Year 8 Homework Booklet

Half term 2

2023

Contents

English

RESEARCH REPORT TEENAGE GIRLS

Reframing Sport for Teenage Girls: Tackling Teenage Disengagement

This report funded by Sport England summarises our most recent survey findings of over 4,000 adolescent girls and boys to understand the similarities and differences in their attitudes towards sport and physical activity. Importantly we were able to understand how the various barriers play out for sporty and non-sporty girls, identifying the barriers that are magnified differently across three key groups: **The Uninspired**, **The Missed Opportunity**, **The Passionate Participants**.

Too many girls are disengaging from sport and exercise in their teens. This is huge compared to boys – a significant missed opportunity.
Self-belief, capability and body image concerns can be significant issues for all girls. Our report highlights that complex barriers and deep-rooted negative attitudes are affecting enjoyment:

The need to engage girls in more active lifestyles has never been more urgent. This generation of teenage girls are experiencing worrying mental health issues and report being less happy, more anxious and increasingly dissatisfied with their appearance. The pandemic has, in many instances, simply amplified these issues for many girls.

An underlying narrative prevails; that girls are not as competitive; that sport is not important for girls; that they will never be as good at it compared to boys; that sport can be at odds with femininity. Add to that the harassment and unwanted attention teenage girls are subject to when exercising and quite simply, taking part becomes a burden, instead of bringing freedom and joy.

We have a significant opportunity to re-engage them and we must work harder to do so and to prevent girls from missing out. In particular, we are deeply concerned by the number of girls who disengage from sport and exercise post primary school (43%). Many of these girls enjoyed being active when younger but have needlessly fallen out of love with it in adolescence. We need to change this.

Homework:

Read this article over the next half term. Highlight at least three key words or language devices and summarise what you have learnt in no more than five lines. Be ready to discuss what you have learnt.

Your English teachers will tell you when we will discuss it.

Please note, this does not have to be completed in the first week or two.

Maths

Public

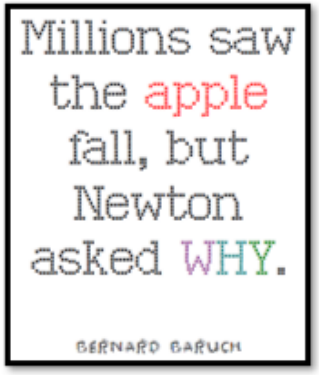
NGA Maths Homework Page

Sir Isaac Newton

Sir Isaac Newton (4 January 1643 – 31 March 1727) was an English mathematician who was born Lincolnshire. Isaac's father, a farmer, died two months before he was born. His early education was at the King's School in Grantham aged twelve until he was seventeen.

His interest in mathematics developed after he bought a book at a fair and did not understand the math concepts it contained. Although Newton is well known as the man who discovered gravity, he was widely recognised as one of the greatest mathematicians of all time. To explain his theory of gravity and motion, Newton invented a branch of maths called calculus. Students in sixth form currently studies calculus (differentiation & integration) at A-Level. In addition to the calculus, he also discovered the binomial theorem. This theorem describes the algebraic expansion of powers of a binomial. He also used geometry to support some of his scientific inventions.

Isaac Newton changed the world when he invented calculus in 1665. We take this for granted today, but what Newton accomplished at that age is simply astonishing. The development of calculus is so powerful, it is used in all branches of math, science, engineering, biology, and more. As a result, there is no end to the influence that Isaac Newton and his invention of calculus have had on the world.



Reading task:

Read the text about Sir Isaac Newton and answer the following questions:

1) List the factors of Newton's age when died?

2) What age was Sir Isaac when he invented calculus?

3) Name three topics which Newton developed in maths.

4) How many prime numbers are in the year Newton died?

Public

Public

NGA Maths Homework Page

Hegarty Maths homework record

Due date	
Clip Number	
Title	
Percentage correct	
Teacher initals	

Due date	
Clip Number	
Title	
Percentage correct	
Teacher initals	

Due date	
Clip Number	
Title	
Percentage correct	
Teacher initals	

Due date	
Clip Number	
Title	
Percentage correct	
Teacher initals	

Due date	
Clip Number	
Title	
Percentage correct	
Teacher initals	

Due date	
Clip Number	
Title	
Percentage correct	
Teacher initals	

Public

Science

The Radium Girls

Charlotte Richards tells us the story of the Radium Girls

Radium glowed with promise - lauded by the cosmetics and health industries it was a tonic, a pick me up - not to mention a serious medicine. The 'Radium craze' saw the radioactive material used in over the counter products available to all who could afford it... but all that glitters is not Gold.

Radium

'My beautiful Radium', Marie Curie called the element she discovered in 1898, she was enchanted by its radiant blue light and rarity, it was able to kill cancers and treat gout, it was the new craze in health spas - claiming to restore vitality and beauty; however these treatments were strictly for the rich — gram for gram, Radium was the most expensive substance on Earth costing around the equivalent of £1.5 million per gram today.

