

The header features a light blue background with a rainbow on the left and a landscape with a mountain, a sailboat, and birds on the right. A blue decorative bar runs across the middle. On the left, a white box with a blue border contains the text 'Unit 1'.

Unit

1

Glimpses of Greatness

'Success is not final, failure is not fatal: it is the courage to continue that counts.'

- Winston Churchill

About the Unit

Success is undoubtedly the fruit of perseverance. The great achievements of others can inspire us, and we, in turn, can be an inspiration to many. The first unit of this textbook 'Glimpses of Greatness' highlights the personality traits of some great people. It throws light on the qualities that are to be developed so as to become successful in life.

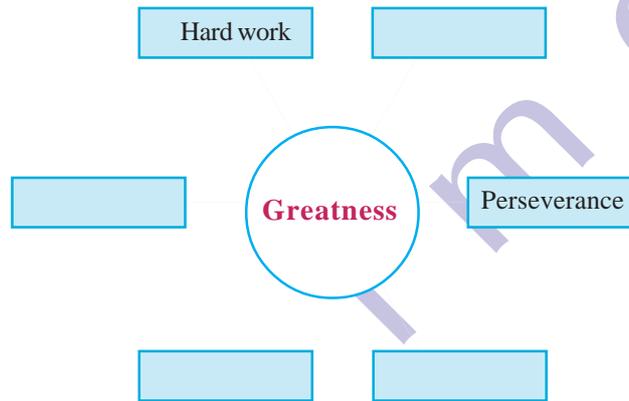
This unit includes an anecdote from the life of Abraham Lincoln – 'Abe's First Speech,' a story by Liam O' Flaherty – 'His First Flight,' a speech by Dr A. P. J. Abdul Kalam – 'I will Fly,' a profile of Stephen Hawking – 'Quest for a Theory of Everything' and a poem by Rudyard Kipling – 'If'. It aims at equipping the learners to face the challenges of life with courage, confidence and perseverance, and to become unique in their own ways. While doing so, they must uphold the values of life. The unit also aims at building confidence in learners to use English effectively and to help them acquire a strong linguistic foundation that will improve their application of the language in other contexts.

Let's begin

1. 'Some are born great; some achieve greatness; some have greatness thrust upon them.' – William Shakespeare (*Twelfth Night*).

Is greatness an innate trait? Is it acquired by the successful or thrust upon them? Discuss.

2. What qualities make people great? Discuss with your friends and write them in the boxes below.



3. We strive to reach heights, achieve greatness and be successful in life. But at times, it seems difficult.

Now, look at the picture given below.



- What thoughts and feelings does it evoke in you?
- Give a suitable caption to the picture.
- Have you had any similar experience? If so, share it with your friends.

4. Read and discuss:

- *Abraham Lincoln is one of the greatest of American statesmen. He is known for his celebrated speeches. Here is the story of his first speech as a little boy.*

ABE'S FIRST SPEECH

'Abe' made his first speech when he was a boy, going barefoot, his trousers held up by one suspender, and his shock of hair sticking through a hole in the crown of his cheap straw hat.

Abe, in company with his rail-splitting* companion Dennis Hanks, attended a political meeting, which was addressed by a typical stump speaker**—one of those loud-voiced fellows, who shouted at the top of his voice and waved his arms wildly.

At the conclusion of the speech, which did not meet the views either of Abe or Dennis, the latter declared that Abe could make a better speech than that. Whereupon, he got a dry goods box and called on Abe to reply to the campaign orator.

Little Abe threw his old straw hat on the ground, and, mounting the dry goods box, delivered a speech which held the attention of the crowd, and won him considerable applause. Even the campaign orator admitted that it was a fine speech and answered every point in his own 'oration'.

Dennis Hanks, who thought Abe was the greatest man who ever lived, was delighted, and he often spoke of how young Abe got the better of the trained campaign speaker.

(From 'Abe Lincoln's Anecdotes and Stories' by R. D. Wordsworth.)

**Think and respond:**

- What made little Abe stand on the dry goods box and deliver the speech?
- Do you think good dress, appearance, position in society, etc., are needed to present yourself before the public for a speech?
- What is the role of Dennis in bringing out the best in young Abe?
- Do you think that everybody has some potential in them? Some people take the initiative, while others do not dare to showcase their talents. What do you think are the reasons for this? Write down your views.
- Lack of opportunity ○ Lack of confidence
- _____ ○ _____

* Lincoln has often been portrayed as a 'rail-splitter,' wielding a heavy axe and splitting logs to make rail fences.

** A **stump speech** was a speech addressed to the general public during a political or social campaign, where political candidates stood upon tree stumps to deliver a speech — the custom in 19th century America.

I. Read and reflect:

Let's read the story of a young seagull that was afraid to make its first flight, and how its parents goaded it into action and thereby equipped it to face the challenges of life.

HIS FIRST FLIGHT

Liam O'Flaherty



The young seagull was alone on his ledge. His two brothers and his sister had already flown away the day before. He had been afraid to fly with them.

- Why was the young seagull afraid to fly?

Somehow, when he had taken a little run

forward to the brink of the ledge and attempted to flap his wings, he became afraid. The great expanse of sea stretched down beneath, and it was such a long way down — miles down. He felt certain that his wings would never support him; so he bent his head and ran away back to the little hole under the ledge where he slept at night.

Even when each of his brothers and his little sister, whose wings were far shorter than his own, ran to the brink, flapped their wings, and flew away, he failed to muster up courage to take that plunge which appeared to him so desperate. His father and mother had come around calling to him shrilly, scolding him, threatening to let him starve on his ledge, unless he flew away. But for the life of him, he could not move.

- What did the parents do to motivate the young bird when it failed to muster up enough courage to fly?

That was twenty-four hours ago. Since then, nobody had come near him. The day before, all day long, he had watched his parents flying about with his brothers and sister, perfecting them in the art of flight, teaching them how to skim the waves and how to dive for fish. He had, in fact, seen his older brother catch his first herring and devour it, standing on a rock, while his parents circled around raising a proud cackle. And all the morning, the whole

- How did the parents support and encourage the young seagull's brothers and sister?

family had walked about on the big plateau midway down the opposite cliff, laughing at his cowardice.

