

Summer 1

Broad Horizons

Set : Thursday

Due: Thursday



Broad horizons. Confident leaders.



"Make it possible."



Tenacity

We promote **honesty**, **responsibility**, **perseverance** and **resilience**.
We hold everyone to the same **high standard**, so that everyone **achieves**.



"Look after each other."



Empathy

We value **family** and **community**.
We promote **inclusivity**, **manners**, **gratitude** and **respect**,
celebrate and appreciate **diversity**, and instil the **courage**
to do what is **right**, not what is **easy**.



"Be the best you can be."



Aspiration

We instil **confidence** and **ambition**, and promote
purpose, **passion**, **pride** and **independence**.
We strive for
100% effort, 100% of the time.



"Every moment matters."



Motivation

We teach that **every day is a chance to be better**
than we were the day before.
Personal and collective success is the incentive, and everyone
will be **celebrated** for being the **best version of themselves**.

Name.....

Tutor group.....

Saltash
Community
School

Achieving More Together

Tenacity | Empathy | Aspiration | Motivation

Broad Horizons

Why do we set this homework?

This homework is unique to Saltash Community School and has been created by your teachers just for you! The vocabulary, questions and extended writing tasks all aim to help you practise the essential skills needed to be a successful student, and support all areas of the curriculum.

Our school vision is "Broad Horizons. Confident Leaders." This is what we want for each of you when you leave us at the end of year 13.

We have chosen this vision carefully and it shapes everything we do for you- it's why we have our TEAM values and help you to develop the leadership traits within.

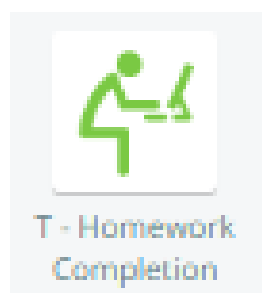
Why 'Broad Horizons'?

The term "broad horizons" evokes a sense of vastness, openness, and limitless possibilities. It suggests a worldview that extends beyond the immediate and familiar, embracing a wider range of experiences, perspectives, and cultures. Essentially, it is about expanding one's mental horizons, breaking free from limitations, and embracing the diversity of the world. Broaden your horizons and you will in turn gain *cultural capital*: a form of knowledge that will grant you access to opportunities and networks. This can lead to greater success in education, careers, and personal relationships, and can significantly enhance your quality of life.

What do I do with this homework?

On a Thursday in tutor time, your tutor will introduce the article for the week, and together you will look at the words and definitions in the key vocabulary table. At home, you will be expected to read the article, answer the comprehension questions (in FULL sentences) and then complete an extended piece of creative writing. If you are absent or late for Thursday tutor, you must still complete this homework, including the vocabulary.

On Mondays, your tutor will check your booklet in line-up. You will be given points for both completion and effort, which can earn you two points per week. Consistently good work will earn you even more points! If you have not completed your homework, or if you forget / lose your booklet, you will receive a negative point and you will be expected to complete it for the next day. Don't forget that x3 negatives for homework mean you will be expected to attend a Friday detention after school, where we will help you to catch up. Come and see a member of staff at any time on Thursday or Friday if you need help or get stuck, or send your tutor an email. We are always here to help!



Learning new things is exciting and gaining knowledge makes you a more interesting person . We hope that you enjoy the articles within this booklet, and that it ignites an interest in the wider world that will last you a lifetime.

Dolly the Sheep



Dolly the sheep, born on 5th July 1996, at the Roslin Institute in Scotland, became an **iconic** figure in scientific history as the first mammal successfully cloned from an adult somatic cell. Her birth was a **groundbreaking** achievement that **revolutionised** our understanding of cellular biology and ignited a **profound** global debate about the ethics and potential of cloning.

Before Dolly, it was widely believed that once a cell had specialised (e.g., into a skin cell or a mammary cell), its genetic programming was **irreversible**, meaning it could not be used to create an entire new organism. Dolly's creation **demystified** this long-held **dogma**. The technique used, known as **Somatic** Cell Nuclear Transfer (SCNT), involved taking a mammary gland cell from a Finn Dorset sheep (the genetic donor) and an unfertilised egg cell from another sheep (a Scottish Blackface). The nucleus, containing the DNA, was removed from the egg cell, and the **nucleus** from the mammary cell was then inserted into the "empty" egg. This reconstructed cell was then stimulated to divide and develop into an embryo, which was implanted into a surrogate mother.

Dolly's birth, announced in February 1997, sparked a media frenzy and widespread discussion. Her existence proved that adult cells could be "reprogrammed" to a totipotent state, capable of developing into a complete animal. This **unprecedented** demonstration opened new avenues in stem cell research, offering **ingenuity** in understanding development, disease, and the potential for **regenerative** medicine.

