



Grade IX

Lesson 4 - A Truly Beautiful Mind

Prose

Soul of the Chapter

Albert Einstein was born on March 14, 1879, in the German city of Ulm. He had a large head and his mother thought that he was a freak. He was a late talker. He could never adjust with his playmates who used to call him 'Brother Boring.' Albert had special interest in mechanical toys. He loved playing violin too. He went to a school in Munich. He was good at studies but he felt suffocated there. His headmaster believed that he would never succeed in his life.

Albert wanted to study at a university in Zurich where the system was more liberal. He went there and showed more interest in Physics and Mathematics. He met a fellow student, Mileva Maric, in the university. Later on, he married Mileva. Albert and Mileva had two sons but their marriage failed in 1919.

Albert worked as a technical expert in a patent office. He continued working secretly on his idea on relativity. In 1905, he published a paper on special theory of relativity. In 1915, he published his *General Theory of Relativity* and became famous. In 1933, Einstein emigrated to the United States. Five years later, the German scientists in Berlin discovered nuclear fission. The scientists in America were greatly disturbed. Albert wrote a letter to the President to apprise him of the extent of destruction the atom bomb could cause. His letter was taken very seriously by the President. The atomisation of Hiroshima and Nagasaki in 1845 shocked Albert Einstein. He was disturbed by the destruction and mindless use of science. He wrote a letter to the United Nations and suggested the formation of a world government but his letter had no effect.

He spent his later days in politics advocating for world peace and democracy. He died at the age of 76 in the year 1955.

Next Generation School



NCERT Questions

Thinking About the Text

1. Here are some headings for paragraphs in the text. Write the number(s) of the paragraph(s) for each title against the heading. The first one is done for you.

- i. Einstein's equation
- ii. Einstein meets his future wife
- iii. The making of a violinist
- iv. Mileva and Einstein's mother
- v. A letter that launched the arms race
- vi. A desk drawer full of ideas.
- vii. Marriage and divorce

i. 9 ii. 7 iii. 3 iv. 10 v. 15 vi. 8 vii. 11

2. Who had these opinions about Einstein?

- i. He was boring.
- ii. He was stupid and would never succeed in life.
- iii. He was a freak.

- i. Einstein's playmates thought that he was boring
- ii. Einstein's headmaster thought that he was stupid and would never succeed at anything in life.
- iii. Einstein's mother thought that he was a freak.

3. Explain what the reasons for the following are.

- i. Einstein leaving the school in Munich for good.
- ii. Einstein wanting to study in Switzerland rather than in Munich.
- iii. Einstein seeing in Mileva an ally.
- iv. What do these tell you about Einstein?

- i. Einstein left the school in Munich for good because he hated the school's regimentation.
- ii. Einstein wanted to study in Switzerland rather than in Munich because it was a more liberal city.
- iii. Einstein found in Mileva an ally because she disapproved of the "philistines" or the people who did not like art, literature or music.



iv. These told about Einstein that he loved freedom. He was liberal and cultured person.

4. What did Einstein call his desk drawer at the patent office? Why?

Einstein called his desk drawer at the patent office the "bureau of theoretical physics". He used to store his secretly developed ideas in the drawer.

5. Why did Einstein write a letter to Franklin Roosevelt?

Einstein wrote a letter to Franklin Roosevelt to warn about bomb effect and also wanted to encourage them to make a bomb to utilize its destruction potential.

6. How did Einstein react to the bombing of Hiroshima and Nagasaki?

Einstein was deeply shaken by the disaster in Hiroshima and Nagasaki. He wrote a public missive to the United Nations. He proposed the formation of a world government to stop the nuclear weapons.

7. Why does the world remember Einstein as a "World citizen"?

Einstein is remembered as a "world citizen" as much as a genius scientist because of his efforts towards world peace and democracy, and for his crusade against the use of arms.

8. Here are some facts from Einstein's life. Arrange them in chronological order.

1. Einstein publishes his special theory of relativity.
2. He is awarded the Nobel Prize in Physics.
3. Einstein was a letter to Us President, Franklin D. Roosevelt, and warns against Germany's building of an atomic bomb.
4. Einstein attends a high school in Munich.
5. Einstein's family moves to Munich.
6. Einstein's is born in the German city of Ulm.
7. Einstein joins a university in Zurich, where he meets Mileva.
8. Einstein dies.
9. He provides a new interpretation of gravity.
10. Tired of the school's regimentation, Einstein withdraws from school.
11. He works in a patent office as a technical expert.
12. When Hitler comes to power, Einstein leaves Germany for the United States.