Radium-226 decays slowly, it's half-life (time taken for half of a sample to undergo radioactive decay) is 1,600 years, steadily emitting alpha particles (Helium nuclei) and decaying into Radon gas. Alpha particles may only have a penetrating power of around 5 cm in air and be stopped in their tracks by a piece of paper but they are heavily ionising due to their strong positive charge - tearing electrons off of atoms causing radiation burns and tissue damage and mutating DNA within cells causing cancers. Easy enough to protect against if the correct precautions are taken however in its heyday Radium's 'perpetual sunshine' was little understood and the inherent dangers of its radiation left in the dark.

'Undark'

The United States Radium Corporation produced a glowing 'undark' Radium paint, perfect for the military to use on watch and instrument dials. Hordes of young women were employed to paint the dials, the fine detailed work required them to continually 'point' their paint brushes - usually by using their lips. The shimmering radioactive dust would fill the air when the paint was mixed, ending up on the women's hair and clothes, they would leave the factory shimmering and shining. Some would purposefully paint themselves for fun or take evening gowns to the factory to make them sparkle and the pay was fantastic – roughly three times the average working girls' wage in any other factory for the war effort. Needless to say no health warnings were given to the dial painters on the factory floor.

Illnesses

One by one, the dial painters began, to fall ill. Their teeth fell out, their mouths filled with sores that seeped pus and would not heal, their jaw bones rotted and crumbled falling away from their skulls, their spines weakened and hips broke under their own weight and they suffered an apparently unstoppable anemia and its inexorable exhaustion. By 1924, nine of the dial painters were dead. They were all young women in their 20s, formerly healthy, with little in common except for those hours they spent, sitting at their desks at the factory, painting tiny bright numbers on delicate instruments.

On September 12, 1922, the strange infection that had plagued a radium dial painter named Mollie Maggia for less than a year spread to the tissues of her throat. The disease slowly ate its way through her jugular vein. At 5 p.m. that day, her mouth was flooded with blood as she hemorrhaged so fast that her nurse could not stop it. She died at the age of 24. Her doctors were flummoxed as to the cause of death; her death certificate, claimed she'd died of syphilis, something her former company would later use against her and other dial painters discrediting the girls as being of poor character.

More women started to die. And when they died, it was painful and bloody, resulting in body parts literally falling off them. The companies who used Radium paint remained silent. Using their huge profits, they would convince doctors to write different causes of death on their reports, often pointing to syphilis.

Explanation

Medical examiner Harrison S. Martland, was assigned to look into Mollie Maggia's case and that of the other Radium girls - but only after a male employee died of a similar illness - eventually realising that these illnesses were not mysterious at all but caused by the Radium in the 'undark' paint. When a person swallowed Radium, the body processed and used it in a way similar to Calcium – some went toward nerve and muscle function but most was deposited into the bones. But where Calcium, of course, strengthened and added to the mineral content of the skeleton, Radium did the opposite – it bombarded the girls' bones with alpha radiation from within, causing irreparable damage to their bones, joints, and bone marrow.

The legacy of the Radium Girls remains - and so does the radium that killed them. Mollie Maggia's cause of death was listed as syphilis, but her friends and family wanted to prove that she had died from Radium poisoning. Her body was exhumed, upon opening the coffin, they found that her remains were still faintly glowing. Their suspicions were confirmed - even in death, the Radium Girls continue to glow in their coffins.

Their sacrifice was not in vain. Dr. Martland's work attracted attention, and in the 1930s, several research institutes approached him for advice in safely handling even more dangerous elements such as Uranium and Plutonium for the Manhattan Project and radiation workers now have strict safety protocols to adhere to and there are laws concerning the safety of employees while at work.

Comprehension and Reflection Questions

1. What is an alpha particle?
2. Why was the Radium so dangerous for the girls if its radiation can be stopped by a sheet of paper?
3. What was the importance of the Radium to the war effort?
4. Why do you think it took so long for the deaths & illnesses to be taken seriously and investigated?
5. How long will it take for the girls to be half as radioactive as they were when they were working in the factory (HINT: Think about the half-life of the Radium)

Extension Activities

Ideas for things to do next:

- Research modern applications of radioactivity - are there any unexpected uses?
- Find out about background radiation - how much radiation are we exposed to from natural sources?

Further Reading

Ideas for things to read next:

- Royal Society of Chemistry essay on the discovery of radiation http://www.rsc.org/images/essay1_tcm18-17763.pdf
- Marie Curie ~ a biography https://www.mariecurie.org.uk/who/our-history/marie-curie-the-scientist

Spanish

Day Of the Dead Celebrations Across Latin America

Many Latin American countries celebrate el Día de Los Muertos, or Day of the Dead, in November. During the Day of the Dead celebrations, people honour the loved ones who have passed, sharing positive memories and stories.