The sun was now ascending the sky, blazing warmly on his ledge that faced the south. He felt the heat because he had not eaten since the previous nightfall. Then, he had found a dried piece of mackerel's tail at the far end of his ledge. Now, there was not a single scrap of food left. He had searched every inch, rooting among the rough, dirt-caked straw nest where he and his brothers and sister had been hatched. He even gnawed at the dried pieces of eggshell. It was like eating a part of himself.

- Cite an instance which shows the pathetic condition of the young bird.

He then trotted back and forth from one end of the ledge to the other, his long gray legs stepping daintily, trying to find some means of reaching his parents without having to fly. But on each side of him, the ledge ended in a sheer fall of precipice, with the sea beneath. And between him and his parents, there was a deep, wide crack.

- How did the bird try to reach its parents without having to fly?

Surely he could reach them without flying if he could only move northwards along the cliff face? But then, on what could he walk? There was no ledge, and he was not a fly. And above him, he could see nothing. The precipice was sheer, and the top of it was, perhaps, farther away than the sea beneath him.

- Why could the seagull not succeed in its attempt?

He stepped slowly out to the brink of the ledge, and, standing on one leg with the other leg hidden under his wing, he closed one eye, then the other, and pretended to be falling asleep. Still, they took no notice of him. He saw his two brothers and his sister lying on the plateau dozing, with their heads sunk into their necks. His father was preening the feathers on his white back. Only his mother was looking at him.

She was standing on a little high hump on the plateau, her white breast thrust forward. Now and again, she tore at a piece of fish that lay at her feet, and then scraped each side of her beak on the rock. The sight of the food maddened him. How he loved to tear food that way, scraping his beak now and again

- Do you think that the young seagull's parents were cruel?

to whet it! He uttered a low cackle. His mother cackled too, and looked at him.

'Ga, ga, ga,' he cried, begging her to bring him over some food. 'Gawl-ool-ah,' she screamed back mockingly. But he kept calling plaintively, and after a minute or so, he uttered a joyful scream. His mother had picked up a piece of fish and was flying across to him with it. He leaned out eagerly, tapping the rock with his feet, trying to get nearer to her as she flew across. But when she was just opposite to him, abreast of the ledge, she halted, her legs hanging limp, her wings motionless, the piece of fish in her beak almost within reach of his beak.

- Can you justify the attitude of the parents?
- Your parents sometimes behave in the same manner. They may seem cruel and unrelenting. Does it mean that they do not love you?

He waited a moment in surprise, wondering why she did not come nearer, and then maddened by hunger, he dived at the fish. With a loud scream, he fell outwards and downwards into space. His mother had swooped upwards. As he passed beneath her, he heard the swish of her wings.

- What prompted the young seagull to fly finally?

Then a monstrous terror seized him and his heart stood still. He could hear nothing. But it only lasted a moment. The next moment, he felt his wings spread outwards. The wind rushed against his breast feathers, then under his stomach and against his wings. He could feel the tips of his wings cutting through the air. He was not falling headlong now. He was soaring gradually, downwards and outwards. He was no longer afraid. He just felt a bit dizzy. Then, he flapped his wings once and he soared upwards.

- Why was the young bird terrified? How did it overcome its fear?

He uttered a joyous scream and flapped them again. He soared higher. He raised his breast and banked against the wind. 'Ga, ga, ga. Ga, ga, ga.' 'Gawl-ool-ah.' His mother swooped past him, her wings making a loud noise. He answered her with another scream. Then, his father flew over him screaming. Then, he saw his two brothers and sister flying around him, soaring and diving.

- How did the family support the seagull?

Then, he completely forgot that he had not always been able to fly, and commenced to dive and soar, shrieking shrilly.

He was near the sea now, flying straight over it, facing out over the ocean. He saw a vast green sea beneath him, with little ridges moving over it; he turned his beak sideways and crowed amusedly. His parents and his brothers and sister had landed on this green floor in front of him. They were beckoning to him, calling shrilly. He dropped his legs to stand on the green sea. His legs sank into it. He screamed with fright and attempted to rise again, flapping his wings. But he was tired and weak with hunger and he could not rise, exhausted by the strange exercise. His feet sank into the green sea, and then his belly touched it and he sank no farther.

- Why couldn't the young seagull stand on the green sea?

- Do you think that the bird's parents loved him? Why?

He was floating on it. And around him, his family was screaming, praising him, and their beaks were offering him scraps of dog-fish.

He had made his first flight.

Your teacher will help you watch the visualisation of the story.

Glossary:

ledge (n)	:	a narrow horizontal projection from a vertical surface
muster up (v)	:	gather
skim (v)	:	glide
trot (v)	:	run at a moderate pace
precipice (n)	:	very steep rock face/cliff
preen (v)	:	clean
whet (v)	:	sharpen
plaintively (adv)	:	sadly
monstrous (adj)	:	frightening

About the Author



Liam O'Flaherty (1896-1984) was an Irish novelist and a short-story writer. His works are noted for their psychological insight into life's problems and the ways of overcoming them.

His First Flight relates the importance of independence and self-confidence, as well as the need to remain involved in family life. Through the story of the birds, the writer conveys the importance of self-esteem and self-reliance.

Activity I (Read and respond)

- What is the theme of the story?
- What do you think is the real crisis faced by the young bird?
- What is your impression of the reaction of the parents in the story?

- Identify the words or expressions used in the story to express thoughts, attitudes, movements, sounds, emotions, appearance, descriptions of the birds/ places, etc.

e.g. *description of the young seagull's legs as 'long gray,' the ledge as 'a sheer fall of precipice,' its walk as 'trotted back and forth,' etc.*

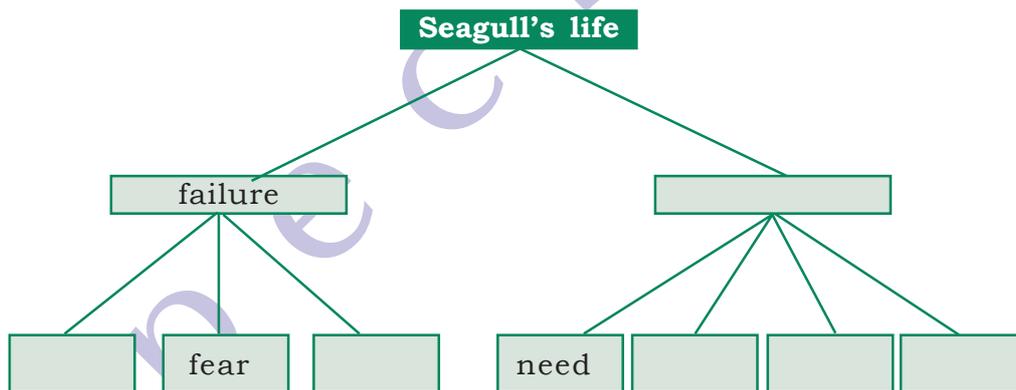
- Do you think such expressions make the narrative more effective and engage your interest and attention?
- What is the message of the story?