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2. Einstein attends a high school in Munich.





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11. Einstein wrote a letter to US President, Franklin D. Roosevelt, and warns against Germany's building of an atomic bomb.
12. Einstein dies.

Thinking About Language

I. Here are some sentences from the story. Choose the word from brackets which can be substituted for the italicised words in the sentences.

1. A few years later, the marriage *faltered*. (Failed, broke, became weak)
2. Einstein was constantly *at odds* with people at the university. (On bad terms, in disagreement, unhappy)
3. The newspapers *proclaimed* his work as "a scientific revolution". (Declared, praised, showed)
4. Einstein got ever more involved in politics, *agitating* for an end to the arms buildup. (Campaigning, fighting, supporting)
5. At the age of 15, Einstein felt so *stifled* that he left the school *for good*, (Permanently, for his benefit, for a short time)
6. Five years later, the discovery of nuclear fission in Berlin had American physicist *in a uproar*. (In a state of commotion, full of criticism, in a desperate state)
7. Science wasn't the only thing that *appealed* to the dashing young man with the walrus moustache.

1. became weak

2. In disagreement

3. Declared

4. Campaigning

5. permanently

6. In a state of commotion



7. Interested

II. Study the following sentences.

- Einstein became a gifted amateur violinist, maintaining this skill throughout his life.
- Letters survive in which they put their affection into words, mixing science with tenderness.

The parts in italics in the above sentences begin with -ing verbs, and are called participial phrases. Participial phrases say something more about the person or thing talked about or the idea expressed by the sentence as a whole. For example:

- Einstein became a gifted amateur violinist. He maintained this skill throughout his life.

Q. Complete the sentences below by filling in the blanks with suitable participial clauses.

The information that has to be used in the phrases is provided as a sentence in brackets.

1. _____, the fire-fighters finally put out the fire. (They worked round the clock.)
2. She watched the sunset above the mountain, _____ (She noticed the colours blending softly into one another.)
3. The excited horse pawed the ground rapidly, _____ (While it neighed continually.)
4. _____, I found myself in Bangalore, instead of Benaras. (I had taken the wrong train.)
5. _____, I was desperate to get to the bathroom. (I had not bathed for two days)
6. The stone steps, _____ needed to be replaced. (They were worn down).
7. The actor received hundreds of letters from his fans, _____ (They asked him to send them his photograph.)

1. Working round the clock, the fire-fighters finally put out the fire.
2. She watched the sunset above the mountain, noticing the colours blending softly into one another.
3. The excited horse pawed the ground rapidly, neighing continually.



4. Having taken the wrong train, I found myself in Bangalore, instead of Benaras.
5. Having not bathed for two days, I was desperate to get to the bathroom.
6. The stone steps, being worn down, needed to be replaced.
7. The actor received hundreds of letters from his fans, asking him to send them his photograph.

NCERT Workbook Questions

1. Read the paragraphs mentioned against each explanation and find out the words in that paragraph which best match the explanation given. Refer to the chapter 'A Truly Beautiful Mind' given in your textbook, Beehive.
 - a. A word used disapprovingly to talk about a person who is unusual and doesn't behave like others. _____ (paragraph 1)
 - b. Taking part in an activity for pleasure, not as a job. _____ (paragraph 3)
 - c. Respecting and allowing many different types of beliefs or behaviour. _____ (paragraph 5)
 - d. A person who is lacking in or hostile or smugly different to cultural values, intellectual pursuits, etc. _____ (Paragraph 7)
 - e. Relating to work that needs special training or education. _____ (paragraph 8)
- a. Freak b. Amateur c. Liberal d. Ally e. Expert

Solved Question Bank

- Q. Read the following extracts carefully and answer the questions that follow:
1. When he finally did learn to speak, he uttered everything twice. Einstein did not know what to do with other children, and his playmates called him 'Brother Boring'.
 - a. After Einstein learnt to speak, he articulated everything _____ times.
Two
 - b. Einstein's companions used to call him _____.
'Brother Boring'
 - c. Einstein was probably called 'Brother Boring' because he spoke everything twice.
True





d. Antonym of 'enemies' in the above passage is _____.

'Playmates'

2. The previous year, Albert's parents had moved to Milan, and left their son with relatives. After prolonged discussion, Einstein got his wish to continue his education in German-speaking Switzerland.

a. Albert was left under the care of his _____ after his parents moved to _____.

Relatives, Milan

b. Einstein had a desire to resume his study in _____.

German - speaking Switzerland.

c. Before Einstein could continue his education in Switzerland, he had a long discussion with his family and relatives.

