: Unhappy childhood

3rd para: Reading, an obsession

4th para: Twist in life

### English workshop | Q 3 | Page 54

List the different gadgets and instruments mentioned in the passage. Find more information about them (at least 3), using the internet.

#### **SOLUTION**

##### **Gadgets and Instruments:**

Fan, air conditioners, sewing machines, power tools, cars, trains, airplane engines, induction motors, telescopes, Bavarian glass, microscopes, electrical generators, light bulbs. Now you add to the list of gadgets and instruments. You can add your own too.

##### **Microscope:**

It is an instrument used to see objects that are too small to be seen by the naked eye. Anton Van Leeuwenhoek (1632- 1723), a Dutch scientist, who in the late 17th century became the first man to make and use a real microscope. All microscopes came with a lens that can magnify 40 times the normal size.

##### **Electrical generator:**

It was invented by Michael Faraday in 1831. It is a device that converts mechanical energy into electrical energy. Sources of mechanical energy include steam, turbines, gas turbines, water turbines, etc. It works on the principle of electromagnetic induction.

##### **Fan:**

A fan is a machine used to create flow within a fluid, typically a gas such as air. The fan consists of a rotating arrangement of blades which act on the fluid. The fan was invented by Schuyler Skaats Wheeler in 1882.

### English workshop | Q 4. (a) | Page 54

**Find out more about the following scientist with the help of the internet.**

Michael Faraday

#### **SOLUTION**

Michael Faraday (1791-1867) was an English (British) Scientist who contributed to the study of electromagnetism and electrochemistry. He was highly influenced by Humphry Davy and William Thomas Brande. He had notable awards to his credit, a few being Royal Medal, Copley Medal, Rumford Medal, Albert Medal.

### English workshop | Q 4. (b) | Page 54

**Find out more about the following scientist with the help of the internet.**

Humphry Davy

#### **SOLUTION**

Humphry Davy (1778-1829) was a British scientist. It was he who found out that the inhalation of nitrous oxide produced surprising results, it came to be known as the

laughing gas. He was awarded a medal by Napoleon and he identified the element iodine for the first time. He is remembered for his discoveries of sodium, potassium, calcium, magnesium, etc. He was awarded the Copley Medal, Rumford Medal, Royal Medal.

### English workshop | Q 4.(c) | Page 54

**Find out more about the following scientist with the help of the internet.**

Thomas Edison

#### **SOLUTION**

Thomas Alva Edison (1847-1931) an American inventor and businessman, has been described as America's greatest inventor. He invented the photograph in 1877 because of which he came to be known as 'The Wizard of Monto Park'. Thomas Edison had hearing problems during his childhood which persisted. The phonograph was the first machine that could record the sound of someone's voice and play it back. Edison recited the nursery rhyme 'Mary had a little lamb' and the phonograph played the words back to him. This was invented by a man whose hearing was poor and thought himself as deaf. It was Edison who designed a system of power plants. He has got 1093 patents to his credit. Many awards to his credit. Some of them are Franklin Medal, Albert Medal, Technical Grammy Award, etc.

### English workshop | Q 4. (d) | Page 54

**Find out more about the following scientist with the help of the internet.**

James Maxwell

#### **SOLUTION**

James Oerk Maxwell(1831-1879) was a Scottish scientist in the field of mathematical physics. His most notable work was to formulate the classical theory of electromagnetic radiation. He is known as the Father of Modern Physics. His other contributions included producing the first color photograph taken in 1861 and many more. He earned an array of awards. To name a few, Rumford Medal, Keith, and. f06lr. J[q Hopkins prize, Adams prize. etc

### English workshop | Q 5 | Page 54

What is subject and predicate Explain with an example?

#### **SOLUTION**

Subject and predicate: A word or a phrase in a sentence that shows who or what does the action, is the subject.

The predicate is the part of a sentence that tells us something about the subject  
example: The baby is laughing.

**subject:** The baby

**Predicate:** is laughing.