You can track Día de Los Muertos back to indigenous cultures hundreds of years ago. Pre-Columbian civilizations have practiced rituals celebrating the deaths of ancestors for as long as 2,500–3,000 years. Day of the Dead celebrations have morphed over the years to become the Latino tradition it is now. Decorative altars, colourful flowers, and delicious food are all part of the festivities.

Where Is The Day Of The Dead Celebrated?

Mexico is best known for its *Día de Los Muertos* celebrations which include pageantry, processions, and public display of altars to the dead. In the Andean regions of Ecuador, Peru, and Bolivia, families gather in cemeteries to remember ancestors and loved ones. They bring food offerings such as *colada morada*, a spiced fruit porridge made with Andean blackberry and purple maize. In addition, *guagua de pan* is another popular food, a bread shaped like a swaddled infant filled with cheese or guava.

In Bolivia, the *Día de las ñatitas,* or Day of the Skulls, is an ancient Bolivian ritual celebrated on November 9th. Skulls of ancestors are decorated with flowers and pampered with cigarettes, coca leaves, and other treats to bring good luck to the family.

El Día De Los Muertos In Guatemala

As October ends, flower stands spring up on every corner of Guatemala City. Kite vendors' displays sway in the brisk November winds, and marketplaces and cemeteries are full of multi-coloured flowers. Finally, on November 1st, families gather to celebrate All Saints Day and eat *fiambre.* It is a traditional salad-like cold dish that consists of assorted cold cuts, pickled vegetables, and meats. It is so complex that it can easily include 50 or more ingredients.

The most spectacular Day of the Dead celebrations in Guatemala occurs in the towns of Santiago, Sacatepéquez and Sumpango. Townspeople assemble giant kites or *barriletes gigantes*, reaching diameters of almost 30ft, made of bamboo rods and coloured paper ready to paint the sky. On November 1st, the famous Guatemalan kite festival takes place, and these giant kites with intricate designs attempt to take flight. Unfortunately, some of them never manage to leave the ground! Why do you think this might be?

Highlight the information which answer each question in the text, writing the question number at the side, then be ready to answer the question in your own words.

1. WHICH month does the celebration take place?

2. WHAT do people share during the celebration?

3. WHEN did people begin celebrating this tradition?

4. HOW do you know that the celebrations have changed over the years?

5. WHAT do families often take to the cemetery?

6. WHAT is a 'ñatita'?

7. HOW do Guatemalans 'paint the sky'?

8. WHY do you think some of the kites don't fly?

Geography

Yr8 Geography Homework – HT2 – Literacy
The world's 10 largest deserts

23 August 2022
https://geographical.co.uk/science-environment/the-worlds-largest-deserts
Did you know?
Deserts are found on every continent and cover about one-fifth of the Earth's land area. They are home to around a billion people — one-sixth of the global population.

Deserts are arid ecosystems that receive less than 250 millimetres of precipitation a year on average. As the amount of evaporation in a desert often greatly exceeds the annual rainfall, there's little water available for plants and other organisms, although many still find a way to survive.
While the common perception of a desert is a sandy expanse, sand dunes cover only about ten per cent of the world's deserts, which can be divided into four types: hot and dry (also known as arid or subtropical), semi-arid, coastal and cold. Here we depict the world's ten biggest deserts.

1.Antarctic – 14.2m sq. km
Antarctica is, on average, the coldest, windiest and driest of all the world's continents. With an average annual precipitation of just 166 millimetres along the coastal regions and even less farther inland, it qualifies as a desert. What snow does fall doesn't melt, instead building up over many years to create large, thick sheets of ice. The continent has no trees or shrubs; the only plants that can live in a region so cold and dry are mosses and algae.

2.**Arctic Tundra (Canada, Russia, Denmark (Greenland), Finland, Iceland, Sweden, Norway, USA – 13.9m sq. km**
The Arctic tundra, where the average temperature is -30 to 20 degrees Fahrenheit (-34 to -6 degrees Celsius), supports a variety of animal species, including Arctic foxes, polar bears, grey wolves, caribou, snow geese, and musk oxen. The summer growing season is just 50 to 60 days, when the sun shines up to 24 hours a day. The relatively few species of plants and animals that live in the harsh conditions of the tundra are essentially clinging to life. They are highly vulnerable to environmental stresses like reduced snow cover and warmer temperatures brought on by global warming.

3.Sahara (Western Sahara, Mauritania, Algeria, Mali, Niger, Libya, Egypt, Sudan) – 9.2m sq. km
The Sahara is the world's biggest producer of dust, which can be blown far and wide, especially in spring when seasonal winds rake the desert. In fact, clouds of the dust can be swept across the Atlantic on the trade winds, and more than 20m tonnes reach the Amazon each year. That dust is a precious fertiliser that nourishes the rainforest with much-needed iron and phosphorus minerals. In fact, by a strange symmetry, the Saharan dust adds about the same amount of phosphorus to the Amazon each year that is flushed out to sea by flood waters.

