NAPLAN Big-Dog Comprehension

20 Juicy Non-Fiction Texts

(Year 7)

Engaging comprehension practice for Year 7 students

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How to Use This Book

Welcome to NAPLAN Big-Dog Comprehension!

This book contains 20 carefully selected non-fiction texts designed to help Year 7 students develop strong reading comprehension skills for the NAPLAN assessment and beyond.

What You'll Find:

- **Diverse Topics:** From science and technology to history and culture, each text explores fascinating real-world subjects
- **Engaging Content:** All texts are written to capture your interest whilst providing valuable information
- **Comprehensive Questions:** Each text includes 8-10 questions testing different comprehension skills
- **Complete Answer Keys:** Detailed answers are provided at the end of the book

How to Practice:

1. Read each text carefully, paying attention to key details and main ideas
2. Answer all comprehension questions before checking the answer key
3. Review any questions you found challenging and re-read relevant parts of the text
4. Keep track of your progress and note areas for improvement

Question Types You'll Encounter:

- **Literal Comprehension:** Finding information directly stated in the text
- **Inferential Reasoning:** Making logical deductions based on the text
- **Vocabulary in Context:** Understanding word meanings within the passage
- **Text Structure:** Identifying how the text is organised
- **Critical Thinking:** Evaluating and analysing the author's message

Remember: Regular practice with diverse texts will improve your reading comprehension skills and boost your confidence for the NAPLAN assessment!

Text 1: The Science of Climate Change

Climate change refers to long-term shifts in global temperatures and weather patterns. While climate variations occur naturally, scientific evidence overwhelmingly shows that human activities have been the primary driver of climate change since the mid-20th century.

The main culprit is the burning of fossil fuels such as coal, oil, and gas. When these fuels are burnt for energy, they release greenhouse gases into the atmosphere. The most significant of these is carbon dioxide (CO2), which acts like a blanket around Earth, trapping heat from the sun and causing global temperatures to rise.

Scientists measure atmospheric CO2 levels at observatories worldwide. Before the Industrial Revolution in the 1800s, CO2 levels were approximately 280 parts per million (ppm). Today, they exceed 420 ppm—the highest level in over three million years. This dramatic increase correlates directly with human industrial activity.

The consequences of rising temperatures are already visible. Arctic ice is melting at an unprecedented rate, causing sea levels to rise. Extreme weather events, including heatwaves, droughts, floods, and hurricanes, are becoming more frequent and intense. These changes threaten ecosystems, agriculture, and human communities worldwide.

However, there is hope. Renewable energy technologies like solar and wind power are becoming cheaper and more efficient. Many countries are investing heavily in clean energy infrastructure and implementing policies to reduce greenhouse gas emissions. Individual actions, such as using public transport, reducing energy consumption, and supporting sustainable practices, also contribute to the solution.

Understanding climate science is crucial for making informed decisions about our planet's future. The scientific consensus is clear: immediate action is needed to limit global warming and protect the environment for future generations.

Comprehension Questions

1. What has been the primary driver of climate change since the mid-20th century?

2. Name three types of fossil fuels mentioned in the text.

3. What was the approximate CO2 level before the Industrial Revolution, and what is it today?

4. How does carbon dioxide act in the atmosphere? Use the text's analogy in your answer.

5. List three consequences of rising temperatures mentioned in the text.

6. What does the phrase "unprecedented rate" suggest about Arctic ice melting?

7. According to the text, what gives us hope for addressing climate change?

8. What is the author's main purpose in writing this text?

9. Why does the author emphasise that today's CO2 levels are "the highest in over three million years"?

10. Based on the text, explain why understanding climate science is important for ordinary people.

Text 2: Marie Curie: Pioneering Scientist

Marie Curie stands as one of history's most remarkable scientists, breaking barriers and making groundbreaking discoveries that changed our understanding of physics and chemistry. Born Maria Sklodowska in Warsaw, Poland, in 1867, she faced numerous obstacles that would have deterred many others from pursuing scientific careers.

Growing up under Russian occupation, Marie's family valued education despite financial hardships. Women were banned from attending university in Poland, so Marie made a pact with her sister: she would work to fund her sister's medical studies in Paris, and her sister would later support Marie's education. This arrangement required years of patience and sacrifice.

In 1891, Marie finally arrived in Paris to study at the Sorbonne. Living in poverty, she often survived on bread and butter whilst pursuing her degrees in physics and mathematics. Her dedication paid off when she graduated first in her physics degree and second in mathematics.

Marie's life changed when she met Pierre Curie, a brilliant physicist eight years her senior. They married in 1895, beginning both a romantic partnership and one of science's most productive collaborations. Together, they investigated the mysterious rays emitted by uranium, a phenomenon that Marie named "radioactivity."

The Curies' research led to the discovery of two new elements: polonium (named after Marie's homeland) and radium. Their work required processing tonnes of pitchblende ore in a converted shed, under dangerous conditions that they didn't fully understand at the time. Marie often carried test tubes of radium in her pockets, fascinated by their beautiful blue-green glow.

In 1903, Marie became the first woman to win a Nobel Prize, sharing the Physics award with Pierre and Henri Becquerel for their work on radioactivity. Tragically, Pierre died in a street accident in 1906. Despite her grief, Marie continued their research and became the first woman professor at the Sorbonne. In 1911, she won an unprecedented second Nobel Prize, this time in Chemistry for discovering radium and polonium.

Marie Curie's legacy extends beyond her scientific achievements. She opened doors for women in science and demonstrated that determination and curiosity could overcome seemingly insurmountable obstacles.

Comprehension Questions

1. What was Marie Curie's original name and birthplace?

2. Why couldn't Marie attend university in Poland?

3. Describe the arrangement Marie made with her sister regarding their education.

4. What subjects did Marie study at the Sorbonne, and how well did she perform?

5. What term did Marie coin to describe the rays emitted by uranium?

6. Why did Marie name one of the elements she discovered "polonium"?

7. What does the phrase "insurmountable obstacles" mean in the context of the final paragraph?

8. How many Nobel Prizes did Marie Curie win, and in which subjects?

9. What evidence in the text suggests that Marie and Pierre didn't understand the dangers of radioactivity?

10. Besides her scientific discoveries, what other significant contribution did Marie Curie make to society?

Text 3: The Ancient Olympic Games

Long before the modern Olympics captured global attention, ancient Greece hosted athletic competitions that would inspire sporting traditions for millennia. The ancient Olympic Games, held in Olympia from 776 BCE to 393 CE, represented far more than mere athletic contests—they embodied Greek ideals of physical excellence, religious devotion, and cultural unity.

Every four years, athletes from across the Greek world travelled to Olympia to compete in honour of Zeus, king of the gods. The games were so important that warring city-states would declare a sacred truce, called the "Olympic Peace," allowing safe passage for athletes and spectators. This truce demonstrated the unifying power of sport in a region often divided by conflict.

Unlike today's Olympics, the ancient games were exclusively for male competitors. Women were forbidden from participating or even watching, under penalty of death. The athletes competed naked, believing this displayed the human form in its most natural and beautiful state. Winners received olive wreaths rather than gold medals, but the honour and fame that accompanied victory often led to substantial rewards from their home cities.

The original Olympic programme was quite different from modern competitions. The first recorded event was the stadion, a sprint of approximately 192 metres. Over time, additional events were added, including wrestling, boxing, chariot racing, and the pentathlon (combining running, long jump, discus, javelin, and wrestling). The pankration, a brutal combination of wrestling and boxing with few rules, was particularly popular among spectators.

Training for the Olympics required extraordinary dedication. Athletes often spent years preparing, following strict diets and training regimens. Many relocated to Olympia a month

before the games for final preparation under the supervision of official trainers called paidotribes.

The ancient Olympics gradually declined as the Roman Empire adopted Christianity and viewed the games as pagan rituals. Emperor Theodosius I officially banned them in 393 CE. However, their legacy survived, inspiring Baron Pierre de Coubertin to revive the Olympic movement in 1896. Today's Olympics maintain many ancient traditions, including the lighting of the Olympic flame and the emphasis on international friendship through sport.

Comprehension Questions

1. When did the ancient Olympic Games take place, and how long did they continue?

2. What was the "Olympic Peace" and why was it significant?

3. Who was allowed to compete in the ancient Olympics?

4. Why did ancient Greek athletes compete naked?

5. What did winners receive instead of gold medals?

6. What was the stadion, and approximately how long was it?

7. Which five events made up the ancient pentathlon?

8. What were paidotribes, and what role did they play?

9. Why did Emperor Theodosius I ban the Olympic Games?

10. How does the text suggest that the ancient Olympics were "far more than mere athletic contests"? Give two examples from the text.

Text 4: How Social Media Changed Communication

In just two decades, social media has fundamentally transformed how humans communicate, share information, and maintain relationships. What began as simple networking platforms for university students has evolved into a complex digital ecosystem that influences everything from personal friendships to global politics.

Before social media, long-distance communication relied primarily on letters, phone calls, or emails. Staying connected with friends and family required deliberate effort and often significant cost. Today, platforms like Facebook, Instagram, Twitter, and TikTok allow instant, free communication with people anywhere in the world. A teenager in Sydney can share a photo that their grandmother in London sees within seconds.

This revolutionary speed has created a culture of immediate gratification and constant connectivity. Modern teenagers often communicate more through digital messages than

face-to-face conversations. Acronyms like "LOL" (laugh out loud) and "BRB" (be right back) have become commonplace, whilst emojis provide emotional context that text alone cannot convey. The 280-character limit on Twitter has taught people to express complex ideas concisely.

Social media has democratised information sharing, allowing anyone to become a content creator or citizen journalist. During natural disasters or important events, eyewitness accounts and real-time updates often appear on social platforms before traditional news outlets can report them. However, this accessibility has also created challenges, as misinformation can spread just as quickly as accurate news.