Activity II (Review)

- Based on the discussion, prepare a **review** of the story.

Activity III (Tree diagram)

- Read the story once again. Identify the factors that prevented the seagull from flying and those that favoured his flight. Now, complete the **tree diagram**.



Activity IV (Think and respond)

- Do you believe that you also can fly high in your life?
- What sort of support do you expect from your family?
- Can their support alone help you in fulfilling your ambition?
- What do you think are the requirements to attain success in life?
Write them below:

- | | |
|---------|---------|
| ○ _____ | ○ _____ |
| ○ _____ | ○ _____ |
| ○ _____ | ○ _____ |

II. Read and reflect:

Let's examine what Dr A. P. J. Abdul Kalam has to tell us about being successful and unique.

I WILL FLY

Dr A. P. J. Abdul Kalam

*When I wish upon a star,
Makes no difference who I am.
Anything my heart desires
Will come to me.*

Dear friends,

I realize how the contributions of the youth in the past have continuously contributed to the world of today in many fields. I would like to assert that no youth today needs to fear about the future. Why? The ignited mind of the youth is the most powerful resource on the earth, under the earth, and above the earth. Dear young friends, I would like to talk to you on the topic 'I am born with wings.'

- Why does Dr. Kalam say that 'No youth needs to fear about the future'?

Last year, I went to a village to inaugurate a programme called Sasthrayaan, which means 'the propagation of Science'. The mission of Sasthrayaan was to ensure the preparation of about two thousand students from different schools, towards making them eligible to be engineers, scientists, doctors, qualified managers, and civil servants. This action would, in turn, empower about two thousand families of the village. My inaugural address to a mixed audience, consisting of five thousand students and their family members, was on the topic, 'Science Empowers the Nation'.

- What was the mission of 'Sasthrayaan'?

- Dr Kalam's talk was on the topic 'Science Empowers the Nation.' How does science empower the nation?

After my address, hundreds of hands were raised for asking questions. Due to the limited availability of time, I selected twelve students at random, from the last row to the first, to ask questions. I would like to share with you one question of great concern which was asked by a student.

The question was from a teenager who had come from a far away village. He was nervous and a typical representative of the youth of India. The boy began

speaking, 'Sir, I don't know what I should ask. I am nervous. I have not asked any question in my class. I need to have confidence, but I have not gained any confidence through my education during all these years. I am afraid to talk to my teachers, I am afraid to talk to my friends. Whenever I talk, I compare myself with other students and their elegant dress. Please tell me. I want to become a marine engineer. I want to travel in a ship. I want to be the captain of the ship. I want to build the engine of the ship. Shall I be able to do all these, sir? How can I achieve this mission? What should I do?' When the boy completed the question, the entire audience and the dignitaries on the dais, including the Chief Minister, were looking at me wondering what Kalam was going to say to the sincere question of a young village boy.

- Why couldn't the boy gather confidence?
- If you were there, would you dare to ask Dr Kalam a question?

I thought of it, and breaking the silence, I said, 'My dear friend, you have put the most difficult question among the many questions that I have received from millions and millions of students whom I have met. I value your question. I know you are echoing the fear of many. Let me recite a beautiful ancient poem named 'I will fly'.

- What was the boy's concern?

- Why did the audience look at Dr Kalam when the boy completed the question?

- Why did Dr Kalam value the boy's question?

*I am born with potential.
I am born with goodness and trust.
I am born with ideas and dreams.
I am born with greatness.
I am born with confidence.
I am born with wings.
So, I am not meant for crawling,
I have wings, I will fly
I will fly and fly.*

Young friends, let me discuss with you, how you can be unique. I have, so far, met fifteen million youth in a decade's time. I learnt, 'Every youth wants to be unique, that is YOU!' But the world all around you is doing its best, day and night, to make you just 'everybody else'. In your home, dear young fellows, you are asked by your parents to be like the neighbours' children for scoring good marks. When you go to school, your teacher

- How can you be unique?

says, 'Why don't you become like the first five rankers in the class?' Wherever you go, people say, 'You have to be somebody else or everybody else'. Now, dear young friends, how many of you would like to be unique yourself?

The challenge, my dear young friends, is that you have to fight the hardest battle which any human being can ever imagine, and never stop fighting until you arrive at your destined place, that is, a UNIQUE YOU!

(Adapted)

About the Author



Dr A. P. J. Abdul Kalam

Dr Kalam, the former President of India, is a distinguished scientist, well-known for his significant contribution to the field of space research. His vision is to transform India into a developed nation by 2020.

Born on 15 October, 1931, at Rameswaram in Tamil Nadu, Abdul Kalam specialised in Aeronautical Engineering from the Madras Institute of Technology. He became Professor of Technology and Societal Transformation at Anna University, and was involved in teaching and research.

Glossary:

dais (n)	:	platform/stage
propagate (v)	:	spread/ promote

Activity I (Think and respond)

- Are you confident enough to ask questions or express your views in public?
- Have you ever felt inferior to others in any way?
- How can you overcome your fear or inhibition?
- What is your ambition in life?
- Are you confident that you can fulfil your dream?
- How do you think you can attain your goal?

Activity II (Speech)

- Imagine that you get the opportunity to address Class X students before their public examination. On the basis of Dr Kalam's message, prepare a **speech** to motivate and prepare them for the examination.

Activity III (E-mail)

- You get inspired by Dr A. P. J. Abdul Kalam's message and decide to communicate your thoughts and ideas to your friend who is studying abroad. Draft an **e-mail** to your friend.

III. Read and reflect:

Dr Kalam exhorts everybody to be unique in his/her own way. There are many people who have proved their uniqueness even while fighting adversities and limitations. Stephen Hawking's profile reveals how he has overcome his disabilities to become the 'supernova' of physics.