While Dolly lived for six and a half years, a shorter lifespan than average for her breed, and suffered from arthritis and lung disease, it was never definitively proven that these were directly linked to her cloned status. Despite the initial ethical **scepticism** and ongoing debates, Dolly's legacy is **pervasive**. She remains a **testament** to scientific perseverance and a **pivotal** moment that continues to shape discussions in genetics, biology, and assisted reproductive technologies worldwide.

Iconic	Widely recognised and well-established.
Groundbreaking	Innovative; a new and very important discovery or invention.
Revolutionised	Changed (something) fundamentally and completely.
Profound	(Of a state, quality, or emotion) very great or intense.
Irreversible	Not able to be undone or altered.
Demystified	Made clearer and easier to understand.
Dogma	A belief that is presented as true and often expected to be accepted without question
Somatic	Relating to the body, especially as distinct from the mind.
Nucleus	The central and most important part of an object, movement, or group, forming the basis for its activity and growth. (In biology, the central part of a cell containing genetic material).
Unprecedented	Never done or known before.
Ingenuity	The quality of being clever, original, and inventive.
Regenerative	(Of a process or system) involving or causing regeneration, especially of a body part or tissue.
Scepticism	A doubting or questioning attitude or state of mind; a lack of conviction.
Pervasive	Spreading widely throughout an area or a group of people.
Testament	Something that serves as a sign or evidence of a specified fact, event, or quality.
Pivotal	Of crucial importance in relation to the development or success of something else.

• What was the common scientific belief about adult cells before Dolly's birth, and how did her creation challenge this belief?

• Describe the process of Somatic Cell Nuclear Transfer (SCNT) as it was applied to create Dolly the sheep.

• What were some of the initial reactions and debates sparked by the announcement of Dolly's birth?

• Beyond simply creating a clone, for what broader scientific advancements and discussions did Dolly's existence pave the way?

Write about a time where you learned something new that surprised or inspired you.

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Alan Turing

Alan Mathison Turing, born in London in 1912, was a brilliant British mathematician and logician whose **pivotal** work during World War II and beyond laid the **groundbreaking** foundations for modern computer science and artificial intelligence. His life, marked by extraordinary intellect and tragic injustice, remains a **profound** story in the annals of scientific history.



Turing's most famous contribution came during World War II at Bletchley Park, Britain's top-secret codebreaking centre. Here, he played an **unprecedented** role in cracking the German Enigma code. The Enigma machine was a complex electromechanical device used by the German armed forces to **encrypt** their communications, boasting billions of possible settings, making it seem virtually unbreakable.

Building upon earlier work by Polish cryptanalysts, Turing, along with his colleague Gordon Welchman, designed and developed the "Bombe." This electromechanical machine was an **ingenuity** that helped to rapidly determine the daily settings of the Enigma machines. By exploiting weaknesses in the Enigma's design and leveraging statistical methods, Turing's team was able to **demystify** vast numbers of **intercepted** German messages. This intelligence, known as Ultra, provided the Allies with **crucial** insights into enemy movements and plans, particularly in the Battle of the Atlantic, where U-boats were inflicting heavy losses on Allied shipping. It is widely believed that Turing's work shortened the war by several years, saving countless lives.

Beyond his wartime heroics, Turing's **theoretical** work on the "Turing machine" in 1936 provided the abstract **blueprint** for the modern computer. He later contributed to the design of early electronic computers and proposed the "Turing Test" as a **criterion** for artificial intelligence. Despite his immense contributions, Turing was tragically prosecuted in 1952 for homosexuality, which was then illegal in Britain, and accepted **chemical castration** as an alternative to prison. He died in 1954, apparently by suicide, a victim of the era's prejudice. His legacy, however, is **pervasive**, a testament to his enduring genius and his **iconic** status as a father of the digital age.

Pivotal	Of crucial importance in relation to the development or success of something else.
Groundbreaking	Innovative; a new and very important discovery or invention.
Profound	(Of a state, quality, or emotion) very great or intense.
Unprecedented	Never done or known before.
Electromechanical	Involving both electrical and mechanical components.
Encrypt	Convert (information or data) into a cipher or code, especially to prevent unauthorised access.
Ingenuity	The quality of being clever, original, and inventive.
Demystify	Make (something) clearer and easier to understand.
Intercepted	Obstructed (someone or something) so as to prevent them from continuing to a destination.
Crucial	Of great importance.
Theoretical	Concerned with the theories or hypotheses rather than the practical application of a subject.
Blueprint	A detailed plan or scheme.
Criterion	A principle or standard by which something may be judged or decided.
Pervasive	Spreading widely throughout an area or a group of people.
Chemical Castration	Hormone treatment to reduce testosterone levels, primarily to decrease sex drive and sexual urges
Iconic	Widely recognised and well-established.