4.Australian Desert – 2.7m sq. km

The Australian desert is really ten interlinked smaller (although by no means small) deserts, including the Great Victoria Desert (348,750 sq km) and the Great Sandy Desert (267,250 sq km). Together, they cover 18 per cent of the mainland and contribute to making Australia the world's driest inhabited continent (only Antarctica is drier). Seventy per cent of the mainland receives less than 500 millimetres of rain annually, which classifies most of Australia as arid or semi-arid. The deserts are far from deserted, populated by bilbies (long-eared marsupials also known as rabbit-eared bandicoots), dunnarts (mouse-sized marsupials), kangaroos, bats, dingos, numerous native rodents and myriad reptiles.

5.Arabian Desert (Saudi Arabia, Jordan, Iraq, Kuwait, Qatar, UAE, Oman, Yemen) – 2.3m sq. km

The Arabian Desert encompasses almost the entire Arabian Peninsula, blanketing the area in sandy terrain and seasonal winds. It contains the Rub' al-Khali (the Empty Quarter), one of the world's largest continuous bodies of sand. Despite the name, Bedouin tribes have crossed these sands for centuries, herding animals (camels, sheep, goats or cattle) into the desert during the rainy winter season and moving back toward cultivated land during the dry summer months. Today, however, only an estimated five per cent of the Bedouin people still live as pastoral (semi)nomads.

6.Gobi Desert (Mongolia, China) – 1.3m sq. km

The Gobi Desert is a vast desert spanning parts of Southern Mongolia and Northern China. The word "Gobi" itself means "very large and dry" in the Mongolian language. Rocky outcrops and barren gravel plains constitute the landscape of the Gobi Desert. The summer temperatures of the desert rise as high as 40°C and winters might experience temperature falls as low as -40°C (-40°F). The Gobi Desert area was once home to dinosaurs and now hosts several dinosaur fossil sites of great value to palaeontologists.

7.Kalahari Desert (Botswana, Namibia, South Africa) – 0.93m sq. km

Strictly speaking, the Kalahari doesn't fit the definition of a desert as its wettest regions can receive more than 500 millimetres of rain in very wet years. However, it remains extremely dry. Rain filters rapidly through the vast expanses of sand, leaving nothing on the surface. In fact, the name 'Kalahari' is derived from the Tswana word *kgala*, meaning 'the great thirst', or *kgalagadi*, meaning 'a waterless place'. Some people favour a definition of a desert as a region in which the evaporation rate is twice as great as the precipitation, which is true for the southwestern half of the Kalahari. The desert is home to several important national parks and reserves, providing sanctuary for antelope, elephants, giraffes, many bird species and various predators

8.Patagonian (Argentina, Chile) – 0.67m sq. km

At the northern tip of Patagonia's desert coast in Argentina, the skies above El Cóndor are filled with shifting clouds of chatty, colourful parrots. The mountain's crumbling sandstone cliffs are home to the largest parrot colony in the world, containing 37,000 nests. The burrowing parrots are so named because they tunnel into the sandy cliffsides to build their nests. These tunnels can be up to 9.8 feet (about 3 meters) deep.

9.Great Basin (USA) – 0.49m sq. km

The Great Basin is considered a "cold" desert. Much of its minimal precipitation falls in the form of snow. This is because of the relatively high latitude and high altitude (3,000 - 6,500-feet above sea level). It is an overall temperate desert with hot summers. The extremely arid climate is formed due to the ‘rain shadow effect’ created by the Sierra Nevada and Cascade Mountains.

10.Syrian Desert (Iraq, Syria, Jordan, Saudi Arabia) – 0.46m sq. km
The Syrian Desert, covering a total area of 500,000 square kilometres in southwestern Asia, extends from the northern parts of **Saudi Arabia** into southern **Syria** (covering an area of 130,000 square kilometres in Syria, roughly two-thirds of the country), and also stretches across parts of western Iraq and eastern **Jordan**. Damascus, the capital city of Syria and a UNESCO World Heritage Centre, is located on an oasis in the Syrian Desert. The natural boundaries of the Syrian Desert are formed by the Euphrates River in the east, the Orontes Valley in the west, and the deserts of the Arabian Peninsula to the south.

History

Yr8 History HT2 reading

Echoes of the English Civil War run through Nottingham and Nottinghamshire.