The rise of "influencers"—individuals who build large online followings—has created new career opportunities and marketing strategies. Companies now invest billions in social media advertising, recognising that peer recommendations carry more weight than traditional advertisements. Young people increasingly turn to YouTube tutorials or TikTok videos for learning everything from cooking to coding.

Despite its benefits, social media has introduced new social pressures. The carefully curated images people share can create unrealistic expectations and contribute to mental health issues. Cyberbullying has become a serious concern, as harmful messages can reach victims 24/7. The addictive nature of social platforms, designed to maximise user engagement, has raised questions about healthy technology use.

As social media continues evolving, society must balance its tremendous potential for connection and learning with the need to protect users' wellbeing and privacy. The future of human communication will likely depend on how well we navigate these digital challenges.

Comprehension Questions

1. What three methods of long-distance communication existed before social media?

2. How has social media changed the cost and speed of global communication?

3. What does the phrase "immediate gratification" mean in the context of this text?

4. According to the text, why do people use emojis in digital communication?

5. What does it mean to say that social media has "democratised information sharing"?

6. What advantage does social media have over traditional news outlets during emergencies?

7. Why do companies prefer social media influencers over traditional advertisements?

8. List three negative effects of social media mentioned in the text.

9. What does the author mean by describing social media images as "carefully curated"?

10. Based on the conclusion, what does the author believe is necessary for the future of social media?

Text 5: The Great Barrier Reef Under Threat

Stretching over 2,300 kilometres along Australia's northeastern coast, the Great Barrier Reef stands as one of Earth's most spectacular natural wonders. This massive coral ecosystem, visible from space, supports an extraordinary diversity of marine life and provides crucial economic benefits to Australia. However, this UNESCO World Heritage site faces unprecedented threats that jeopardise its survival.

The reef comprises approximately 2,900 individual coral reefs and 900 islands, creating a complex underwater city teeming with life. Over 1,500 species of fish, 400 types of coral, and countless other creatures call this marine paradise home. Indigenous Australian communities have maintained deep spiritual and cultural connections to the reef for over 60,000 years, relying on its resources for food, medicine, and cultural practices.

Climate change poses the greatest threat to the reef's existence. Rising ocean temperatures cause coral bleaching, a stress response where corals expel the colourful algae living in their tissues. Without these algae, corals turn white and often die if temperatures remain elevated. The reef has experienced several mass bleaching events since 1998, with the most severe occurring in 2016 and 2017, affecting over two-thirds of the northern reef.

Ocean acidification compounds these problems. As seawater absorbs excess carbon dioxide from the atmosphere, it becomes more acidic, making it difficult for corals to build their calcium carbonate skeletons. This process weakens existing coral structures and slows the formation of new reefs.

Local threats also contribute to the reef's decline. Agricultural runoff containing fertilisers and pesticides creates nutrient pollution that fuels harmful algae blooms. These blooms block sunlight and consume oxygen, creating dead zones where marine life cannot survive. Coastal development increases sedimentation, whilst crown-of-thorns starfish outbreaks devastate coral populations during their feeding frenzies.

Despite these challenges, conservation efforts offer hope. The Australian government has invested billions in reef protection programmes, implementing stricter water quality standards and reducing agricultural pollution. Scientists are developing coral restoration techniques, including breeding heat-resistant coral varieties and using probiotics to boost coral health. Marine park zones protect critical areas from fishing and tourism damage.

The Great Barrier Reef's fate ultimately depends on global action to address climate change. Protecting this natural treasure requires both immediate local conservation efforts and long-term international cooperation to reduce greenhouse gas emissions. The reef's survival reflects humanity's commitment to preserving Earth's irreplaceable ecosystems.

Comprehension Questions

1. How long is the Great Barrier Reef, and where is it located?

2. How many individual coral reefs and islands make up the Great Barrier Reef system?

3. For how long have Indigenous Australian communities been connected to the reef?

4. What is coral bleaching, and what causes it?

5. Which years saw the most severe mass bleaching events, and how much of the reef was affected?

6. How does ocean acidification affect coral reefs?

7. What problems does agricultural runoff cause for the reef?

8. Name two innovative scientific approaches mentioned for coral restoration.

9. What does the phrase "feeding frenzies" suggest about crown-of-thorns starfish behaviour?

10. According to the conclusion, what two types of action are needed to save the Great Barrier Reef?

Text 6: The Rise of Renewable Energy

The global energy landscape is undergoing a remarkable transformation as renewable technologies revolutionise how we generate electricity. Solar panels, wind turbines, and other clean energy sources are rapidly becoming cheaper and more efficient than traditional fossil fuels, promising a sustainable future for energy production.

Solar power exemplifies this renewable revolution. Photovoltaic cells, which convert sunlight directly into electricity, have experienced dramatic cost reductions over the past decade. In many regions, solar energy is now the cheapest source of electricity ever recorded. Countries with abundant sunshine, such as Australia and parts of the United States, are installing massive solar farms that can power entire cities.

Wind energy has achieved equally impressive growth. Modern wind turbines stand as tall as 20-storey buildings, with blade spans exceeding the length of football pitches. These giants can generate enough electricity to power thousands of homes with a gentle breeze. Offshore wind farms, built in coastal waters, take advantage of stronger and more consistent winds, producing even greater amounts of clean energy.

Hydroelectric power, whilst not new, remains crucial to the renewable mix. By harnessing the energy of flowing water, hydroelectric plants provide reliable, continuous power output. Unlike solar and wind, which depend on weather conditions, hydroelectric generation can be controlled to match electricity demand throughout the day.

Energy storage technology has solved one of renewables' biggest challenges: intermittency. Advanced battery systems can store excess solar and wind energy for use when the sun isn't shining or wind isn't blowing. Tesla's massive battery installation in South Australia demonstrated this technology's potential by stabilising the electrical grid and reducing power costs.

The economic benefits of renewable energy extend beyond electricity generation. The renewable sector has created millions of jobs worldwide, from manufacturing solar panels to maintaining wind farms. Many of these positions are located in rural communities, providing economic opportunities in areas that traditionally depended on fossil fuel industries.

Despite rapid progress, challenges remain. Transitioning entire electrical grids to renewable sources requires substantial infrastructure investments and careful planning. Some industries, such as steel production and aviation, still rely heavily on fossil fuels and need innovative solutions to achieve carbon neutrality.

However, the momentum behind renewable energy appears unstoppable. Governments worldwide are setting ambitious clean energy targets, whilst corporations are voluntarily switching to renewable sources to reduce their environmental impact. The renewable revolution represents not just an environmental necessity, but an economic opportunity that is reshaping the global economy.

Comprehension Questions

1. What are photovoltaic cells, and what do they do?

2. How tall can modern wind turbines be, and how large are their blade spans?

3. What advantage do offshore wind farms have over land-based ones?

4. What makes hydroelectric power different from solar and wind energy?

5. What does "intermittency" mean in the context of renewable energy?

6. How did Tesla's battery installation in South Australia benefit the electrical grid?

7. Besides generating electricity, what other economic benefit does renewable energy provide?

8. Name two industries that still face challenges in moving away from fossil fuels.

9. What does the phrase "momentum behind renewable energy appears unstoppable" suggest about the future?

10. According to the conclusion, why are corporations switching to renewable energy sources?

Text 7: Nelson Mandela's Fight for Freedom

Nelson Mandela's extraordinary life journey from prisoner to president embodies the triumph of human dignity over oppression. Born in 1918 in rural South Africa, Mandela would become one of history's most respected leaders, dedicating his life to dismantling apartheid and building a democratic nation founded on equality and justice.

Apartheid, meaning "separateness" in Afrikaans, was a brutal system of racial segregation that dominated South Africa from 1948 to 1994. Under apartheid laws, the white minority government classified people into racial categories and severely restricted the rights of Black, Coloured, and Indian populations. Black South Africans were forced to live in impoverished homelands, denied quality education, and prohibited from voting or owning land in most areas.

As a young lawyer in Johannesburg, Mandela witnessed firsthand the injustices of apartheid. He joined the African National Congress (ANC) in 1944, initially supporting peaceful protests and civil disobedience. However, after the Sharpeville Massacre in 1960, where police killed 69 unarmed protesters, Mandela concluded that non-violent resistance alone would not end apartheid.

Mandela co-founded Umkhonto we Sizwe (Spear of the Nation), the ANC's armed wing, which conducted sabotage operations against government installations whilst avoiding civilian casualties. This decision to embrace armed resistance was deeply personal and politically risky, as Mandela knew it would likely result in his imprisonment or death.

In 1964, Mandela was sentenced to life imprisonment for sabotage and conspiracy to overthrow the government. He spent the next 27 years in prison, mostly on Robben Island, where conditions were harsh and degrading. Despite the brutality, Mandela used his time to study, reflect, and emerge as an even more powerful symbol of resistance. His imprisonment became a rallying point for the international anti-apartheid movement.

International pressure, economic sanctions, and internal resistance gradually weakened the apartheid government. In 1990, President F.W. de Klerk released Mandela unconditionally. Rather than seeking revenge, Mandela pursued reconciliation, working alongside de Klerk to negotiate a peaceful transition to democracy.

In 1994, South Africa held its first democratic elections, and Mandela became the country's first Black president. His inaugural address emphasised healing and unity: "Never, never and never again shall it be that this beautiful land will again experience the oppression of one by another." Mandela served one term before retiring, focusing on his legacy of forgiveness and nation-building.

Mandela's commitment to reconciliation rather than retribution demonstrated remarkable moral leadership. He showed the world that even the deepest wounds could heal through truth, forgiveness, and shared humanity. His legacy continues to inspire people fighting for justice and equality worldwide.