QUEST FOR A THEORY OF EVERYTHING



Kitty Gail Ferguson

In the Cockcroft Lecture Room, on April 29, 1980, scientists and university dignitaries gathered in steep tiers of seats, facing a two-storey wall of chalkboard and slide screen. The occasion was the inaugural lecture by a new Lucasian Professor of Mathematics, the thirty eight-year-old mathematician and physicist, Stephen Hawking.

The title of the lecture was a question: 'Is the End in Sight for Theoretical Physics?' Hawking startled his listeners by announcing that he thought it was. He invited them to join him in a sensational escape through time and space to find the *Holy Grail** of science: the theory that explains the universe, and everything that happens in it.

Stephen Hawking sat silently in a wheelchair while one of his students read his lecture to the assembled company. Judged by appearance alone, Hawking didn't seem a promising choice to lead any adventure.

Stephen William Hawking was born on 8 January, 1942, in Oxford, England. It was exactly three hundred years after the death of Galileo, the father of modern science.

Frank and Isobel Hawking, Stephen's parents were not

- How did Hawking startle the audience?
- Stephen Hawking did not appear to be a promising choice to lead any adventure. Why?
- Can a person be judged by appearance alone? Justify your response.

* Holy Grail- (in medieval legend) the cup said to be used by Jesus Christ at the Last Supper

wealthy, but they believed in the value of education. So they planned for Stephen to go to Westminster, a famous public school in the heart of London. Unfortunately, Stephen was ill at the time of the scholarship examination for Westminster. Therefore, he attended the local Saint Alban's School.

By the time he was eight, he was thinking seriously about becoming a scientist. Frank Hawking encouraged his son to follow him into medicine, but Stephen found biology too imprecise. He wanted a subject in which he could look for exact answers and get to the root of things.

- What do you learn about Stephen Hawking's childhood?

Young Stephen was no prodigy. He was just an ordinary English school boy, slow in learning to read, his handwriting the despair of his teachers! He was ranked no more than halfway up in his class, though he now says in his own defence, 'It was a very bright class.'

At fourteen, Stephen knew that he would pursue mathematics and physics. His father called this impractical for there were no jobs in mathematics except teaching. Moreover, he wanted his son to attend his own college and Oxford offered no mathematics. He followed his father's advice and studied chemistry, physics and only a little mathematics, in preparation for the entrance into Oxford. He did well in physics and the interview was brilliantly accepted.

In 1959, at the age of seventeen, Hawking went to Oxford to study natural science and to specialize in physics. He joined University College, his father's college and the oldest at Oxford, founded in 1249 AD.

Nevertheless, for about a year and a half, Hawking was lonely and bored. He was not inspired to relieve his boredom by exerting himself academically. But halfway through his second year, he began enjoying Oxford.

- Comment on Hawking's life at Oxford.

He became popular and well-accepted among his peers. They remember him as lively, buoyant, and adaptable. He wore his hair long, was famous for his wit, liked classical music and science fiction, and took part in sports.

- What opinion did Hawking's peers at Oxford have about him?

However, at the end of the third year, Hawking almost floundered. He selected theoretical physics as his specialty. He had then applied to do a Ph.D. at Cambridge and was accepted on condition that he got a 'First' from Oxford. Hawking was confident that he could get through successfully. But as the examination day approached, his confidence failed. Hawking ended up disastrously on the borderline between a first and a second.

Faced with a borderline result, the examiners summoned Hawking for an interview and questioned him about his plans. In spite of the tenseness of the situation, Hawking managed to come up with the kind of remark for which he was famous among his friends. 'If I get a first, I shall go to Cambridge. If I receive a second, I will remain at Oxford. So I expect that you will give me a first.' He got his 'First' and he went to Cambridge.

- Cite an example to prove that Stephen Hawking was sharp-witted. Did his wit help him in any way?

His first year at Cambridge was worse than that at Oxford. His slipshod mathematical background caught up with him, and he found general relativity extremely tough. Another far more disastrous problem arose then. During his third year at Oxford, Hawking started getting clumsy. He'd fallen once or twice for no apparent reason. The following autumn, at Cambridge, he had trouble tying his shoes and sometimes, he had difficulty talking.

- Stephen's first year at Cambridge was worse than that at Oxford. Why?

Shortly after his twenty-first birthday in 1963, Hawking contracted a rare disease, *amyotrophic lateral sclerosis*, for which there was no known cure. It caused a gradual disintegration of the nerve cells in the spinal cord and the brain. At first, he went into a deep depression. He did not know what he ought to do, or what his future would be like.

- How did tragedy strike Hawking shortly after his twenty first birthday?

'My dreams at that time were rather confused,' he admitted. 'Before my condition was diagnosed, I had been very bored with life. There did not seem to be anything worth doing. But shortly after I came out of hospital, I dreamt that I was going to be executed. I suddenly realized that there were a lot of worthwhile things to do, if I were reprieved.'

- What drastic change came over Hawking after the diagnosis of the disease?

Another recurring dream was the idea of sacrificing my life to save others. After all, if I were going to die, I might as well do some good.'

- What trait of Hawking's character do you note here?

Hawking's doctors hoped that his condition would stabilize, but the disease aggravated rapidly. They soon informed him that he had only about two more years to live.

Two years passed. The progression of the disease had slowed. 'I didn't die. In fact, although there was a cloud hanging over my future, I found to my surprise that I was enjoying life in the present, more than before'. Total disability and death, though still a not-too-distant certainty, were postponed. Hawking had his reprieve, a precarious and a temporary one, but life was precious.

At a New Year's party at Saint Alban's, just before he entered the hospital for tests, Hawking met Jane Wilde. To her, this dishevelled graduate student seemed terribly intelligent, eccentric and rather arrogant. But he was interesting and she liked his wit.

- What was Jane's impression of Hawking?

When Jane met him again after his discharge from the hospital, he was really in a pathetic state. 'I think he's lost his will to live. He was very confused,' she commented. She was not, however, put off by his physical or mental condition. She was rather a shy teenager, serious-minded, with a strong faith in God ingrained from childhood by her mother, and a belief that good can come out of any adversity.

- Write a note on the character of Jane.

Hawking admired her optimism and their friendship developed slowly. After a while, the two began to realize, in Jane's words, 'that together, we could make something worthwhile.' For Stephen, that made 'all the difference.' He applied for a research fellowship at Caius, one of the colleges in Cambridge University.