• How was Alan Turing's work at Bletchley Park **pivotal** and **groundbreaking** in the context of World War II?

• Explain how the Enigma machine **encrypted** messages and what **ingenuity** was required to **demystify** them.

• What was the **unprecedented** nature of the "Bombe" machine, and how did it help with **intercepted** German communications?

• Beyond his wartime efforts, what **theoretical** contributions did Turing make that are considered a **blueprint** for modern computing, and how is his legacy now seen as **iconic** and **pervasive**?

“Prejudice is a great time save. You can form opinions without having to get to the facts.’ – E.B. White. To what extent do you believe this quote to be true?

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The Arab Spring



The Arab Spring refers to a series of **profound** anti-government protests, uprisings, and armed rebellions that spread across much of the Arab world in the early 2010s. This **unprecedented** wave of popular movements began in Tunisia in December 2010, sparked by the **self-immolation** of Mohamed Bouazizi, a street vendor protesting corruption and ill-treatment. His act ignited a **pivotal** moment, quickly leading to the overthrow of Tunisia's long-standing **authoritarian** president.

The success in Tunisia **pervasively** inspired similar uprisings across the region. Citizens, often **mobilised** through social media, took to the streets to demand political reforms, greater freedoms, economic opportunities, and an end to corruption and **autocratic** rule. Major protests erupted in Egypt, Libya, Yemen, Syria, and Bahrain, among others. The initial optimism was **palpable**, as **long-entrenched** regimes faced popular **defiance**.

However, the outcomes of the Arab Spring were highly diverse and often tragic. While some countries, like Tunisia, transitioned towards more democratic governance, others **descended** into prolonged civil wars, such as in Syria and Libya, leading to immense human suffering, displacement, and regional instability. In Egypt, the initial revolution led to the overthrow of Hosni Mubarak, but was followed by a period of political turmoil and ultimately a military takeover.

The Arab Spring highlighted the deep-seated **grievances** within these societies and the desire for change, but also exposed the complex geopolitical dynamics and internal divisions that often **hindered** successful transitions. Its legacy remains a subject of intense debate and analysis, underscoring the challenges of democratic transformation in regions with long histories of authoritarian rule and external interference. It stands as a testament to the power of popular protest, yet also a cautionary tale about the **fragility** of political change.

Profound	(Of a state, quality, or emotion) very great or intense.
Unprecedented	Never done or known before.
Pivotal	Of crucial importance in relation to the development or success of something else.
Self-immolation	The act of killing oneself as a sacrifice or protest by setting oneself on fire.
Authoritarian	Favouring or enforcing strict obedience to authority, especially that of the government, at the expense of personal freedom.
Pervasively	In a way that spreads widely throughout an area or a group of people.
Mobilised	(Of a country or its government) prepared and organised (troops) for active service. (In this context, organised people for action).
Autocratic	Relating to a ruler who has absolute power.
Palpable	(Of a feeling or atmosphere) so intense as to be almost tangible.
Entrenched	(Of an attitude, habit, or belief) firmly established and difficult or unlikely to change; ingrained.
Defiance	Open resistance; bold disobedience.
Descended	Moved or fallen downwards.
Grievances	Real or imagined wrong or cause for complaint, especially unfair treatment.
Hindered	Made it more difficult for (someone) to do something or for (something) to happen.
Fragility	The quality of being easily broken or damaged.

• What was the **pivotal** event that sparked the Arab Spring in Tunisia, and how did its success **pervasively** inspire movements in other countries?

• What were the primary demands of the citizens who **mobilised** during the Arab Spring, and what kind of rule were they seeking to challenge?

• Why were the outcomes of the Arab Spring described as diverse and often tragic, and what factors **hindered** successful transitions in some nations?

• How does the article characterise the legacy of the Arab Spring, highlighting both the power of popular protest and the **fragility** of political change?

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The Tower of London



Standing majestically on the banks of the River Thames, the Tower of London is one of Britain's most **iconic** and historically **profound** landmarks. Founded by William the Conqueror in 1066, this **formidable** fortress has served various roles over the centuries: a royal palace, an armoury, a treasury, a zoo, and most famously, a prison. Its walls hold centuries of **unprecedented** tales, many of them dark and chilling, particularly concerning its high-profile prisoners.