Comprehension Questions

1. What does the word "apartheid" mean, and when was this system in place in South Africa?

2. What restrictions did apartheid laws place on Black South Africans?

3. When did Mandela join the African National Congress, and what methods did he initially support?

4. What was the Sharpeville Massacre, and how did it change Mandela's approach?

5. What was Umkhonto we Sizwe, and what type of operations did it conduct?

6. How long was Mandela imprisoned, and where did he spend most of this time?

7. What role did international pressure play in ending apartheid?

8. What does Mandela's quote from his inaugural address reveal about his vision for South Africa?

9. What does "retribution" mean, and why is it significant that Mandela chose reconciliation instead?

10. How does the text suggest that Mandela's approach to leadership was different from what might be expected?

Text 8: The Psychology of Sports Performance

Elite athletes possess more than just physical prowess—they have mastered the mental aspects of competition that often determine the difference between victory and defeat. Sports psychology, the study of mental factors affecting athletic performance, has become increasingly important as coaches and athletes recognise that the mind is their most powerful tool.

Confidence forms the cornerstone of athletic success. Athletes who believe in their abilities perform significantly better under pressure than those plagued by self-doubt. This confidence isn't mere arrogance; it's built through countless hours of preparation, successful past experiences, and positive self-talk. Tennis champion Serena Williams exemplified this mindset, often stating her intention to win before matches, which helped programme her mind for success.

Visualisation techniques allow athletes to mentally rehearse their performance before competition. Olympic swimmers often spend time imagining every stroke of their race, from the starting blocks to touching the wall. This mental practice activates the same neural pathways used during actual performance, essentially training the brain alongside the body.

Research shows that athletes who combine physical training with visualisation improve faster than those who rely on physical practice alone.

Managing pressure represents perhaps the greatest psychological challenge in sports. The phenomenon known as "choking" occurs when athletes overthink their movements, disrupting the automatic processes they've developed through training. Golfers who suddenly become aware of their putting technique during crucial moments often miss shots they would normally make effortlessly.

Successful athletes develop various strategies to handle pressure. Deep breathing exercises help regulate the nervous system and maintain focus. Setting process goals rather than outcome goals keeps athletes concentrated on what they can control. Instead of thinking "I must win this match," they focus on "I will maintain my serve technique" or "I will stay aggressive on defence."

The concept of "flow state" describes moments when athletes perform at their absolute peak. During flow, time seems to slow down, movements feel effortless, and athletes react instinctively without conscious thought. Basketball legend Michael Jordan frequently experienced flow states, describing games where "everything just felt right" and shots seemed to sink automatically.

Mental resilience—the ability to bounce back from setbacks—separates good athletes from great ones. Every competitor faces losses, injuries, and disappointments. Those who develop coping strategies, learn from failures, and maintain long-term perspective often emerge stronger. They understand that setbacks are temporary and necessary parts of the improvement process.

Modern sports increasingly recognise mental health as crucial to athletic performance. Teams now employ sports psychologists to help athletes develop mental skills alongside physical ones. This holistic approach acknowledges that peak performance requires training both body and mind in harmony.

Comprehension Questions

1. What is sports psychology, and why has it become more important?

2. According to the text, how is athletic confidence different from arrogance?

3. How does visualisation help athletes improve their performance?

4. What is "choking" in sports, and what causes it?

5. What is the difference between process goals and outcome goals? Give an example of each from the text.

6. Describe what happens during a "flow state" in sports.

7. What does "mental resilience" mean in the context of athletics?

8. How do successful athletes view setbacks and failures?

9. What does the phrase "holistic approach" mean in the final paragraph?

10. Based on the text, explain why mental training is just as important as physical training for athletes.

Text 9: Ancient Civilisations: The Maya

Deep in the rainforests of Central America, the ancient Maya civilisation flourished for over 2,000 years, creating one of the most sophisticated cultures in the pre-Columbian Americas. From approximately 2000 BCE to 1500 CE, the Maya developed remarkable achievements in astronomy, mathematics, architecture, and art that continue to astound modern scholars.

Unlike the centralised empires of Egypt or Rome, Maya civilisation consisted of independent city-states scattered across present-day Mexico, Guatemala, Belize, Honduras, and El Salvador. Each city-state had its own ruler, often called an "ajaw," who claimed divine authority. Major centres like Tikal, Chichen Itza, and Palenque competed for resources and prestige, sometimes forming alliances and frequently engaging in warfare.

The Maya's intellectual achievements were extraordinary. They developed the most accurate calendar system in the ancient world, tracking celestial movements with precision that rivals modern astronomical calculations. Their calendar consisted of multiple interlocking cycles, including a 260-day ritual calendar and a 365-day solar year. Maya astronomers could predict eclipses and planetary movements centuries in advance.

Mathematics was another Maya strength. They independently invented the concept of zero—a revolutionary idea that many advanced civilisations, including the Romans, never developed. Using a vigesimal (base-20) number system, Maya mathematicians performed complex calculations necessary for their architectural projects and astronomical observations.

Maya architecture demonstrates both artistic beauty and engineering brilliance. Without metal tools, wheels, or beast of burden, they constructed massive stone pyramids, palaces, and observatories. The pyramid at El Mirador towers 72 metres high, making it one of the tallest pre-Columbian structures in the Americas. These buildings often incorporated sophisticated acoustic properties, allowing speakers at the top of pyramids to be heard clearly at ground level.

The Maya writing system, consisting of intricate hieroglyphs, was the most advanced in the pre-Columbian Americas. These symbols could represent sounds, syllables, or entire concepts, allowing scribes to record everything from historical events to astronomical data. Thousands of Maya texts were written on bark paper books called codices, though Spanish conquistadors destroyed most of them during the colonial period.

Agriculture formed the foundation of Maya society. In the challenging environment of tropical rainforests, they developed innovative farming techniques including raised fields, terracing, and sophisticated irrigation systems. Maize (corn) was their primary crop and held deep religious significance—the Maya believed humans were created from corn dough.

The decline of Classic Maya civilisation around 900 CE remains one of archaeology's greatest mysteries. Possible factors include environmental degradation, overpopulation, warfare, and climate change. However, Maya culture never completely disappeared. Millions of Maya descendants still live in Central America today, maintaining many traditional practices whilst adapting to the modern world.

Comprehension Questions

1. Approximately how long did Maya civilisation flourish, and in which regions?

2. How was Maya political organisation different from empires like Egypt or Rome?

3. What was an "ajaw" and what type of authority did they claim?

4. Describe two components of the Maya calendar system.

5. Why was the Maya invention of zero considered revolutionary?

6. List three challenges the Maya overcame in their architectural achievements.

7. What were Maya books called, and what happened to most of them?

8. Why was maize particularly important to Maya society beyond its use as food?

9. What does the phrase "one of archaeology's greatest mysteries" suggest about our understanding of Maya decline?

10. According to the text, what evidence shows that Maya culture continues today?

Text 10: The Impact of Plastic Pollution

Plastic pollution has emerged as one of the most pressing environmental challenges of our time, affecting every corner of the planet from the deepest ocean trenches to the highest mountains. Since mass production began in the 1950s, humans have created over 9 billion tonnes of plastic, with less than 10% ever being recycled. The remainder persists in landfills, oceans, and ecosystems, where it will remain for hundreds of years.

The convenience of plastic has revolutionised modern life. Lightweight, durable, and versatile, plastic products have improved everything from food preservation to medical equipment. However, these same properties that make plastic useful also make it environmentally problematic. Unlike organic materials that decompose naturally, most

plastics break down extremely slowly, fragmenting into smaller pieces called microplastics rather than disappearing entirely.

Marine ecosystems suffer disproportionately from plastic pollution. The Great Pacific Garbage Patch, a massive accumulation of floating debris, now covers an area twice the size of Texas. Sea turtles mistake plastic bags for jellyfish, whilst seabirds feed plastic fragments to their chicks, causing malnutrition and death. Whales have been found with stomachs full of plastic waste, unable to digest food properly.

Microplastics present a particularly insidious threat. These particles, smaller than 5 millimetres, are virtually impossible to remove from the environment once released. They contaminate drinking water, enter the food chain through fish and shellfish, and have been detected in human blood and lung tissue. Scientists are still researching the long-term health implications of microplastic exposure.

The economic costs of plastic pollution are staggering. Coastal communities spend millions cleaning beaches and removing debris from fishing nets. Tourism industries suffer when pristine beaches become littered with plastic waste. The fishing industry faces reduced catches as fish populations decline in polluted waters, whilst medical costs may rise as microplastic-related health issues become better understood.

Addressing plastic pollution requires coordinated global action. Many countries have implemented single-use plastic bans, whilst others have introduced extended producer responsibility programmes that make manufacturers responsible for their products' entire lifecycle. Innovative solutions include developing biodegradable alternatives, improving recycling technologies, and creating systems to capture plastic waste from rivers before it reaches oceans.

Individual actions also make a difference. Reducing single-use plastic consumption, supporting refillable and reusable products, and participating in community clean-up efforts all contribute to the solution. Education plays a crucial role in changing consumer behaviour and building support for policy changes.

The fight against plastic pollution represents a defining challenge for this generation. Success requires reimagining our relationship with disposable products and embracing a circular economy where materials are continuously reused rather than discarded. The health of our planet—and future generations—depends on our ability to tackle this crisis decisively.