- How did Jane's optimism influence Hawking?

In 1965, at the age of twenty-three, Hawking received his fellowship at Caius. And in July of the same year, Jane and he were married.

People who remember Hawking in the University in the late 1960s, recall him making his way around the corridors with a cane, supporting himself against the wall. He spoke with what sounded like a slight speech impediment. But

more than that, they remember his brashness in sessions involving some of the world's most distinguished scientists. While other young researchers kept a reverential silence, Hawking daringly asked unexpected and penetrating questions. He clearly knew what he was talking about. His reputation as 'a genius,' 'another Einstein,' began then.

- Is Stephen Hawking really a great mind on par with the likes of Einstein and Newton. Justify your answer.

In 1980, a practical need for funds launched him into a new enterprise that was to have a far reaching impact on the Hawkins and others all over the world. He thought of writing a book about the universe, about the most interesting questions that had made him want to study cosmology and quantum theory: Where did the universe come from? Is the universe infinite or does it have any boundaries? Will it come to an end; if so, how? Is there a complete theory of the universe and everything in it? Is there a beginning of Time? Could time run back? The book begins by rewinding the great theories of the cosmos from Newton to Einstein. He wrote the book to make science understandable to non-scientists.

- List the interesting facts dealt with in Hawking's book.

He completed the first draft in 1984. While the revision process was going on, he made a trip to Switzerland. There he was down with pneumonia and was left on a life-support system. Doctors gave a choice as to whether a tracheotomy operation which would remove his windpipe should be conducted or not. It might save his life, but afterwards he would never again be able to speak or make a vocal sound. With grave misgivings, Jane consented.

'The future looked very bleak,' Jane remarked. Hawking could no longer breathe through his mouth and nose, but only through a permanent opening made in his throat. After many weeks of intensive care, he went home to join Jane and his three children.

- What could have been the misgivings of Jane?

He was still too weak and ill to continue his research. Walt Woltoz, a computer expert in California, sent him a programme he had developed, called the Equalizer, which allowed Hawking to select words from the screen.

- How could he overcome his difficulties after the tracheotomy operation?

He thought he would be unable to finish his book.

With the support of his student Brian Whitt, *A Brief History of Time* was published in 1988. September, 2005, saw the release of an abridged version of the original book. This version was updated to address the new issues that had arisen due to further scientific developments.

One will encounter a multitude of paradoxes in the book: 'In science and with people, things are often not what they seem, and pieces that ought to fit together refuse to do so. You'll learn that beginnings may be endings; cruel circumstances can lead to happiness, although fame and success may not; two great scientific theories taken together seem to give us nonsense; empty space isn't empty; black holes aren't black; and a man whose appearance inspires shock and pity takes us laughing to where the boundaries of time and space ought to be, but are not.'

- Mention some of the unique ideas and paradoxes put forward by Stephen Hawking.

It is of course a miracle that Hawking has been able to achieve everything he has; that he is still alive. However, when you experience his intelligence and humour, you begin to take his unusual mode of communication and his obviously catastrophic physical problems no more seriously than he seems to himself. That is exactly the way he wants it. He chooses to ignore the difficulty and he expects others to adopt the same attitude.

- What was Hawking's attitude to his disability? How do you estimate it in a wider social context?

Stephen Hawking has overcome his crippling disease to become the 'supernova' of world physics.

(Adapted)

Your teacher will help you watch the visualisation of the profile.

About the Author

Kitty Gail Ferguson is a science writer, lecturer and a former professional musician. She has authored numerous science books including books on biographical facts.

Ferguson's works are recognized for their degree of detail and accuracy. She is known for her ability to explain very complicated scientific concepts.

Glossary:

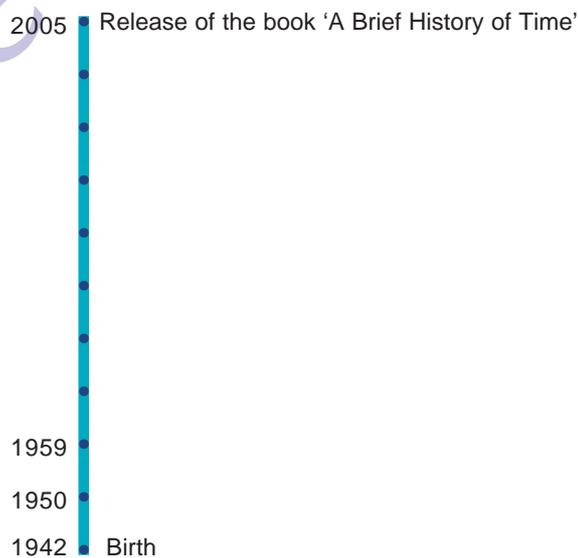
apparent (adj)	:	clear
brashness (n)	:	boldness
buoyant (adj)	:	cheerful
dishevelled (adj)	:	untidy
flounder (v)	:	struggle
imprecise (adj)	:	inexact
misgivings (n)	:	doubts
penetrating (adj)	:	sharp
precarious (adj)	:	unstable
prodigy (adj)	:	genius
reprieve (n)	:	release
slipshod (adj)	:	careless
summon (v)	:	call
supernova (n)	:	a star that suddenly becomes brighter (often, because of an explosion)

Activity I (Writing)

- Attempt an assessment of the personality of Hawking in a short **paragraph**.

Activity II (Timeline)

- List the facts you have learned about Stephen Hawking, in chronological order, in the **timeline** given below:



- Now, look at the list you have made. What facts do the readers expect in a profile?
- Date of birth
 -
 -
 -
 -
 -
 -
 - etc.

Activity III (Interview)

- Read the excerpt from the interview of Stephen Hawking by Kitty Gail Ferguson. She interviews him to collect details for his biography. Find out Stephen's responses from the profile and complete the **interview**.

Interviewer : Shortly after your twenty-first birthday, your doctors diagnosed that you had amyotrophic lateral sclerosis, a rare disease for which there is no known cure. How did you react to the diagnosis? How did you manage to cope with the situation?

Interviewee :

.....

.....

Interviewer : What made you think that life was precious? Can you recollect any particular instance in your life that has become crucial?

Interviewee :

.....

.....

Interviewer : It is said that you wrote a book to make science understandable to non-scientists. Is that so?

Interviewee :

.....

.....