Source: https://www.visit-nottinghamshire.co.uk/ideas-and-inspiration/english-civil-war

It was in Nottingham on 22 August 1642, that Charles I raised his royal standard as a signal for his supporters to rally to his side. Taking place on Derry Mount (later named Standard Hill) just outside Nottingham Castle, the event effectively marked the beginning of the Civil War.
A plague on Standard Hill commemorates this historic event, which you can visit

today.
Nottingham proved to be a town of divided loyalties and Charles soon moved off to Shrewsbury to gather more support for his cause. This left the Parliamentarians (Roundheads) free to garrison the castle with their own soldiers under the command of Colonel John Hutchinson. Nottingham wasn't the only place in the county with divided loyalties - Holme Pierrepont Hall experienced divides within its own walls. Two brothers living in the hall had opposing views with Henry, Marquess of Dorchester supporting the King and his brother, William being a close friend and supporter of Oliver Cromwell. Being on opposing sides and with their mother living at Holme Pierrepont Hall the house was actually never attacked during the Civil War, even though battles took place very close by. After the Civil War William was able to negotiate favourably with his brother over the return of his estates.

The Parliamentarians were soon in the thick of action in Nottinghamshire as Royalists from around the county repeatedly tried to retake Nottingham Castle for the king. On one occasion, in September 1643, 600 Royalist soldiers from Newark managed to fight their way through the town and up to the castle but were eventually driven away. In fact Hutchinson held the castle until the end of the war.
Like Nottingham, Newark held a strategic position on the route northwards through England. Due to its location at the junction of the Fosse Way and the Great North Road, the town was an important control point for access across the country. Troops loyal to the King swelled its population many times over, and from the safety of its defences, they would launch attacks on local Parliamentarians.
Newark came under siege no less than three times from the Parliamentarians, in 1643, 1644 and 1645-46. Conditions in the town grew intolerable, especially after an outbreak of plague, and in May 1646 Charles I ordered the town to surrender. Charles himself, disguised as a clergyman, made his way to Southwell where, at the King's Arms, he gave himself up to the Scots Army. Charles was taken back to the Scots camp at Kelham, near Newark. The Civil War was effectively over.

Despite the surrender of Charles I, the Civil War rumbled on. A final skirmish in Nottinghamshire took place at Willoughby-on-Wolds in the south of Nottinghamshire on 5 July 1648. Here, in a field near the church, the Parliamentarians took on 800 Royalist troops under Sir Phillip Monckton. It was a 'bloody' battle but the Royalists were eventually overcome.
The Civil War in Nottinghamshire was finally over.

The remains of Newark Castle, with its resounding echoes of the past and its fine vista over the River Trent, attract visitors from all over Europe. Today, you can still see a cannonball hole on Newark Church from where a Parliamentarian cannonball is said to have hit it in 1644 and the Governor's House, the residence of the Governors of Newark during the sieges of the Civil War. You can also visit The National Civil War Centre in Newark, an excellent museum dedicated to this tulmutuous era of British history.

The Sconce and Devon Park, also in Newark, is home to the Queen's Sconce - a 17th Century Civil War earthwork fortification. The Scheduled Ancient Monument is one of the country's finest remaining earthworks from the English Civil War. It is distinctively star-shaped when viewed from the air and is one of nine siege works remaining in a recognisable state in and around Newark. It's considered an internationally important heritage feature and is surrounded by open space and playing fields.

Performing Arts

FILM AND BACKGROUND MUSIC

"I do not make films primarily for children. I make them for the child in all of us, whether we be six or sixty."

Walt Disney

Music is like a wordless language to which people respond emotionally. Because of this, it helps create an atmosphere for a film or TV show. It is used to put the audience in a certain mood. Music can make people relax and this is why some public places have background music.

Background Music

Most shops have background music and it is meant to relax you so that you browse around and buy more products. Background music is also played because some people think that silence can be awkward. Most background music consists of instrumental versions of well-known songs, or popular classical pieces. These are arranged so that nothing stands out or demands attention. The tune used most often for background music is the Beatles' song "Yesterday".