Comprehension Questions

1. How much plastic have humans created since the 1950s, and what percentage has been recycled?

2. What are microplastics, and how do they form?

3. How large is the Great Pacific Garbage Patch?

4. Describe two ways that plastic pollution harms marine animals.

5. Why are microplastics described as an "insidious threat"?

6. List three economic costs of plastic pollution mentioned in the text.

7. What are extended producer responsibility programmes?

8. Name three innovative solutions for addressing plastic pollution.

9. What does a "circular economy" mean in the context of the final paragraph?

10. According to the text, why is this generation's response to plastic pollution particularly important?

Text 11: How the Human Brain Works

The human brain, weighing approximately 1.4 kilograms, represents the most complex structure known in the universe. With roughly 86 billion neurons forming trillions of connections, this remarkable organ controls every aspect of human experience, from breathing and heartbeat to creativity and consciousness. Understanding how the brain works continues to challenge scientists and revolutionise our knowledge of human behaviour.

Neurons, the brain's fundamental building blocks, communicate through electrical and chemical signals. When a neuron receives sufficient stimulation, it generates an electrical impulse that travels along its axon—a long projection that can extend up to a metre in length. At the axon's end, the electrical signal triggers the release of chemical messengers called neurotransmitters, which cross synapses (tiny gaps) to influence neighbouring neurons.

The brain consists of distinct regions, each specialising in different functions. The cerebral cortex, the brain's wrinkled outer layer, handles complex thinking, language, and sensory processing. The cerebellum, located at the brain's base, coordinates balance and movement. Deep within the brain, the limbic system governs emotions and memory formation, whilst the brainstem controls vital functions like breathing and heart rate.

Neuroplasticity—the brain's ability to reorganise and form new connections—represents one of neuroscience's most exciting discoveries. Previously, scientists believed brain structure was fixed after childhood. However, research now shows that the brain continuously adapts throughout life. When learning new skills, practising instruments, or recovering from injuries, the brain literally rewires itself, strengthening frequently used pathways whilst pruning unused connections.

Memory formation involves complex processes across multiple brain regions. Short-term memories, lasting seconds to minutes, rely primarily on electrical activity in neural circuits. Converting these into long-term memories requires protein synthesis and structural changes in synapses, particularly in the hippocampus. Sleep plays a crucial role in memory

consolidation, with the brain replaying and strengthening important memories whilst discarding irrelevant information.

The teenage brain undergoes dramatic changes that explain many adolescent behaviours. The prefrontal cortex, responsible for decision-making and impulse control, doesn't fully mature until the mid-twenties. Meanwhile, the limbic system, governing emotions and reward-seeking, develops earlier. This mismatch explains why teenagers often make impulsive decisions and engage in risky behaviours despite understanding potential consequences.

Modern neuroscience employs sophisticated techniques to study the living brain. Functional magnetic resonance imaging (fMRI) measures blood flow to reveal which brain areas activate during specific tasks. Electroencephalography (EEG) records electrical activity, whilst newer methods like optogenetics allow scientists to control specific neurons using light.

Understanding brain function has profound implications for treating neurological and psychiatric disorders. Deep brain stimulation helps patients with Parkinson's disease, whilst targeted therapies for depression and anxiety benefit from insights into neurotransmitter systems. As our knowledge expands, the prospect of more effective treatments for conditions like Alzheimer's, schizophrenia, and autism becomes increasingly realistic.

Comprehension Questions

1. How much does the human brain weigh, and approximately how many neurons does it contain?

2. What are neurotransmitters, and what role do they play in brain communication?

3. List the four main brain regions mentioned and one function of each.

4. What is neuroplasticity, and how has scientific understanding of it changed?

5. How do short-term and long-term memory formation differ?

6. Why is sleep important for memory according to the text?

7. What explains why teenagers often make impulsive decisions?

8. What do fMRI and EEG measure when studying the brain?

9. What does the phrase "the brain literally rewires itself" mean in the context of neuroplasticity?

10. How might better understanding of brain function help treat mental health conditions?

Text 12: The Story of the Internet

The Internet, now an indispensable part of modern life, began as a secret military project during the Cold War. What started as a way to share information between universities and research institutions has evolved into a global network connecting billions of people, fundamentally transforming commerce, communication, education, and entertainment.

In 1962, the United States Department of Defence commissioned ARPANET (Advanced Research Projects Agency Network) to create a communication system that could survive nuclear attacks. Traditional telephone networks relied on central switching stations that, if destroyed, would cripple communications. ARPANET solved this problem by creating a decentralised network where information could travel through multiple pathways to reach its destination.

The first ARPANET connection occurred on 29 October 1969, linking computers at UCLA and Stanford University. The initial message was supposed to be "LOGIN," but the system crashed after transmitting only "LO." Despite this inauspicious beginning, the network gradually expanded to include universities and research centres across America, enabling scientists to share data and collaborate remotely.

A crucial breakthrough came in the 1970s with the development of TCP/IP (Transmission Control Protocol/Internet Protocol), a standardised method for different computer networks to communicate. This protocol became the foundation of the modern Internet, allowing diverse systems to exchange information seamlessly. By the 1980s, the network had evolved beyond its military origins, with the National Science Foundation creating NSFNET to connect universities nationwide.

The invention of the World Wide Web in 1989 by British scientist Tim Berners-Lee revolutionised Internet usage. Berners-Lee created three essential technologies: HTML (HyperText Markup Language) for creating web pages, HTTP (HyperText Transfer Protocol) for transferring information, and URLs (Uniform Resource Locators) for web addresses. Crucially, he decided not to patent these innovations, ensuring the Web remained free for everyone.

The 1990s witnessed explosive Internet growth as commercial restrictions were lifted and personal computers became affordable. The first web browser, Mosaic, made the Internet accessible to non-technical users by displaying images alongside text. Search engines like Yahoo and later Google helped users navigate the rapidly expanding web, whilst e-commerce pioneers like Amazon and eBay demonstrated the Internet's commercial potential.

Social media transformed the Internet from a primarily information-sharing tool into a platform for human connection. Early platforms like MySpace and Friendster paved the way for Facebook, Twitter, and Instagram, enabling people to share personal experiences and maintain relationships across vast distances. The rise of smartphones and mobile Internet access made online connectivity truly ubiquitous.

Today's Internet faces new challenges including cybersecurity threats, privacy concerns, and digital inequality. As artificial intelligence and quantum computing emerge, the next phase of Internet evolution promises even greater changes to how humans interact with

information and each other. The Internet's remarkable journey from military project to global phenomenon demonstrates technology's power to reshape civilisation in unexpected ways.

Comprehension Questions

1. What was ARPANET, and why was it commissioned?

2. How did ARPANET solve the problem of network vulnerability?

3. When and where did the first ARPANET connection occur, and what went wrong?

4. What does TCP/IP stand for, and why was it important?

5. Who invented the World Wide Web, and what three technologies did he create?

6. Why was Tim Berners-Lee's decision not to patent his inventions significant?

7. What made the Mosaic web browser important for Internet adoption?

8. How did social media change the purpose of the Internet?

9. What does "ubiquitous" mean in the context of mobile Internet access?

10. According to the conclusion, what does the Internet's development demonstrate about technology's impact?

Text 13: Traditional Aboriginal Culture

Aboriginal Australians represent the world's oldest continuous culture, with archaeological evidence suggesting human presence on the continent for over 65,000 years. This remarkable civilisation developed sophisticated knowledge systems, artistic traditions, and sustainable land management practices that enabled them to thrive in diverse environments from tropical rainforests to arid deserts.

Dreamtime, or "Tjukurpa" in some Aboriginal languages, forms the foundation of Aboriginal spiritual beliefs. This complex concept encompasses the creation period when ancestral spirits shaped the landscape, established natural laws, and created all living things. Dreamtime stories, passed down through generations via oral tradition, serve multiple purposes: they preserve historical knowledge, teach moral lessons, explain natural phenomena, and maintain connections to specific locations.

The concept of "Country" extends far beyond simple land ownership. For Aboriginal people, Country encompasses a deep spiritual and emotional connection to specific territories that includes responsibility for maintaining the land's health and continuing ancestral traditions. This relationship involves detailed knowledge of seasonal patterns, animal behaviour, plant properties, and water sources—information essential for survival in harsh environments.

Aboriginal art represents one of humanity's oldest continuous artistic traditions. Rock paintings dating back over 40,000 years can be found across Australia, depicting everything from everyday life to sacred ceremonies. Traditional art styles vary significantly between regions, with distinctive techniques like cross-hatching in Arnhem Land and dot painting in Central Australia. These artworks often function as maps, teaching tools, and spiritual records rather than mere decoration.

Traditional Aboriginal society was organised around complex kinship systems that determined relationships, responsibilities, and social behaviour. These systems, varying between different groups, governed everything from marriage rules to ceremonial obligations. Elders held positions of respect and authority, responsible for maintaining cultural knowledge and making important decisions affecting the community.

Aboriginal Australians developed sophisticated technologies adapted to their environments. Boomerangs, perhaps their most famous invention, served multiple purposes beyond hunting—some returned when thrown (mainly used for practice and ceremonial purposes), whilst hunting sticks flew straight and were designed to stun or kill prey. Fish traps, sophisticated weaving techniques, and fire management practices demonstrated remarkable ingenuity and environmental knowledge.

Fire management represented a particularly advanced practice. Aboriginal people used controlled burning to maintain healthy ecosystems, reduce catastrophic wildfire risks, promote new plant growth, and manage animal populations. This practice, known as "cultural burning," is increasingly recognised by modern land managers as an effective conservation technique.

Today, Aboriginal culture faces both challenges and opportunities. While colonisation disrupted many traditional practices, Aboriginal communities are working to preserve and revitalise their cultural heritage. Modern Aboriginal artists, musicians, and writers are finding new ways to express traditional knowledge whilst embracing contemporary mediums. Recognition of Aboriginal land rights and the growing appreciation for traditional ecological knowledge represent positive developments in reconciling ancient wisdom with modern Australian society.