- Now, prepare a set of questions, and conduct an **interview** with a person who has become successful in any field in your locality. You can identify people who became successful in any walk of life, such as farming/ entrepreneurship/ the civil services/ competitive examinations, etc.

Activity IV (Profile)

Using the responses you received from the person you interviewed, prepare his/her **profile**.

Activity V (Speech)

- Read the following statements from the profile of Stephen Hawking.

‘Shortly after I came out of hospital, I dreamt that I was going to be executed. I suddenly realized that there were a lot of worthwhile things I could do.’

Can you find out similar incidents that happened in the lives of other great people (such as Helen Keller, Wilma Rudolf, Valentina Tereshkova, etc.). Prepare a short **speech** on any one of them so as to deliver it before the school assembly.

Activity VI (Group Discussion)

- Now, conduct a **group discussion** on the topic ‘Adversities in life should make you better, not bitter.’

Tips

The Group Discussion is a comprehensive tool for assessing a candidate’s personality. Most organizations today are very clear about the skills and knowledge that they look for in a candidate, while screening. The GD has become a part of the selection process for admission to any reputed institution.

Skills judged in Group Discussions

- how good you are at communication
- how you behave and interact with others
- how open-minded you are
- your listening skills
- the way you present your views
- your leadership and decision making capacity
- your knowledge of the subject and ability to analyze
- problem solving and critical thinking skills
- your attitude and confidence

Your teacher will help you watch the visualisation of model GDs

Activity VII (Cohesive devices)

- Note the use of words like ‘moreover’, ‘nevertheless’, ‘however’, etc. in the profile. These words which show the relationship between sentences and hold a text together, are known as **cohesive devices**. Identify a few such expressions/words and complete the following.

Words used	Writer's purpose	Whether effective or not
.....
.....
.....

A table showing commonly used Cohesive devices for different functions are given below. You may add more.

Function	Cohesive devices
Reason/ Cause and Effect	because of/ as/ since/ due to/ owing to/for/ ...
Result	so/as a result/ therefore/ consequently/ ...
Purpose	in order (not) to / so/so that/ so as (not) to/ ...
Contrast/ Qualify	even though/ but/ however/ while/ nevertheless/ yet/ although/ in spite of/ despite/ though/ whereas/ still/ ...
Contradicting	on the contrary/ even so/ ...
Adding	and/ too/ moreover/ also/ furthermore/ in addition to/ besides/ ...
Illustrating	for instance/ for example/in particular/ ...
Comparing	similarly/ in the same way/ likewise/ like/ equally/ ...
Generalising	on the whole/ in some cases/ in general/ in all / many/ most/ broadly speaking/ ...
Sequencing / Structuring	firstly/ secondly/ lastly, etc./ first of all/ finally/ to begin with/ to start with/ meanwhile/ then/ after/ subsequently/ ...

Let's practise

- Choose the correct cohesive devices from the box given to complete the sentences. Each one is to be used only once.

moreover	firstly
on the other hand	whereas
at least	then
however	actually
besides	though

- I had a terrible day at work and lost my umbrella too. _____ I spoke to that nice guy who works in the coffee shop at last!
- Television turns people into lazy couch potatoes. _____, there are some educational programmes on.
- _____, I would like to welcome you all to the conference today.
- _____ the film was a little boring, we still had a nice evening out.
- I've always known Caroline as a miser. _____, she lent me ₹ 1000 yesterday without my having to ask twice!
- I got up at 9 o'clock yesterday and had a cold shower. _____, I had breakfast and left for work.
- My brother works in a large office _____ I work on my own at home.
- Why do you think I don't want to go out tonight? _____, I would be delighted to get out of the house.
- You should participate in the school youth festival as it gives you a chance to meet many people. _____, it gives you an opportunity to showcase your talents.
- I don't want to go to the football game. Football bores me and I don't want to pay ₹40 for a ticket. _____, look at the weather! All that rain!

Activity VIII (Collocation)

- Look at the expressions used in the biography of Stephen Hawking.

‘Stephen Hawking has overcome his *crippling disease* to become the supernova of world physics.’

The words in italics go together. In other words, *crippling* collocates with *disease*.

Given below are a set of **collocations** which can be used to express ‘success’:

crowning achievement/ dramatic improvement/ made a breakthrough/ brilliant success/ enjoy the fruits of hard work/ brought out the best/ won the respect of/ remarkable achievement

Let’s practise

Arun’s teacher is talking about his merit and achievement to his parents while giving the end-of-term report. Imagine what the teacher would say, and complete the sentences using suitable collocations from those given in the box above.

Arun has _____ in Maths this year, doing excellent work compared to last year. It is, of course, a _____ on his part.

This year has seen a _____ in Arun’s English.

His _____ is his performance in the school’s staging of ‘Othello’.

He has found some effective ways of working with natural materials this year, and his self-portrait is a _____

He is now able to _____. Playing for the school cricket team has certainly _____ in him and he rightly _____ of all his teammates.

Collocation is the way in which some words are used together or in combination. e.g. ‘commit a crime’ is a standard collocation in English. (‘Did a crime’ is not.)

IV. Read and enjoy:

We have read about a few great personalities and identified some of the qualities of greatness. 'If' is a didactic poem which suggests the idea of conditional fulfillment, where the poet describes the traits of the perfect man. Enjoy reading the poem.

IF

Rudyard Kipling

If you can keep your head when all about you
Are losing theirs and blaming it on you;
If you can trust yourself when all men doubt you,
But make allowance for their doubting too:
If you can wait and not be tired by waiting,
Or, being lied about, don't deal in lies,
Or being hated don't give way to hating,
And yet don't look too good, nor talk too wise;

If you can dream – and not make dreams your master;
If you can think – and not make thoughts your aim,
If you can meet with Triumph and Disaster
And treat those two impostors just the same:
If you can bear to hear the truth you've spoken
Twisted by knaves to make a trap for fools,
Or watch the things you gave your life to, broken,
And stoop and build 'em up with worn-out tools;

If you can make one heap of all your winnings
And risk it on one turn of pitch-and-toss,
And lose, and start again at your beginnings,
And never breathe a word about your loss:
If you can force your heart and nerve and sinew
To serve your turn long after they are gone,
And so hold on when there is nothing in you
Except the Will which says to them: "Hold on!"