Film Music

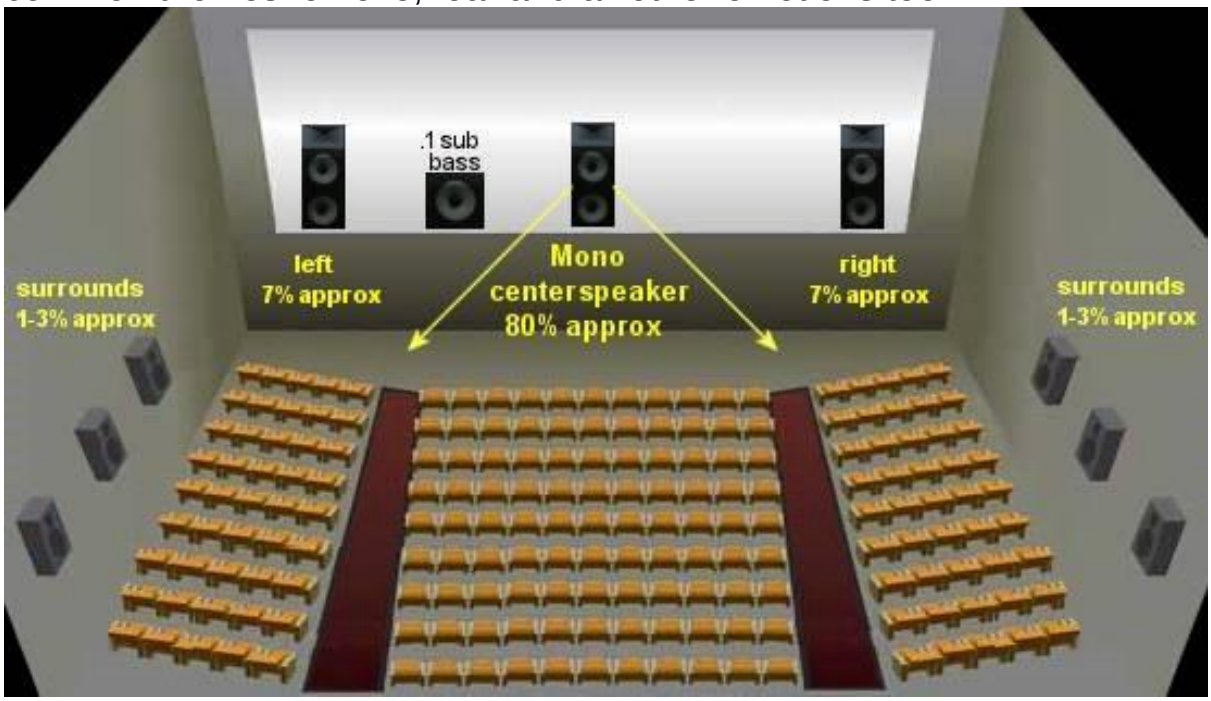
Unlike background music, film music is used to grab the listener's attention. A film might have a theme tune at the beginning or end. Music during the film, which is called **incidental music**, might contain variations of the theme. This helps give the film its own identity.

A lot of modern films use pop songs throughout to set the mood and help tell the story. An example of this is the film 'Trolls', that uses famous songs from artistes including Justin Timberlake, Gorillaz, Kool & The Gang and lots more. The songs chosen set a particular mood and also encourage the audience to sing-a-long.

Music for Silent Movies

Films did not have soundtracks until the 1930's. Before then, each cinema employed a pianist to pay the piano live while the film was

playing. They improvised an accompaniment to the film. There were common themes for love, fear and all other emotions too.



Cinema Sound Systems

There are four sets of speakers in a cinema. Sound can come from anywhere, depending on which it is set to play through. This system of reproducing sound is called Dolby Stereo surround sound as it literally surrounds you. Speech often comes from the front speakers near the actors on the screen, crowd noise from all around can come from all of the speakers and sudden noises in a scary film can come from speakers behind you. This process is meant to make you feel more connected with the film and feel the emotions fully.

Questions:

1. Why do shops play background music?

_____

_____

2. List 2 different types of music used in films.

_____

_____

3. What is your favourite film or TV show? Describe the music.

_____

_____

_____

_____

PE

Fitness Components for Basketball

In addition to the high level of skill required to play Basketball, to be a successful player you need good speed, agility and endurance. However, which of these are more important? Below is a discussion about the fitness requirements for Basketball, which can help with developing training programs for this sport, and for interpreting fitness testing results and determining the relative strengths and weaknesses of a player.

You Need to be Fast and Agile

We have a poll about the component of fitness most important for success in Basketball. Out of the options of Body Size and Composition, Muscle Strength, Muscular Endurance, Power, Speed / Quickness, Agility, Flexibility, Balance and Coordination, and Cardiovascular Endurance, the factors which are considered most important by the readers of this site are speed and agility, though there are votes for most of the fitness components indicating that basketball requires good all round fitness abilities.

Factors of Success in Sports

There is a range of physical and mental components that contribute to successful performance in sports. Each sport and activity requires a specific set of these skills. Being successful in one sport does not necessarily make you successful in another, as success requires a whole range of factors to come together and interact in the right way.

Fitness is just one of the factors, and for many sports plays a major role in success. In addition, there are psychological factors, then many more minor factors including supply of equipment, opportunity for training, expertise in coaching and skill teaching, nutritional status, a good support network, funding etc.

Factors for Success

We have narrowed down the important individual factors to the 15 listed below, though the importance of each will vary between sports. Fitness factors are generally divided into these specific fitness categories or components. A few of the other important factors for success are derived from the list of sport specific athleticism.

After some initial testing, this list was too overwhelming, and a shorter list of only 12 factors was used for our online rating system. You can rate each of these factors for a range of sports (using the short list). On the short list, muscular endurance and anaerobic capacity were removed, and muscle strength and power were combined. Some of this data has been analyzed, though the rating continues. See how the sports compare for these factors of success.