Comprehension Questions

1. How long have Aboriginal Australians lived on the continent?

2. What is Dreamtime, and what multiple purposes do Dreamtime stories serve?

3. How does the Aboriginal concept of "Country" differ from simple land ownership?

4. How old are the oldest Aboriginal rock paintings, and what subjects do they depict?

5. What role did Elders play in traditional Aboriginal society?

6. Explain the difference between returning boomerangs and hunting sticks.

7. What is "cultural burning," and what purposes did it serve?

8. How are modern Aboriginal people preserving their cultural heritage?

9. What does the phrase "revitalise their cultural heritage" mean?

10. According to the text, what represents "positive developments" in modern Australia's relationship with Aboriginal culture?

Text 14: The Benefits of Exercise for Teenagers

During adolescence, the human body undergoes dramatic physical and mental changes that make regular exercise particularly beneficial. While many teenagers lead increasingly sedentary lifestyles due to screen time and academic pressures, research consistently demonstrates that physical activity during these crucial years establishes foundations for lifelong health and wellbeing.

Physical benefits of exercise for teenagers are extensive and well-documented. Regular activity strengthens bones during the critical period when bone density is still developing, reducing the risk of osteoporosis later in life. Exercise also builds lean muscle mass, improves cardiovascular fitness, and enhances coordination and balance. These physical improvements boost energy levels and help teenagers maintain healthy body weight during a time when many develop unhealthy eating habits.

Mental health benefits of exercise are equally significant. Physical activity stimulates the release of endorphins—natural chemicals that create feelings of happiness and reduce pain perception. For teenagers dealing with stress from school, social pressures, and identity formation, exercise provides a healthy outlet for managing anxiety and depression. Studies show that adolescents who exercise regularly report higher self-esteem and better sleep quality than their sedentary peers.

Exercise also enhances cognitive function and academic performance. Physical activity increases blood flow to the brain, delivering oxygen and nutrients essential for optimal mental function. Research indicates that students who participate in regular exercise demonstrate improved concentration, better memory retention, and enhanced problem-solving abilities. Some schools have found that incorporating physical activity breaks into the school day actually improves classroom behaviour and academic outcomes.

Social benefits of exercise often prove particularly valuable during adolescence. Team sports teach cooperation, leadership, and communication skills whilst providing opportunities to form lasting friendships. Even individual activities like running or swimming can create social connections through clubs and training groups. These relationships often provide emotional support during challenging teenage years.

Establishing exercise habits during adolescence creates patterns that typically persist into adulthood. Teenagers who engage in regular physical activity are more likely to remain active throughout their lives, reducing their risk of chronic diseases such as diabetes, heart

disease, and certain cancers. The skills and confidence gained through sports and exercise also transfer to other life areas, teaching perseverance, goal-setting, and resilience.

Despite these benefits, many teenagers struggle to maintain regular exercise routines. Common barriers include lack of time, limited access to facilities, and self-consciousness about their changing bodies. However, effective solutions exist: walking or cycling to school, taking stairs instead of lifts, dancing, or playing active video games can all provide valuable physical activity without requiring expensive equipment or gym memberships.

Health experts recommend that teenagers engage in at least 60 minutes of moderate to vigorous physical activity daily. This doesn't need to occur in a single session—three 20-minute periods can be equally effective. The key is finding activities that teenagers enjoy, whether that's traditional sports, martial arts, hiking, skateboarding, or any other movement that gets their heart rate elevated whilst having fun.

Comprehension Questions

1. Why is bone strengthening particularly important during adolescence?

2. What are endorphins, and how do they affect mood?

3. List three mental health benefits of exercise mentioned in the text.

4. How does exercise enhance academic performance?

5. What social skills can teenagers learn through team sports?

6. Why is establishing exercise habits during adolescence important for long-term health?

7. What are three common barriers that prevent teenagers from exercising regularly?

8. Suggest four activities that can provide exercise without requiring expensive equipment.

9. How much daily exercise do health experts recommend for teenagers?

10. What does the phrase "sedentary lifestyles" mean, and what factors contribute to this among teenagers?

Text 15: Exploring Antarctica

Antarctica, Earth's southernmost continent, represents one of the last frontiers of human exploration. This vast, frozen wilderness covers 14 million square kilometres—larger than Europe and nearly twice the size of Australia—yet remains largely uninhabited by humans. Understanding Antarctica is crucial for climate science, as this icy continent profoundly influences global weather patterns and sea levels.

The harsh Antarctic environment challenges human survival in extraordinary ways. Temperatures can plummet to -89°C, whilst katabatic winds exceeding 200 kilometres per hour create conditions that would be lethal without proper protection. During winter months, the continent experiences complete darkness for up to six months, whilst summer brings continuous daylight. These extreme conditions have shaped unique adaptations in the wildlife that calls Antarctica home.

Despite its inhospitable environment, Antarctica supports remarkable biodiversity. Emperor penguins, the continent's most iconic residents, have evolved extraordinary survival strategies. These birds huddle together in groups of thousands, rotating positions to share warmth during the brutal winter breeding season. Antarctic seals, including Weddell, leopard, and elephant seals, have developed thick blubber layers and efficient diving capabilities to hunt in icy waters.

The Antarctic ice sheet contains approximately 70% of the world's fresh water, locked in ice layers that can exceed 4 kilometres in thickness. This massive ice reservoir plays a critical role in regulating global climate. If the entire Antarctic ice sheet were to melt, sea levels would rise by approximately 60 metres, submerging most coastal cities worldwide. Climate scientists closely monitor Antarctic ice for early warning signs of accelerated melting.

Scientific research in Antarctica has yielded groundbreaking discoveries. Ice cores drilled from the continent provide detailed records of Earth's climate history spanning hundreds of thousands of years. These frozen time capsules contain trapped air bubbles that reveal past atmospheric compositions, helping scientists understand natural climate variations and predict future changes.

The discovery of the ozone hole above Antarctica in the 1980s demonstrated the continent's importance for understanding global atmospheric processes. This thinning of Earth's protective ozone layer, caused by human-made chemicals, highlighted the interconnectedness of environmental systems and led to international agreements to phase out ozone-depleting substances.

Modern Antarctic exploration relies on international cooperation and advanced technology. The Antarctic Treaty, signed in 1959, designates the continent as a scientific preserve, prohibiting military activities and territorial claims. Research stations from over 30 countries conduct studies ranging from astronomy to marine biology, with strict environmental protocols protecting this pristine ecosystem.

Tourism to Antarctica has grown significantly, with thousands of visitors arriving annually on specially designed icebreaker ships. While tourism provides economic benefits and raises environmental awareness, it also poses risks to the fragile ecosystem. Strict guidelines govern tourist activities to minimise human impact on this irreplaceable wilderness that belongs to all humanity.

Comprehension Questions

1. How large is Antarctica compared to Europe and Australia?
2. What are katabatic winds, and how fast can they travel?
3. How do Emperor penguins survive the Antarctic winter?
4. What percentage of the world's fresh water is contained in Antarctic ice?
5. How much would sea levels rise if all Antarctic ice melted?
6. What information do ice cores provide to scientists?
7. What caused the ozone hole above Antarctica?
8. What does the Antarctic Treaty prohibit, and when was it signed?
9. What does the phrase "pristine ecosystem" mean in the context of Antarctica?
10. According to the text, what balance must be struck regarding Antarctic tourism?

Text 16: The Industrial Revolution's Legacy

The Industrial Revolution, spanning roughly from 1760 to 1840, fundamentally transformed human civilisation from agricultural societies to mechanised industrial ones. Beginning in Britain before spreading across Europe and North America, this period of rapid technological advancement reshaped how people lived, worked, and related to their environment in ways that continue to influence modern society.

The revolution's driving force was steam power, which liberated industry from dependence on water wheels and wind. James Watt's improved steam engine in 1769 provided reliable, controllable power that could operate anywhere. Factories no longer needed to locate near rivers, enabling the growth of industrial cities. Steam locomotives revolutionised transportation, whilst steamships transformed international trade by making ocean crossings faster and more predictable.

Textile manufacturing exemplified industrial transformation. Before mechanisation, cloth production was a time-consuming domestic activity performed on hand looms. The invention of spinning machines like the spinning jenny and water frame increased thread production dramatically, whilst power looms automated weaving. These innovations meant that clothing, previously expensive and scarce, became affordable for ordinary people.

The social consequences of industrialisation were profound and often contradictory. Rural populations migrated to rapidly growing industrial cities, seeking employment in factories. However, early factory conditions were frequently dangerous and unhealthy, with long working hours, inadequate safety measures, and child labour commonplace. Workers lived in overcrowded slums lacking proper sanitation, leading to disease outbreaks and high mortality rates.

Simultaneously, industrialisation created new opportunities and social mobility. A growing middle class emerged, consisting of factory owners, engineers, and professionals who benefited from industrial prosperity. Education became increasingly important as technological jobs required literacy and numeracy. Women's roles began changing as some found employment in factories, though this work was typically poorly paid and considered temporary.

The environmental impact of industrialisation established patterns of resource consumption and pollution that persist today. Factories burned vast quantities of coal, blackening city skies with smoke and contributing to air pollution. Rivers became contaminated with industrial waste, whilst deforestation accelerated to provide timber for construction and fuel. These environmental costs were largely ignored as societies prioritised economic growth.

Labour movements emerged in response to harsh working conditions. Workers organised trade unions to negotiate better wages, shorter hours, and safer workplaces. Strikes and protests became common as workers discovered collective action could challenge powerful factory owners. Government gradually intervened with labour laws protecting workers, particularly children, though progress was slow and often met with resistance.