The Tower's **pervasive** reputation as a place of **incarceration** and execution is well-deserved. Many famous figures met their end within its confines. Perhaps one of the most **poignant** stories is that of Anne Boleyn, second wife of King Henry VIII. Imprisoned on charges of treason and incest, she was executed on Tower Hill in 1536, her final moments a **testament** to her **defiance** and dignity. Her ghost is still said to roam the Tower grounds.

Another notable prisoner was Guy Fawkes, part of the Gunpowder Plot to blow up Parliament in 1605. Captured in the cellars of the Houses of Parliament, he was brought to the Tower, where he was subjected to intense torture to reveal his co-**conspirators**. The conditions within the Tower were often brutal, and many prisoners, regardless of their guilt, suffered **immensely**.

Beyond its grim history, the Tower is also home to the Crown Jewels and guarded by the Yeoman Warders, or Beefeaters, who share its rich history with visitors. The ravens, too, are an **integral** part of the Tower's legend; it is said that if they ever leave, the kingdom will fall. The Tower of London remains a **captivating** site, a pivotal reminder of Britain's turbulent past, continuing to draw millions who seek to unravel its **enigmatic** stories.

Iconic	Widely recognised and well-established.
Profound	(Of a state, quality, or emotion) very great or intense.
Formidable	Inspiring fear or respect through being impressively large, powerful, intense, or capable.
Unprecedented	Never done or known before.
Pervasive	Spreading widely throughout an area or a group of people.
Incarceration	The state of being confined in prison; imprisonment.
Poignant	Evoking a keen sense of sadness or regret; touching.
Testament	Something that serves as a sign or evidence of a specified fact, event, or quality.
Defiance	Open resistance; bold disobedience.
Incest	Sexual intercourse between people too closely related to marry legally.
Conspirators	People who are involved in a secret plan to do something harmful or illegal.
Immensely	To a great extent; extremely.
Integral	Necessary to make a whole complete; essential or fundamental.
Captivating	Capable of attracting and holding interest; charming.
Enigmatic	Difficult to interpret or understand; mysterious.

•How has the Tower of London's **formidable** history as a prison contributed to its **pervasive** reputation and **enigmatic** tales?

•What makes the story of Anne Boleyn a **poignant** example of a prisoner's **defiance** within the Tower's walls?

•Beyond its role in **incarceration**, what other **integral** functions has the Tower served throughout its **unprecedented** history?

•Why is the Tower of London considered a **captivating** site, and how does it serve as a **testament** to Britain's past?

Write the opening to a heist story, where someone is planning on stealing the Crown Jewels from The Tower of London.

[illegible]



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We Are All Made of Stars



The poetic notion that "we are all made of stars" is, in fact, a **profound** scientific truth. Every atom of our bodies, from the carbon in our DNA to the iron in our blood, originated within the fiery furnaces of stars or the cataclysmic explosions of supernovae. This **unprecedented** understanding of our cosmic origins is a **testament** to centuries of astronomical and physical research.

In the immediate aftermath of the Big Bang, the universe was composed almost entirely of the lightest elements: hydrogen and helium, with trace amounts of lithium. Heavier elements, those **integral** to life as we know it, did not yet exist. Their creation began within the cores of the first stars. Through a process called **nuclear fusion**, immense gravitational pressure and extreme temperatures forced hydrogen atoms to combine, forming helium, and then progressively heavier elements like carbon, oxygen, and nitrogen. This **stellar nucleosynthesis** is a **captivating** display of cosmic **alchemy**.

However, stars like our Sun can only fuse elements up to iron. To create elements heavier than iron – such as gold, silver, or uranium – an even more energetic event is required: a **supernova**. When massive stars exhaust their nuclear fuel, they undergo a spectacular and **formidable** collapse, followed by an explosion that releases an **immense** amount of energy. This violent outburst creates the conditions necessary for rapid nucleosynthesis, scattering newly formed heavy elements across the cosmos.

These **dispersed** elements, often in the form of cosmic dust or "stardust," become the raw material for **subsequent** generations of stars and planetary systems. Our own solar system, including Earth and all life upon it, formed from such a cloud of recycled stellar material billions of years ago. Thus, the very atoms that compose us have travelled through the life cycles of ancient stars, making us quite literally, children of the cosmos. This **enigmatic** connection to the universe's grand evolutionary story is a **pervasive** reminder of our place within the vast cosmic tapestry.