1. **Body Composition** — refers primarily to the distribution of muscle and fat in the body. Body size such as height, lengths and girths are also grouped under this component.
2. **Aerobic Endurance** — also known as cardiovascular fitness and stamina, is the ability to exercise continuously for extended periods without tiring.
3. **Muscular Endurance** — the ability to repeat a series of muscle contractions without fatiguing.
4. **Muscle Strength** — the ability to carry out work against a resistance.
5. **Explosive Power** — the ability to exert a maximal force in as short a time as possible, as in accelerating, jumping and throwing implements.

6. **Speed / Quickness** — the ability to move quickly across the ground or move limbs rapidly to grab or throw.
7. **Anaerobic Capacity** — long sprinting ability, or the ability recover from repeat sprints (glycolytic system)
8. **Flexibility** — the capacity of a joint to move through its full range of motion, which is important for execution of the techniques of sports.
9. **Agility** — the ability to quickly change body position or direction of the body.
10. **Balance and Coordination** — the ability to stay upright or stay in control of body movement is an important component of many sports skills.
11. **Reaction Time** — the ability to respond quickly to a stimulus.
12. **Analytic and Tactical Ability**— the ability of the mental system to evaluate and react to strategic situations (tactical ability).
13. **Motivation and Self Confidence** — a motivated and focused athlete, with a level of belief in themselves, often seen as arrogance in athletes.
14. **Coping with Pressure** — the ability to stay focused and perform up to expectations while under increasing pressure, and under changing conditions.
15. **Skill and Technique** — the specific skill set and technique required to be successful in a particular sport.

What Do You Think Is Important?

Which Factors Make Successful Basketball Players?

There are a range of physical and mental factors that contribute to successful performance in sports, as listed below. Not all of these factors are important for Basketball Players - and that is what this survey is to determine. Please add your rating to as how important you think each of these factors are to the success of Basketball Players. Use the stars to give a rating from 1 to 5 stars, using this rating scale. Even if you think a factor is not important, please still give it a one-star rating. Draw a circle around the total number of stars that you are selecting.

Factors of Success	your rating (importance, low to high)
Body Size and Composition	★★★★★
Aerobic Endurance	★★★★★
Strength & Power	★★★★★
Speed / Quickness	★★★★★
Flexibility	★★★★★
Agility	★★★★★
Balance & Coordination	★★★★★
Reaction Time	★★★★★
Analytic & Tactical Ability	★★★★★
Motivation & Self Confidence	★★★★★
Coping with Pressure Situations	★★★★★
Skill and Technique	★★★★★

Computing

Year 8 – Operating Systems

All hardware needs an operating system. It is responsible for managing the hardware and providing an environment for programs to run in. There are many different operating systems available. Most are specifically designed for computers, smartphones, or tablets but some operating systems are used on multiple devices.

The two leading producers of desktop operating systems are Microsoft and Apple. Microsoft makes Windows and Apple makes Mac OS. The two companies are competitors.

In its early days, Microsoft concentrated its resources on the development of its operating system and programs to complement it, e.g., Microsoft Office. It licensed its OS and software to hardware manufacturers, the first being IBM. Apple, on the other hand, split its resources between its operating system and hardware.

In 1984 the Apple Macintosh was released. It was the first commercially successful product to use a graphical user interface (GUI). But it was Windows 3.1 that led to the popularity of the mouse which was developed in the 1960s and is still in use today. Before GUIs, commands were typed into the command prompt.

Computers running Windows were cheaper than their Apple counterparts. As a result, far more Windows than Mac OS computers were sold, and Apple found itself in trouble. Microsoft rescued it with a $150 million investment and the development of Mac-compatible Microsoft software and tools.

The two operating systems continue to compete. Microsoft and Apple have branched out into mobile operating systems with Microsoft's Windows Phone and Apple's iOS. Windows Phone runs exclusively on smartphones, while Apple's iOS runs on smartphones and tablets. Google has its own operating system for smartphones and tablets named Android.

There is an open-source operating system called Linux. It is free to use and runs on PCs, laptops, and handheld devices.

Creative Arts

CREATIVE ARTS

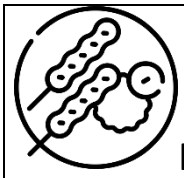
D&T	**Wood** Read the information and answer the questions on the sheet Woods can be divided into two main categories - softwood and hardwood. This is not a description of the wood - it just means what type of tree it comes from. **Softwood evergreen trees, like pine** Most softwood trees are coniferous (cone bearing). They typically have thin needle-like leaves and are evergreen - e.g. pine, cedar and yew. They grow in colder climates and are fast growing — most reaching maturity within 30 years. This makes them easy to replace with new trees, so they're usually cheaper than hardwoods. Pines: there are several types of pine but they're all generally pale yellow with brown streaks. Scots pine is fairly strong but knotty. Parana pine is more expensive it's hard and is best used for interior joinery. **Hardwood - Deciduous Trees, like Oak** Most hardwood trees are broadleaved and deciduous (they shed their leaves annually) - e.g. oak, mahogany, beech and elm. Broadleaf trees grow in warm climates and are usually slow growing. They can take around a hundred years to mature, so they're generally more expensive than softwoods. **Colours of the common hardwoods:** mahogany reddish brown, beech creamy/pinkish, elm light reddish brown, oak rich light brown **Questions:** 1; In softwood trees, what is meant by coniferous? 2; What do hardwood trees do annually? 3; which wood is the most expensive? 4; What colour is oak?