The Industrial Revolution's legacy remains complex and multifaceted. It created the foundations of modern technology, global trade, and urban society whilst establishing democratic movements and workers' rights. However, it also introduced environmental degradation, social inequality, and exploitation that continue challenging humanity today. Understanding this period helps explain both the opportunities and problems inherent in rapid technological change.

Comprehension Questions

1. When did the Industrial Revolution occur, and where did it begin?

2. How did James Watt's steam engine change factory locations?

3. How did mechanisation change textile production and clothing costs?

4. Describe three problems with early factory working conditions.

5. Who made up the new middle class that emerged during industrialisation?

6. What environmental problems did early industrialisation cause?

7. How did workers respond to harsh working conditions?

8. What role did government eventually play in improving working conditions?

9. What does the phrase "social mobility" mean in the context of the Industrial Revolution?

10. Why does the author describe the Industrial Revolution's legacy as "complex and multifaceted"?

Text 17: Understanding Mental Health

Mental health encompasses our emotional, psychological, and social wellbeing, affecting how we think, feel, and behave in daily life. Just as physical health requires attention and care, mental health needs nurturing throughout our lives. Understanding mental health helps reduce stigma, promotes early intervention, and encourages people to seek help when needed.

Mental health exists on a continuum rather than as a simple binary of "healthy" or "unhealthy." Everyone experiences fluctuations in their mental wellbeing due to life stresses, relationships, work pressures, or physical health changes. Normal emotional responses to challenging situations differ from mental health conditions, which involve persistent symptoms that significantly impact daily functioning.

Common mental health conditions include anxiety disorders, depression, bipolar disorder, and attention deficit hyperactivity disorder (ADHD). Anxiety disorders, affecting millions globally, involve excessive worry or fear that interferes with normal activities. Depression causes persistent sadness, loss of interest in previously enjoyed activities, and can affect sleep, appetite, and energy levels. These conditions are medical illnesses with biological, psychological, and environmental causes—not personal weaknesses or character flaws.

The teenage years present particular mental health challenges due to significant brain development, hormonal changes, and social pressures. Adolescents may experience mood swings, identity confusion, and increased risk-taking behaviour as normal parts of development. However, persistent symptoms lasting several weeks, dramatic personality changes, or thoughts of self-harm warrant professional attention.

Various factors influence mental health, including genetics, life experiences, and environmental conditions. Traumatic events, chronic stress, social isolation, and substance abuse can trigger or worsen mental health problems. Conversely, strong social connections, regular exercise, adequate sleep, and healthy coping strategies protect and enhance mental wellbeing.

Treatment for mental health conditions has advanced significantly, offering hope for recovery and improved quality of life. Psychotherapy, including cognitive behavioural therapy (CBT) and counselling, helps people understand their thoughts and develop healthy coping mechanisms. Medication can effectively manage symptoms of many conditions, whilst lifestyle interventions such as exercise, mindfulness, and stress management provide additional support.

Prevention and early intervention are crucial for mental health. Building resilience through strong relationships, developing problem-solving skills, and maintaining physical health create protective factors against mental illness. Schools, workplaces, and communities increasingly recognise their role in promoting mental wellness through supportive environments and mental health literacy programmes.

Stigma remains a significant barrier to mental health treatment. Misconceptions about mental illness can prevent people from seeking help, leading to unnecessary suffering and worsening conditions. Open conversations about mental health, sharing personal experiences, and accurate education help normalise mental health struggles and encourage help-seeking behaviour. Remember: seeking help for mental health is a sign of strength, not weakness.

Comprehension Questions

1. What three aspects does mental health encompass?

2. How does the text describe mental health in terms of a continuum?

3. Name four common mental health conditions mentioned in the text.

4. What are the main symptoms of depression listed in the text?

5. Why are the teenage years particularly challenging for mental health?

6. List three factors that can worsen mental health problems.

7. What is cognitive behavioural therapy (CBT)?

8. What does "mental health literacy" mean in the context of prevention programmes?

9. According to the text, how does stigma affect mental health treatment?

10. What message does the author want to convey about seeking help for mental health?

Text 18: The Future of Space Travel

Human space exploration stands at a pivotal moment as technological advances and commercial investment converge to make space travel more accessible and ambitious than ever before. From the first tentative steps beyond Earth's atmosphere in the 1960s to today's sophisticated missions, space exploration is transitioning from government monopoly to a thriving industry with revolutionary potential.

Private companies are revolutionising space access through reusable rocket technology. SpaceX's Falcon 9 rockets can land back on Earth after delivering payloads to orbit, dramatically reducing launch costs from millions to hundreds of thousands of dollars. This breakthrough makes frequent space missions economically viable, opening possibilities for space tourism, satellite deployment, and eventual colonisation efforts.

Mars exploration represents the next major frontier for human space travel. NASA's Artemis programme aims to establish a sustainable lunar base as a stepping stone to Mars, whilst SpaceX's Starship is designed specifically for interplanetary travel. The challenges are

immense: a journey to Mars takes approximately nine months, exposing astronauts to dangerous radiation and psychological isolation. Life support systems must function perfectly for years without Earth-based assistance.

Space tourism is transforming from science fiction to reality. Companies like Blue Origin and Virgin Galactic offer suborbital flights that provide several minutes of weightlessness and spectacular Earth views. While currently expensive, these services are expected to become more affordable as technology improves and competition increases. Space hotels and lunar tourism may follow within decades.

Long-term space habitation requires solving fundamental biological and psychological challenges. Prolonged weightlessness causes bone density loss, muscle atrophy, and cardiovascular deconditioning. Astronauts on multi-year missions to Mars would need artificial gravity systems, possibly created through rotating spacecraft. Psychological support systems must address isolation, confinement, and the inability to return to Earth quickly during emergencies.

Resource utilisation in space offers exciting possibilities for sustainable exploration. The Moon contains helium-3, a rare isotope that could revolutionise fusion energy production on Earth. Asteroids contain vast quantities of rare metals and water, which could support space-based industries and fuel deep space missions. Technologies for extracting and processing these resources are under development.

International cooperation remains essential for ambitious space projects. The International Space Station demonstrates how nations can collaborate successfully in space despite terrestrial tensions. Future Mars missions will likely require pooled resources, shared expertise, and coordinated efforts from multiple countries and organisations.

The implications of advanced space travel extend far beyond exploration. Space-based solar power could provide clean energy to Earth, whilst manufacturing in zero gravity might produce superior materials impossible to create on Earth. Most profoundly, becoming a multi-planetary species could ensure human survival against existential threats like asteroid impacts or climate catastrophes. The future of space travel promises not just adventure, but potentially the continuation of human civilisation itself.

Comprehension Questions

1. How has reusable rocket technology changed space launch costs?

2. What is the purpose of NASA's Artemis programme?

3. How long does a journey to Mars take, and what are two major challenges?

4. What do companies like Blue Origin and Virgin Galactic currently offer?

5. What health problems does prolonged weightlessness cause?

6. What is helium-3, and why is it significant?

7. How does the International Space Station demonstrate international cooperation?

8. What are two potential benefits of space-based industries mentioned in the text?

9. What does "multi-planetary species" mean in the final paragraph?

10. According to the conclusion, how might space travel benefit human survival?

Text 19: Cultural Festivals Around the World

Cultural festivals represent humanity's diverse traditions, beliefs, and artistic expressions, bringing communities together to celebrate their heritage whilst welcoming outsiders to share in their joy. From ancient religious observances to modern artistic celebrations, festivals provide windows into different cultures and demonstrate both the uniqueness and universality of human experience.

Diwali, the Hindu Festival of Lights, illuminates homes across India and Hindu communities worldwide for five days each autumn. Families clean and decorate their homes with intricate rangoli patterns made from coloured powder, light oil lamps called diyas, and exchange sweets and gifts. The festival celebrates the triumph of light over darkness and good over evil, with each day holding specific religious significance. Spectacular fireworks displays and community gatherings create an atmosphere of joy and renewal.

China's Spring Festival, also known as Chinese New Year, represents the most important celebration in Chinese culture. This lunar calendar festival spans 15 days, beginning with family reunions and elaborate feasts featuring symbolic foods like dumplings for prosperity and fish for abundance. Red decorations symbolise good fortune, whilst dragon and lion dances performed in streets ward off evil spirits. The festival concludes with the Lantern Festival, where communities release thousands of glowing lanterns into the night sky.

Brazil's Carnival exemplifies how festivals can blend cultural influences and create entirely new traditions. This pre-Lenten celebration combines Portuguese Catholic traditions with African rhythms and Indigenous influences. Rio de Janeiro's famous parade features elaborate floats, dazzling costumes, and samba schools competing for prizes whilst millions of spectators join street parties called "blocos." The festival demonstrates Brazil's cultural diversity and provides economic benefits through tourism.

Scotland's Edinburgh Festival Fringe, the world's largest arts festival, transforms the historic city into a global stage each August. Thousands of performers from comedy acts to theatrical productions compete for audiences in venues ranging from grand theatres to makeshift spaces in pubs and car parks. The festival's democratic nature allows anyone to participate, making it a celebration of creativity and artistic freedom that launches careers and challenges artistic boundaries.

Mexico's Day of the Dead (Día de los Muertos) offers a unique perspective on mortality and remembrance. Rather than mourning, families celebrate deceased loved ones by creating

elaborate altars (ofrendas) decorated with marigolds, favourite foods, and personal mementos. Sugar skulls, colourful decorations, and joyful music create an atmosphere of celebration rather than sadness. This tradition, recognised by UNESCO as an Intangible Cultural Heritage, demonstrates how different cultures approach universal human experiences.

Germany's Oktoberfest began as a royal wedding celebration in 1810 but evolved into the world's largest beer festival. Held annually in Munich, the festival attracts millions of visitors who enjoy traditional Bavarian food, music, and culture alongside the famous beer halls. Traditional costumes called lederhosen and dirndls are worn by locals and tourists alike, creating a sense of shared participation in Bavarian culture.