Profound	(Of a state, quality, or emotion) very great or intense.
Unprecedented	Never done or known before.
Testament	Something that serves as a sign or evidence of a specified fact, event, or quality.
Integral	Necessary to make a whole complete; essential or fundamental.
Nuclear fusion	A nuclear reaction in which atomic nuclei of low atomic number fuse to form a heavier nucleus with the release of energy.
Stellar nucleosynthesis	The process by which elements are created within stars by combining lighter nuclei into heavier ones.
Captivating	Capable of attracting and holding interest; charming.
Alchemy	A seemingly magical process of transformation, creation, or combination.
Supernova	A star that suddenly increases greatly in brightness because of a catastrophic explosion that ejects most of its mass.
Formidable	Inspiring fear or respect through being impressively large, powerful, intense, or capable.
Immense	Extremely large or great, especially in scale or degree.
Dispersed	Distributed or spread over a wide area.
Subsequent	Coming after something in time; following.
Enigmatic	Difficult to interpret or understand; mysterious.
Pervasive	Spreading widely throughout an area or a group of people.

- How does the article explain the **profound** scientific truth that "we are all made of stars," and what elements were present in the universe immediately after the Big Bang?

- Describe the process of **stellar nucleosynthesis** and **nuclear fusion** within stars, explaining how elements up to iron are created.

- What **cataclysmic** event is required to create elements heavier than iron, and how does this event lead to the **dispersal** of these elements across the cosmos?

- How does the concept of "stardust" connect the formation of planets and life on Earth to the **enigmatic** and **pervasive** grand evolutionary story of the universe?

The Stars as Silent Witnesses: Throughout history, stars have observed every pivotal event that has transpired on Earth, from meteor impacts to ancient civilizations' rituals. Imagine writing from the perspective of a particular star that has been observing Earth for millennia. **Describe the most profound event it has witnessed and its feelings about humanity's progress.**

[illegible]



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The Obby Oss



Every May Day, the picturesque fishing town of Padstow on the north Cornish coast erupts into a vibrant, **unprecedented** spectacle known as the Obby Oss. This ancient pagan festival, deeply rooted in folklore and tradition, is a **captivating** display that draws thousands of visitors and locals alike, celebrating the arrival of spring and the renewal of life.

The heart of the celebration revolves around two main "Osses" – the Old 'Oss (black) and the Blue Ribbon 'Oss (blue), though other smaller Osses may appear. These are **stylised** hobby horses, carried by a dancer **concealed** beneath a large, circular frame covered in black or blue canvas, **adorned** with ribbons and a **fearsome**, often decorated, head. Accompanied by a "Teaser" who guides its movements, and a band of musicians playing traditional tunes, the Oss dances through the narrow streets, often attempting to "capture" young maidens by sweeping them under its skirt.

The atmosphere is **intense**, filled with music, singing, and dancing. The procession moves from house to house, with participants adorned in white, often with flowers. The songs, passed down through generations, tell tales of the Oss's awakening and its journey through the town. The energy is almost **hypnotic**, a blend of joyous **revelry** and an underlying sense of ancient ritual.

The origins of the Obby Oss are **enigmatic** and debated, with theories linking it to fertility rites, warding off evil spirits, or even a commemoration of historical events. Regardless of its precise **genesis**, the tradition is an **integral** part of Padstow's identity, a **testament** to the community's enduring commitment to its heritage. As the day culminates with the Osses returning to their "stables," the feeling is one of exhaustion and exhilaration, a powerful reminder of the cyclical nature of life and the **profound** connection to the land and sea.

Unprecedented	Never done or known before.
Captivating	Capable of attracting and holding interest; charming.
Stylised	Depicted or treated in a non-realistic style.
Concealed	Kept secret; hidden.
Adorned	Decorated; enhanced.
Fearsome	Inspiring fear or awe.
Intense	Of extreme force, degree, or strength.
Hypnotic	Producing a trance-like state; fascinating.
Revelry	Lively and noisy festivities.
Enigmatic	Difficult to interpret or understand; mysterious.
Genesis	The origin or mode of formation of something.
Integral	Necessary to make a whole complete; essential or fundamental.
Testament	Something that serves as a sign or evidence of a specified fact, event, or quality.
Profound	(Of a state, quality, or emotion) very great or intense.

• How is the Obby Oss described as an **unprecedented** and **captivating** spectacle, and what does it celebrate?

• What elements contribute to the **intense** and **pervasive** atmosphere of the Obby Oss celebration, including the role of the "Teaser" and the traditional music?

• Why are the origins of the Obby Oss considered **enigmatic**, and what theories are mentioned regarding its **genesis**?

• How does the article suggest the Obby Oss tradition is an **integral** part of Padstow's identity, serving as a **testament** to its **profound** connection to heritage?

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