If you can talk with crowds and keep your virtue,
Or walk with Kings – nor lose the common touch,
If neither foes nor loving friends can hurt you,
If all men count with you, but none too much:
If you can fill the unforgiving minute
With sixty seconds' worth of distance run,
Yours is the Earth and everything that's in it,
And – which is more – you'll be a Man, my son!

Glossary:

build 'em up	:	build them up
impostor (n)	:	a person who pretends to be someone else
knave (n)	:	a dishonest man
making allowance for their doubting	:	understand their doubts
sinew (n)	:	(here) something that gives strength or support

Your teacher will help you to listen to the recitation of the poem.

About the Author

Joseph Rudyard Kipling (1865–1936), an English short-story writer, poet, and novelist, is chiefly remembered for his tales and poems of British soldiers in India and his tales for children.

Kipling's 'If,' perhaps his most famous poem, attracted immediate nationwide attention, and it soon became a popular anthem.

Activity I (Read and respond)

- The first stanza of 'If' speaks about the need for self-confidence. Do you agree? Why?
- What does the poet say about patience?
- Explain the poet's views on honesty and fortitude of character.
- Lines 5-7 speak about the need for righteous behaviour in the face of unrighteousness. How far do you agree?
- What is the poet's approach to dreams and longings?
- The poet believes that success comes from self-control and a true sense of the value of things. Express your views on this.
- 'Never breathe a word about your loss.' What impression do you get about the poet when you read this?
- What is the message conveyed in the last stanza of the poem?

Activity II (Read and reflect)

- What is the central theme of the poem?
- What, according to the poem, are the two impostors in life?
- What, according to the poet, should be one's attitude to unexpected loss?
- What is the poem about? (Consider the speaker, theme, symbols, comparisons, contrasts and conflicts)
- Identify the poetic forms, figurative language and poetic structure.
- When the poet says, 'If you can dream – and not make dreams your master,' he is **personifying** dreams. i.e. dreams are spoken of as masters who can control our lives. In this case, dreams assume a human role/quality.

Pick out the other expressions where the poet uses personification.

- 'Unforgiving minutes' is a metaphoric expression as it refers to time that waits for no man; it is like a race where every second is important.

Now, identify other metaphoric expressions used in the poem.

- What do knaves represent?

What other symbols are used in the poem 'If'?

Personification means giving human traits and qualities to an inanimate object.

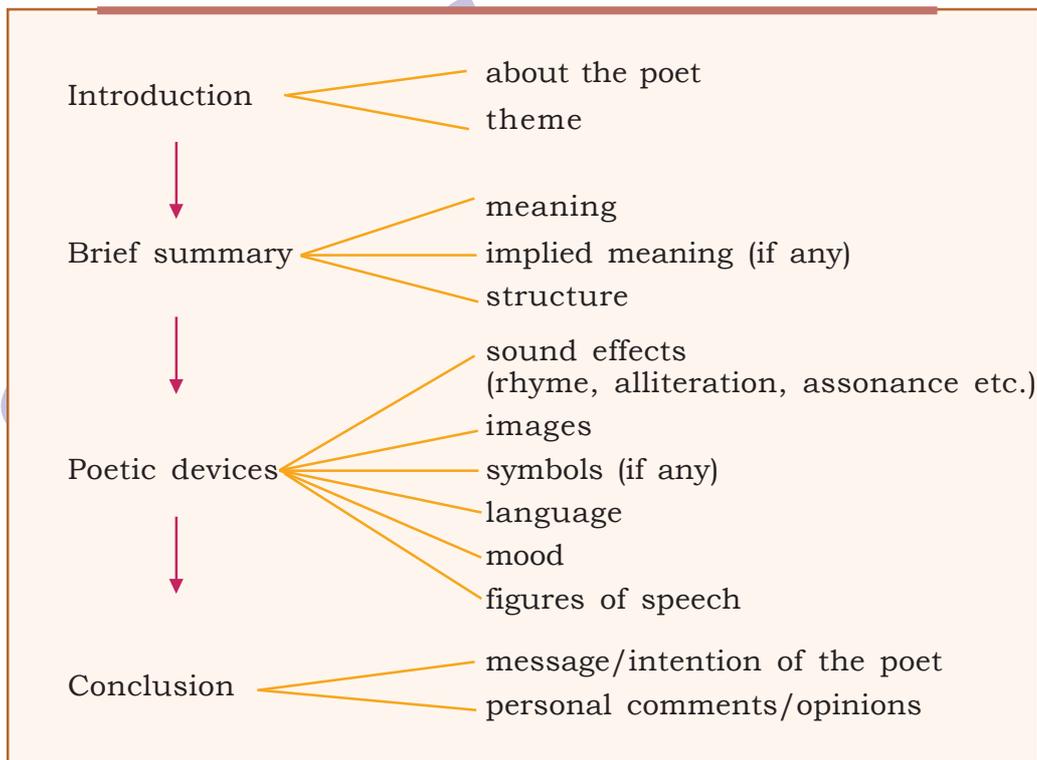
Metaphor is a figure of speech that describes a subject by asserting that it is, at some point of comparison, the same as another, otherwise, unrelated object.

Symbol is an object that represents an idea, image or an action.

Activity III (Appreciation)

- Based on the responses you have got, prepare an appreciation of the poem 'If' (Consider theme, language, style, figures, symbols, relevance, etc.).

The following tips will help you prepare an appreciation of the poem.



Activity IV (Conditionals/ If clause)

- The poem 'If' is explicitly an exploration of the 'If clause.' As the 'If clauses refer to condition, they are called conditional clauses. You may examine the If clauses in the poem and write them below.

If clause (Subsidiary clause)	Main clause
• If you can keep your head when all about you are losing theirs.....	• Yours is the earth and everything that is in it.You'll be a man, my son.
•	•
•	•

Usually there are three common patterns with 'If' which are often called first, second and third conditionals.

Conditional clauses	Tense		Nature	Example
	If clause	Main clause		
First conditional	If + present	Will / shall / can / may + infinitive	Open condition	<ul style="list-style-type: none"> • If you work with confidence, you will succeed. • If you get here before eight, we shall catch the early train.
Second conditional	If + past	Would / should / could / might + infinitive	Unlikely to be fulfilled	<ul style="list-style-type: none"> • If I worked with confidence I would succeed. • If I knew her name, I would tell you.
Third conditional	If + past perfect	Would / should / could / might + have + past participle	Unreal past situation	<ul style="list-style-type: none"> • If you had gone there, you could have met him. • If I had worked with confidence, I would have succeeded.