These festivals, whilst rooted in specific cultures, increasingly attract global participation. They promote cultural understanding, boost local economies, and preserve traditions that might otherwise disappear. In our interconnected world, cultural festivals serve as bridges between communities, celebrating diversity whilst highlighting the common human desires for joy, connection, and meaning.

Comprehension Questions

1. How long does Diwali last, and what does it celebrate?

2. What are rangoli patterns and diyas in Diwali celebrations?

3. How long does China's Spring Festival span, and how does it conclude?

4. What three cultural influences combined to create Brazil's Carnival?

5. What makes the Edinburgh Festival Fringe "democratic" according to the text?

6. How does Mexico's Day of the Dead differ from typical mourning practices?

7. What are ofrendas, and how are they decorated?

8. How did Germany's Oktoberfest begin, and what is it known for today?

9. What does "Intangible Cultural Heritage" mean in the context of UNESCO recognition?

10. According to the conclusion, what three benefits do cultural festivals provide in our modern world?

Text 20: Youth Climate Activists

Young people worldwide are leading an unprecedented movement for climate action, demonstrating that age is no barrier to creating meaningful social change. From school strikes to international conferences, youth climate activists are demanding immediate action

on what they consider the defining issue of their generation. Their passion, moral clarity, and innovative approaches are reshaping environmental politics and inspiring millions.

Greta Thunberg, perhaps the most recognisable youth climate activist, sparked a global movement when she began her school strike for climate action outside the Swedish Parliament in August 2018. Her simple yet powerful message—that adults are stealing her generation's future—resonated worldwide. Thunberg's direct speaking style and refusal to fly due to aviation's carbon emissions demonstrated the personal sacrifices required for climate action.

The Fridays for Future movement, inspired by Thunberg's example, has mobilised millions of students across 150 countries. These young activists organise school strikes, demanding that governments treat climate change as the emergency they believe it to be. The movement's slogan, "Why should we study for a future that may not exist?" highlights their frustration with insufficient adult action on climate change.

Youth activists employ diverse strategies beyond street protests. Vanessa Nakate from Uganda focuses on reforestation and renewable energy projects in Africa, highlighting how climate change disproportionately affects developing nations. Autumn Peltier, an Indigenous water protector from Canada, advocates for clean water access whilst connecting environmental protection to Indigenous rights and traditional knowledge.

Legal action represents another powerful tool in youth activism. The organisation Our Children's Trust has supported young people in filing lawsuits against governments for failing to protect their constitutional rights to a stable climate. These cases argue that current climate policies violate young people's rights to life, liberty, and property by condemning them to live with the consequences of environmental destruction.

Youth climate activists face significant challenges and criticism. Some adults dismiss them as naive or manipulated, arguing that complex environmental issues require technical expertise rather than moral arguments. Young activists also struggle with climate anxiety—the stress and despair that comes from understanding the severity of environmental threats facing their generation.

However, research suggests that youth-led climate activism is creating real change. Their moral authority—speaking as the generation most affected by climate change—has shifted public opinion and political discourse. Many politicians now acknowledge climate change as a priority partly due to youth pressure. The movement has also inspired older generations to increase their own environmental engagement.

The success of youth climate activism demonstrates several important principles. Young people bring fresh perspectives unencumbered by established interests or political compromise. Their use of social media creates global networks that can organise rapidly and share strategies across continents. Most importantly, their moral clarity about intergenerational justice—the idea that current generations have obligations to future ones—provides a powerful framework for demanding change.

As climate impacts become increasingly severe, youth activists continue evolving their strategies whilst maintaining their fundamental message: the time for gradual change has

passed, and dramatic action is needed now. Their movement represents both a critique of adult leadership and a demonstration of the power that comes from moral conviction, strategic thinking, and collective action.

Comprehension Questions

1. When and where did Greta Thunberg begin her school strike for climate action?

2. How many countries have been involved in the Fridays for Future movement?

3. What does the movement's slogan reveal about youth activists' concerns?

4. How do Vanessa Nakate's and Autumn Peltier's approaches differ from traditional climate protests?

5. What legal argument do youth climate lawsuits make against governments?

6. What is climate anxiety, and how does it affect young activists?

7. Why might young people have "moral authority" in climate discussions?

8. What does "intergenerational justice" mean in the context of climate activism?

9. What advantages do young activists have according to the text?

10. What fundamental message do youth climate activists want to convey about the urgency of climate action?

Answer Keys

Text 1: The Science of Climate Change - Answers

1. Human activities have been the primary driver of climate change since the mid-20th century.

2. Coal, oil, and gas.

3. Before the Industrial Revolution, CO2 levels were approximately 280 ppm; today they exceed 420 ppm.

4. Carbon dioxide acts like a blanket around Earth, trapping heat from the sun.

5. Arctic ice melting, sea level rise, and more frequent/intense extreme weather events (heatwaves, droughts, floods, hurricanes).

6. "Unprecedented rate" suggests the melting is happening faster than ever before recorded.

7. Renewable energy technologies becoming cheaper and more efficient, government investments in clean energy, and individual actions.

8. To inform readers about climate science and emphasise the need for immediate action.

9. To emphasise the dramatic and alarming nature of the current situation compared to natural historical patterns.

10. Understanding climate science helps people make informed decisions about the planet's future and take appropriate action.

Text 2: Marie Curie: Pioneering Scientist - Answers

1. Maria Sklodowska, born in Warsaw, Poland.

2. Women were banned from attending university in Poland.

3. Marie would work to fund her sister's medical studies in Paris, then her sister would later support Marie's education.

4. Physics and mathematics; she graduated first in physics and second in mathematics.

5. "Radioactivity."

6. She named it after her homeland, Poland.

7. Obstacles that seem impossible to overcome.

8. Two Nobel Prizes: Physics (1903) and Chemistry (1911).

9. She carried test tubes of radium in her pockets and worked in dangerous conditions without proper protection.

10. She opened doors for women in science and showed that determination could overcome barriers.

Text 3: The Ancient Olympic Games - Answers

1. From 776 BCE to 393 CE (over 1,000 years).

2. A sacred truce that allowed safe passage for athletes and spectators, demonstrating sport's unifying power.

3. Only male competitors were allowed; women were forbidden from participating or watching.

4. They believed it displayed the human form in its most natural and beautiful state.

5. Olive wreaths (rather than gold medals).

6. A sprint of approximately 192 metres.

7. Running, long jump, discus, javelin, and wrestling.

8. Official trainers who supervised athletes' final preparation at Olympia.

9. He viewed the games as pagan rituals incompatible with Christianity.

10. They embodied Greek ideals of physical excellence, religious devotion, and cultural unity; they unified warring city-states through the Olympic Peace.

Text 4: How Social Media Changed Communication - Answers

1. Letters, phone calls, and emails.

2. Social media made global communication instant and free.

3. Wanting instant satisfaction or results without waiting.

4. To provide emotional context that text alone cannot convey.

5. It has made information sharing accessible to everyone, allowing anyone to become a content creator.

6. Social media can provide real-time updates during emergencies before traditional news outlets can report them.

7. Because peer recommendations carry more weight than traditional advertisements.

8. Unrealistic expectations, mental health issues, cyberbullying, and addiction to technology.

9. Carefully selected and edited to present an idealised version of reality.

10. Balancing social media's potential for connection and learning with protecting users' wellbeing and privacy.

Text 5: The Great Barrier Reef Under Threat - Answers

1. Over 2,300 kilometres, along Australia's northeastern coast.

2. Approximately 2,900 individual coral reefs and 900 islands.

3. Over 60,000 years.

4. A stress response where corals expel colourful algae from their tissues; caused by rising ocean temperatures.

5. 2016 and 2017; over two-thirds of the northern reef was affected.

6. It makes seawater more acidic, making it difficult for corals to build their skeletons and weakening existing structures.

7. It creates nutrient pollution that fuels harmful algae blooms, which block sunlight and consume oxygen.

8. Breeding heat-resistant coral varieties and using probiotics to boost coral health.

9. It suggests aggressive, destructive eating behaviour that devastates coral populations.

10. Immediate local conservation efforts and long-term international cooperation to reduce greenhouse gas emissions.

Text 6: The Rise of Renewable Energy - Answers

1. Cells that convert sunlight directly into electricity.

2. As tall as 20-storey buildings, with blade spans exceeding the length of football pitches.

3. They take advantage of stronger and more consistent winds.

4. Hydroelectric power provides reliable, continuous output that can be controlled, unlike solar and wind which depend on weather.

5. The problem that renewable energy sources don't produce power consistently (when sun isn't shining or wind isn't blowing).

6. It stabilised the electrical grid and reduced power costs.

7. Creating millions of jobs worldwide.

8. Steel production and aviation.

9. That renewable energy growth will continue and cannot be stopped.

10. To reduce their environmental impact (and because it makes economic sense).

Text 7: Nelson Mandela's Fight for Freedom - Answers

1. "Separateness" in Afrikaans; it was in place from 1948 to 1994.

2. They were forced to live in impoverished homelands, denied quality education, and prohibited from voting or owning land in most areas.

3. 1944; he initially supported peaceful protests and civil disobedience.

4. An incident where police killed 69 unarmed protesters; it convinced Mandela that non-violent resistance alone wouldn't end apartheid.

5. The ANC's armed wing; it conducted sabotage operations against government installations whilst avoiding civilian casualties.

6. 27 years, mostly on Robben Island.

7. International pressure, economic sanctions, and internal resistance gradually weakened the apartheid government.

8. His vision for a unified South Africa free from oppression.

9. Retribution means punishment or revenge; it's significant because Mandela chose healing and unity instead of seeking revenge.