True

d. The synonym of 'dialogue or conversation' in the above passage is _____.

'Discussion'

3. He also felt a special interest in a fellow student, Mileva Maric, whom he found to be a "clever creature". This young Serb had come to Switzerland because the University in Zurich was one of the few in Europe where women could get degree. Einstein saw in her an ally against the 'Philistines' - those people in his family and at the university with whom he was constantly at odds. The couple fell in love.

a. Einstein thought that _____ was very clever, sharp and intelligent.

Mileva Maric.

b. Women could get degrees in Europe only at a _____.

University in Zurich

c. Mileva Maric was Einstein's opponent against 'Philistines'.

False

d. _____ means 'people indifferent to art, literature or music'

'Philistines'

4. While Einstein was solving the most difficult problem in physics, his private life was unravelling. Albert had wanted to marry Mileva right after finishing his studies, but his mother was against it. She thought Mileva, who was three years older than her son,





was too old for him. She was also bothered by Mileva's intelligence. "She is a book like you", his mother said. Einstein put the wedding off.

a. For the world, Einstein was solving complicated _____.

Problems in physics

b. Einstein's mother was against the alliance as she thought _____.

Mileva was too old for him.

c. Mileva's intelligence bothered Einstein's mother.

True

d. "Put something off" can also mean _____. (write in one word)

'Postpone'

5. At the urging of a colleague, Einstein wrote a letter to the American President, Franklin D. Roosevelt, on 2 August, 1939, in which he warned: "A single bomb of this type..... exploded in a port, might very well destroy the whole port together with some of the surrounding territory". His words did not fail to have an effect. The Americans developed the atomic bomb in a secret project of their own, and dropped it on the Japanese cities of Hiroshima and Nagasaki in August 1945.

a. Einstein wrote to the American President, Franklin D. Roosevelt, on the request of his _____.

Colleague

b. He wrote to the American President, Franklin D. Roosevelt to warn him against the _____.

Atomic bomb

c. An atomic bomb was developed secretly by the Japanese.

False

d. The word in the passage that means shattered or burst violently is _____.

'Exploded'

6. Einstein was deeply shaken by the extent of the destruction. This time he wrote a public missive to the United Nations. In it he proposed the formation of a world government. Unlike the letter to Roosevelt, this one made no impact. But over the next decade, Einstein got ever more involved in politics - agitating for an end to the arms build-up and using his popularity to campaign for peace and democracy.





- a. **Massive _____ moved Einstein deeply.**
Destruction
- b. **In a public letter to the United Nations, Einstein recommended the _____.**
Formation of a world government
- c. **Einstein never used his name and fame to campaign for peace and democracy.**
False
- d. **The world that means 'to argue forcefully in public, in order to achieve or change something'.**
'Agitating'
-

Short Answer Questions

1. What did Einstein call his desk drawer at the patent office? Why?

Einstein called his desk drawer at the patent office the 'Bureau of Theoretical Physics'. It was named so because he was always busy in developing new ideas. He kept all the papers related to his ideas in the desk while in the office.

2. Why did Einstein write a letter to Franklin Roosevelt?

Einstein was a peace-loving person. He feared that Nazis could make an atom bomb and use that against the United States. He wrote a letter to President Roosevelt warning against the approaching threat.

3. How did Einstein react to the bombing of Hiroshima and Nagasaki?

Einstein knew that this invention would be misused. He was deeply shaken by the extent of destruction in Hiroshima and Nagasaki. He immediately wrote a letter to the United Nations and proposed the formation of a world government.

4. What did the headmaster think about Einstein?

The headmaster did not like Einstein. He thought that Einstein was a stupid boy. Once he told his father that whatever profession he chose for Einstein, he would never make a success in his life. He thought that Einstein was incapable of achieving in life.

5. How did Einstein fare in high school?

Einstein was a bright student. While studying in Munich in the high school, he scored good marks in almost all the subjects. He had special interest in Maths and Physics. Later on, he became a great scientist.





6. When and where did Einstein meet Mileva Maric?

Einstein met Mileva Maric at a university in Zurich. He found her to be a clever girl. She had come to study in Switzerland. He developed special interest in her. Later they got married.

7. What was the invention of Einstein?

Einstein published his *General Theory of Relativity* in the year 1915. His theory gave a new interpretation of gravity. His theory was proved accurate in 1919.

8. Why does the world remember Einstein was as a World Citizen?

Einstein is remembered as a world citizen because he cared for the whole mankind. Using his popularity as a renowned person, he campaigned for world peace and democracy. People admired him for his good deeds.