Let's practise

Would you like to know the story of 'The Cat and the Mouse.' Complete the conditional sentences to get the full story.

Once upon a time, a cat bit a mouse's tail off. 'Give me back my tail,' said the mouse. And the cat said, 'Well, I **would give** (give) your tail back, if you **fetch** me some milk. But that's impossible for a little mouse like you.'

The mouse, however, went to a cow. 'The cat *will only give* (give/ only) me back my tail if I fetch her some milk.'

And the cow said, 'Well, I would give you some milk, if you ____ (get) me some hay. But that's impossible for a little mouse like you.'

The mouse, however, went to a farmer. 'The cat will only give my tail back if the cow ____ (give) me some milk. And the cow ____ (only/ give) me some milk if I get her some hay.'

And the farmer said, 'Well, I would give you some hay if you ____ (bring) me some meat. But that's impossible for a little mouse like you.'

The mouse, however, went to a butcher. 'The cat will only give my tail back if the cow ____ (give) me some milk. And the cow will only give me some milk if she ____ (get) some hay. And the farmer ____ (only/ give) me some hay if I get him some meat.'

And the butcher said, 'Well, I would give you some meat if you ____ (make) the baker bake me a loaf of bread. But that's impossible for a little mouse like you.'

The mouse, however, went to a baker. 'The cat ____ (give/ only) my tail back if I fetch her some milk. And the cow ____ (give/ not) me some milk if I don't get her some hay. And the farmer will only give me some hay if the butcher ____ (have) some meat for him. And the butcher will not give me some meat if you ____ (bake/ not) him a loaf of bread.'

And the baker said, 'Well, I ____ (give) you a loaf of bread if you promise never to steal my corn or meal.'

The mouse promised not to steal, and so the baker gave the mouse a loaf of bread; the mouse gave the butcher the bread. The butcher gave the mouse some meat; the mouse gave the farmer the meat. The farmer gave the mouse some hay; the mouse gave the cow the hay. The cow gave the mouse some milk; the mouse gave the cat the milk. And the cat gave the mouse her tail back.

But imagine what would have happened otherwise:

If the mouse *had not promised* (promise/ not) never to steal the corn or meal, the baker *would not have given* (not/give) the mouse the bread.

If the baker ____ (not/ give) the mouse the bread, the butcher ____ (refuse) to give her the meat for the farmer.

If the butcher _____ (refuse) her any meat, the farmer _____ (not be) willing to give the mouse the hay.

If the farmer _____ (not/ be) willing to give the mouse the hay, the mouse _____ (not/ receive) the milk from the cow.

If the mouse _____ (not/ receive) the milk from the cow, she _____ (not/ get) back her tail.

Extended Activities

Activity I (Read and respond)

- Read the extract from the newspaper article.

TEACHER'S PRIDE

Many of the old teachers of the University College in the city would have felt a thrill of pride and joy, on reading in the newspapers the news that their old student Arun M. Kumar has been selected by President Obama to a very important post in his government. Arun is now Assistant Secretary and Director General of the United States and Foreign Commercial Service, International Trade Administration, in the Department of Commerce. The President has spoken appreciatively of the new team he has chosen.

A rare honour, indeed, and a well-deserved recognition of merit. Arun did his three-year undergraduate course in Physics in the University College. I taught that class their English prose. It was a very bright class, with some of the students brilliant without any self-consciousness of their brilliance. And Arun was among the most brilliant. Well-read in many subjects, keen in understanding, quick, sensitive, and cultured beyond his years in his responses, it was a privilege and a pleasure to have him in my class, and sometimes, to discuss things with him outside the class. Over the years, as his mind matured, his sense of language had become fine – a sure pointer to deeper changes. Confined to my academic pursuits, I know little about the wider world of Arun's enterprises. To see him trusted with the intricate problems of international finance is enough to make me feel that his choices and decisions were right.

Arun and his friends were responsible for starting the Science Society of Trivandrum for the benefit of school children. It has done a lot of good to school students, both in terms of financial help and academic training.

You have now read an extract from the article written by Prof. B. Hridayakumari about Mr Arun M. Kumar, her former student, who was nominated by Mr Barack Obama, (the President of USA) to a key administrative post.

- This is an unusual excerpt wherein a teacher makes an assessment of a student after several years. Don't you think that each of your classmates has his/ her own special qualities? List out the qualities that you have noticed.
- Now, based on your findings, prepare an article on your views of an ideal person, for your school magazine.

Activity II (Cohesive devices – Practice)

- Fill in the blanks using the appropriate cohesive device from the ones given in brackets.
 1. All the assignments should be submitted on time. _____, they will not be evaluated.
(therefore, otherwise, on the contrary)
 2. The price of petrol has gone up considerably in the last few years. _____, the sale of cars has not seen any decrease.
(in addition to, therefore, however)
 3. Cycling is a good exercise. _____, it helps you to save money.
(however, moreover, consequently)
 4. Desktop computers are cheaper and more reliable than laptops; _____, they last longer.
(whereas, furthermore, alternatively)
 5. There is a stiff competition between mobile phone companies to win customers. _____, they are slashing prices to attract customers.
(as a result, in contrast, in conclusion)

Activity III (Documentary)

- Watch the documentary on Stephen Hawking and prepare a **presentation** on the life and works of an eminent person who has overcome many obstacles/difficulties and become successful in life.

Activity IV (Collection)

- Collect inspiring speeches (both script and audio/video) of great persons like Martin Luther King, Swami Vivekananda, Winston Churchill, Jawaharlal Nehru, etc. Make a **presentation** based on the common factors in the speeches.

The major learning outcomes of this unit are listed below.

Thematic outcomes

Students demonstrate the ability to

- face challenges and emerge successful even against limitations and hardships.
- Overcome hardships.
- present their views to others.
- develop qualities needed for an ideal personality.

Linguistic outcomes

Students demonstrate the ability to

- speak and express their views in a speech, group discussion, etc.
- write reviews, appreciations, profiles, newspaper and magazine articles, letters, e-mails, etc.
- prepare questions and interview others.
- participate actively in group discussions.
- read and comprehend a given story or reading material and prepare notes on it in the form of a tree diagram, timeline, short points, etc.
- use cohesive devices and collocations appropriately.
- use conditionals effectively.
- browse the Internet for additional information.