10. Rather than seeking revenge after 27 years in prison, he chose reconciliation and worked with former enemies to build democracy.

Text 8: The Psychology of Sports Performance - Answers

1. The study of mental factors affecting athletic performance; it's become more important as people recognise the mind as athletes' most powerful tool.

2. Athletic confidence is built through preparation, successful experiences, and positive self-talk, rather than being mere arrogance.

3. It activates the same neural pathways used during actual performance, essentially training the brain alongside the body.

4. When athletes overthink their movements, disrupting automatic processes they've developed through training.

5. Process goals focus on what athletes can control (technique); outcome goals focus on results (winning). Examples: "maintain serve technique" vs. "win this match."

6. Time seems to slow down, movements feel effortless, and athletes react instinctively without conscious thought.

7. The ability to bounce back from setbacks like losses, injuries, and disappointments.

8. They see setbacks as temporary and necessary parts of the improvement process.

9. An approach that considers the whole person, training both body and mind together.

10. Peak performance requires training both body and mind in harmony; mental skills are as important as physical skills for athletic success.

Text 9: Ancient Civilisations: The Maya - Answers

1. Over 2,000 years (approximately 2000 BCE to 1500 CE), across present-day Mexico, Guatemala, Belize, Honduras, and El Salvador.

2. Maya civilisation consisted of independent city-states rather than a centralised empire.

3. A ruler of a Maya city-state who claimed divine authority.

4. A 260-day ritual calendar and a 365-day solar year.

5. Because many advanced civilisations, including the Romans, never developed this concept.

6. No metal tools, no wheels, and no beasts of burden.

7. Codices; Spanish conquistadors destroyed most of them during the colonial period.

8. The Maya believed humans were created from corn dough, giving it deep religious significance.

9. That despite extensive research, scientists still don't fully understand why Maya civilisation declined.

10. Millions of Maya descendants still live in Central America today, maintaining traditional practices whilst adapting to the modern world.

Text 10: The Impact of Plastic Pollution - Answers

1. Over 9 billion tonnes; less than 10% has been recycled.

2. Particles smaller than 5 millimetres; they form when larger plastics break down over time.

3. Twice the size of Texas.

4. Sea turtles mistake plastic bags for jellyfish; seabirds feed plastic to their chicks; whales' stomachs fill with plastic waste.

5. Because they're virtually impossible to remove once released and contaminate drinking water and the food chain.

6. Beach cleaning costs, tourism industry damage, and reduced fishing catches.

7. Programmes that make manufacturers responsible for their products' entire lifecycle.

8. Developing biodegradable alternatives, improving recycling technologies, and creating systems to capture plastic from rivers.

9. An economy where materials are continuously reused rather than discarded.

10. Because the health of the planet and future generations depends on decisive action now.

Text 11: How the Human Brain Works - Answers

1. Approximately 1.4 kilograms; roughly 86 billion neurons.

2. Chemical messengers that cross synapses to influence neighbouring neurons.

3. Cerebral cortex (complex thinking), cerebellum (balance/movement), limbic system (emotions/memory), brainstem (vital functions).

4. The brain's ability to reorganise and form new connections; scientists previously believed brain structure was fixed after childhood.

5. Short-term memory relies on electrical activity; long-term memory requires protein synthesis and structural changes in synapses.

6. The brain replays and strengthens important memories whilst discarding irrelevant information.

7. The prefrontal cortex (decision-making) doesn't mature until mid-twenties, whilst the limbic system (emotions) develops earlier.

8. fMRI measures blood flow to show brain activity; EEG records electrical activity.

9. The brain physically changes its structure and connections based on experiences and learning.

10. Better understanding leads to more effective treatments for neurological and psychiatric disorders.

Text 12: The Story of the Internet - Answers

1. Advanced Research Projects Agency Network; commissioned to create a communication system that could survive nuclear attacks.

2. By creating a decentralised network where information could travel through multiple pathways.

3. 29 October 1969, linking UCLA and Stanford University; the system crashed after transmitting only "LO" instead of "LOGIN."

4. Transmission Control Protocol/Internet Protocol; it allowed different computer networks to communicate seamlessly.

5. Tim Berners-Lee; HTML, HTTP, and URLs.

6. Because it ensured the Web remained free for everyone to use.

7. It made the Internet accessible to non-technical users by displaying images alongside text.

8. From primarily information-sharing to a platform for human connection and personal experience sharing.

9. Present everywhere; available at all times and places.

10. That technology has the power to reshape civilisation in unexpected ways.

Text 13: Traditional Aboriginal Culture - Answers

1. Over 65,000 years.

2. The creation period when ancestral spirits shaped the landscape; the stories preserve history, teach morals, explain natural phenomena, and maintain connections to locations.

3. It encompasses deep spiritual/emotional connection and responsibility for maintaining the land's health and continuing traditions.

4. Over 40,000 years old; they depict everyday life to sacred ceremonies.

5. They maintained cultural knowledge and made important community decisions.

6. Returning boomerangs came back when thrown (for practice/ceremony); hunting sticks flew straight to stun or kill prey.

7. Controlled burning to maintain ecosystems, reduce wildfire risks, promote plant growth, and manage animal populations.

8. Through modern Aboriginal artists, musicians, and writers expressing traditional knowledge in contemporary mediums.

9. To bring back to life and strengthen cultural heritage that may have been weakened or lost.

10. Recognition of Aboriginal land rights and growing appreciation for traditional ecological knowledge.

Text 14: The Benefits of Exercise for Teenagers - Answers

1. Because bone density is still developing during adolescence, and strengthening bones reduces osteoporosis risk later.

2. Natural chemicals that create feelings of happiness and reduce pain perception.

3. Higher self-esteem, better sleep quality, and reduced anxiety and depression.

4. By increasing blood flow to the brain, improving concentration, memory retention, and problem-solving abilities.

5. Cooperation, leadership, and communication skills.

6. Because exercise habits formed during adolescence typically persist into adulthood, reducing chronic disease risk.

7. Lack of time, limited access to facilities, and self-consciousness about changing bodies.

8. Walking/cycling to school, taking stairs, dancing, and active video games.

9. At least 60 minutes of moderate to vigorous physical activity daily.

10. Lifestyles with little physical movement; caused by increased screen time and academic pressures.

Text 15: Exploring Antarctica - Answers

1. Larger than Europe and nearly twice the size of Australia.

2. Winds that flow down from high elevations; they can exceed 200 kilometres per hour.

3. They huddle together in groups of thousands, rotating positions to share warmth.

4. Approximately 70%.

5. Approximately 60 metres.

6. Detailed records of Earth's climate history spanning hundreds of thousands of years.

7. Human-made chemicals that depleted the ozone layer.

8. Military activities and territorial claims; signed in 1959.

9. An ecosystem that remains in its original, uncontaminated natural state.

10. Between providing economic benefits and raising awareness versus protecting the fragile ecosystem from human impact.

Text 16: The Industrial Revolution's Legacy - Answers

1. From 1760 to 1840; began in Britain.

2. Steam power was reliable and controllable, so factories no longer needed to locate near rivers.

3. Mechanisation dramatically increased production speed and made clothing affordable for ordinary people.

4. Long working hours, inadequate safety measures, child labour, dangerous conditions.

5. Factory owners, engineers, and professionals who benefited from industrial prosperity.

6. Air pollution from coal burning, river contamination from industrial waste, and deforestation.

7. They organised trade unions and used strikes and protests to demand better conditions.

8. Government gradually intervened with labour laws protecting workers, especially children.

9. The ability to move up in social class or improve one's economic position.

10. Because it created both positive developments (technology, democracy, workers' rights) and ongoing problems (environmental degradation, inequality, exploitation).

Text 17: Understanding Mental Health - Answers

1. Emotional, psychological, and social wellbeing.

2. Mental health exists on a continuum rather than being simply "healthy" or "unhealthy," with everyone experiencing fluctuations.

3. Anxiety disorders, depression, bipolar disorder, and ADHD.

4. Persistent sadness, loss of interest in previously enjoyed activities, and effects on sleep, appetite, and energy.

5. Due to significant brain development, hormonal changes, and social pressures.

6. Traumatic events, chronic stress, social isolation, and substance abuse.

7. A type of psychotherapy that helps people understand their thoughts and develop healthy coping mechanisms.

8. Education about mental health to improve understanding and reduce stigma.

9. Stigma prevents people from seeking help, leading to unnecessary suffering and worsening conditions.

10. That seeking help for mental health is a sign of strength, not weakness.

Text 18: The Future of Space Travel - Answers

1. From millions to hundreds of thousands of dollars.

2. To establish a sustainable lunar base as a stepping stone to Mars.

3. Approximately nine months; dangerous radiation exposure and psychological isolation.

4. Suborbital flights with several minutes of weightlessness and Earth views.

5. Bone density loss, muscle atrophy, and cardiovascular deconditioning.

6. A rare isotope that could revolutionise fusion energy production on Earth.

7. It shows how nations can collaborate successfully despite terrestrial tensions.

8. Space-based solar power and manufacturing superior materials in zero gravity.

9. Humans living on multiple planets, not just Earth.

10. By ensuring human survival against existential threats like asteroid impacts or climate catastrophes.

Text 19: Cultural Festivals Around the World - Answers

1. Five days; the triumph of light over darkness and good over evil.

2. Rangoli are intricate patterns made from coloured powder; diyas are oil lamps.

3. 15 days; it concludes with the Lantern Festival.

4. Portuguese Catholic traditions, African rhythms, and Indigenous influences.

5. Anyone can participate, regardless of experience or background.

6. It celebrates deceased loved ones with joy rather than mourning them with sadness.

7. Elaborate altars; decorated with