9. Why did Einstein not mix up with other children?

Einstein did not mix up with other children in his childhood. He learnt to speak very late. Till two and a half years he did no talking. He used to utter every word twice. He remained aloof and did not mix up socially with the children.

Long Answer Questions

1. Albert Einstein was an unusual child. How? He was different from others in many ways. Do you think that those who think differently succeed in their life like Einstein? Comment.

Albert Einstein was an unusual child. He did not have any indication of his greatness. He had a larger than usual head. His mother thought him to be a freak. He was a late talker. When he started to speak, he said everything twice. He liked to play by himself and did not enjoy the company of his playmates. They used to call him 'Brother Boring'. He had special interest in mechanical toys. At school, his headmaster thought that he was a useless fellow and would never succeed in his life. But he proved all the speculations wrong. Yes, it is true that a person who thinks differently has more creative ideas. He looks at the things from a different angle. If Albert Einstein had been a normal student, he would not have been a great scientist.





2. Einstein succeeded in his professional life but failed miserably in his personal life. Do you think that family life is more important than the professional life? How can one make both personal and professional life happy? Why could Einstein not balance his family and professional life?

At the university in Zurich, Einstein met Mileva Maric. Both fell in love and decided to marry. They married after a few years. Mileva was equally ambitious and intelligent. She realised that her intellectual ambition was disappearing. They became an unhappy couple as they fought continuously. Finally, they got divorced in 1919. Albert Einstein succeeded in his professional life but did not have a happy married life. Both Einstein and Mileva were genius, ambitious and successful in their professional life. But they lacked personal bond as they were too busy in their professional work to think about their families. One needs to understand one another. One has to respect and recognise the work of the another. All the differences should be resolved amicably. Einstein and Mileva could not balance their personal life because of their professional differences.

3. Why did Albert Einstein leave the school at the age of fifteen? Do you think a liberal environment in the school helps in learning in a better way?

Albert Einstein was quite good at studies and scored good marks in almost all the subjects. He went to a high school in Munich. He was never comfortable in the school. He did not like the strict discipline in the school. He had constant confrontation with his teachers. His headmaster thought that he would never succeed in his life. He could not adjust himself in the school and left it at the age of 15 years. Einstein left his formal school because he felt suffocated due to strict discipline at the school. He felt that he was not given an opportunity to think and work according to his own wish. He needed a liberal environment where he could think freely. He succeeded at the University of Zurich where the environment was more liberal. One learns more when one is allowed to learn according to one's capacity. Better learning takes place when the environment in the school is liberal and student-friendly.

4. Why was Albert Einstein called 'Brother Boring'? Do you also think so? How do you avoid to be called 'Brother Boring' in your school or at home?

Albert Einstein used to play with mechanical toys. He never made up with his friends. That is why he was called 'Brother Boring'. No, I don't think so. He was an introvert whose likings were different from those of his friends. I feel due to being a scientific genius he





was not able to cope up with his classmates. He had different interests and did not take interest in his class fellows. He found that they did not have scientific aptitude. It made him an introvert. I also have different interests but I am not introvert. I play with my class fellows and take interest in their activities too. It brings us closer. We share our joy and happiness. When it is my time, I entertain myself with my own taste and interests. This helps me in mixing up with everyone, I am different from others but still not Brother Boring.

5. Why do you think, Einstein's personal life, was not happy? According to you, what was the main reason for their unhappy married life? Do you think it is a common problem nowadays?

Einstein developed a special interest in a fellow student Mileva Maric. He wanted to marry her but their families did not agree. However, later they married. Both were intelligent and ambitious. They had two sons. But after some time professional ambitions disturbed their family life. Perhaps their interests clashed. Their family life, unfortunately, was not successful. After many years of differences and constant fighting they finally got divorced. I think their professional rivalry was the main reason for their troubled family life. Yes, nowadays professional rivalry, personal differences, ambition and conflicts come in the way of a happy married life of a couple.

6. Einstein was deeply shaken by the extent of the destruction. What kind of destruction had shaken Einstein? Was he a true scientist?

Einstein was a genius. His contribution to science is unparalleled. Einstein was a great visionary. He was against arms build-up. He advocated peace and democracy in the world. In 1938, the discovery of nuclear fission in Berlin made him very upset. He was afraid that his invention might be misused. The Americans misused it and made an atomic bomb. The atom bomb was used in the World War. Two cities of Japan were bombed in August 1945. This destruction disturbed him. He had never thought of such a destruction. He was a true scientist because he wanted his invention to be used for human welfare. He was in favour of world peace and democracy.

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