<table>
<tr><td>ART</td><td>https://www.tate.org.uk/kids/explore/who-is
This link has information about LOTS of different artists from around the world. Choose ONE you like or have something in common with. Find / screenshot a picture of their work and find 5 facts about them. Upload to your work in ‘Teams assignments’</td><td>https://www.nae.org.uk/community/past-projects/

Look at the past events from the New Art Exchange.
Reply in ‘Teams Assignments’ and say which exhibition you would like to have seen and why.</td></tr>
<tr><td>TEXTILES</td><td colspan="2">Creative Arts- Textiles Year 8
Homework PRODUCT ANALYSIS
1.Select two pincushions to analyse
2.Look online stick a picture of the pin cushion in the box
3. Analyse the products and fill in the table.

<table><tr><td>Image</td><td></td><td></td></tr><tr><td>Aesthetics
What does the Product look like?</td><td></td><td></td></tr><tr><td>Cost. Is it expensive or cheap?</td><td></td><td></td></tr><tr><td>Age group
Target market</td><td></td><td></td></tr></table></td></tr>
</table>

	Size (What are the Measurements?)		
	Function What is the product used for?		
	Features Does the product have ant special features?		
	Materials What is the product made from?		
	Conclusion **Overall opinion of product** **What would you change?**		
	Star rating		



FOOD

Read the following Recipe **Date of Practical:**_____

Ingredients

Burgers:

Please bring the following ingredients

250g minced beef or lamb
Small handful of fresh herbs - chopped
½ - 1 egg (beaten in a bowl with fork)
½ an onion finely chopped

Koftas:

Please bring the following ingredients

250g lamb mince
1 tsp ground cumin
2 tsp ground coriander
2 fat garlic cloves, crushed
1 tbsp chopped mint
6 wooden skewers

Meatballs:

Please bring the following ingredients

250g beef mince (or other meat)
½ onion, finely chopped
½ a large bunch parsley, finely chopped
40g parmesan grated
50g fresh breadcrumbs or a tub of
1 egg, beaten with a fork
(this is just to make the meatballs, to add a tomato based sauce bring tin of tomato soup, a jar of tomato sauce or try making the sauce using the ingredients below)

Tomato Sauce

3 tbsp olive oil
4 garlic cloves, crushed
4 x 400g cans chopped tomatoes
3 tbsp caster sugar
½ a large bunch of flat-leaf parsley, finely chopped
few basil leaves (optional)
https://www.bbcgoodfood.com/recipes/spaghetti-meatballs

Method

1. **preheat the oven to 200°c.**
2. Prepare all of the ingredients as instructed in the ingredients list.
2. Place all of the ingredients into a mixing bowl.
3. Using clean hands combine the ingredients and shape.

Burgers

Divide the mixture into small evenly sized balls and squash flat.

Arrange the burgers onto a greased baking tray. Bake in the oven for 20 mins, turning halfway through.
Use a food probe to check the burgers are cooked. The temperature of cooked food should be 75°c. At home serve with a bun and salad, wedges and other burger accompaniments.

Koftas
Divide the mixture into small evenly sized sausage shapes and form around your wooden skewer.
Place the skewers onto a greased baking tray. Bake in the oven for 20 mins, turning halfway through.
Use a food probe to check the burgers are cooked. The temperature of cooked food should be 75°c. At home add rice or pitta bread, salad and a yoghurt based sauce

Meatballs
Divide the mixture into small evenly sized balls.
Arrange the meatballs onto a greased baking tray. Bake in the oven for 20 mins, turning halfway through. Use a food probe to check the burgers are cooked. The temperature of cooked food should be 75°c.
(at home) Warm your sauce through in a sauce pan and place your cooked meatballs in to serve. At home add your sauce and serve with rice or spaghetti, salad and grated parmesan cheese.

Read the following Recipe **Date of Practical:** _____

Chicken Skewers

Ingredients

Please bring the following ingredients
1 chicken breast diced and in a marinade or
Haloumi can be used as a vegetarian option.
Marinade (to be made at home and chicken soaked into it overnight)
Marinade: lemon juice, crushed garlic, chilli and oil **or**
Marinade: yoghurt with spices or something similar – google other ideas or use family recipes.
Other ingredients (the more colourful the better)
1 red pepper
1 yellow pepper
1 red onion
½ a courgette
10 wooden skewers
Named container big enough to present your skewers in, take them home in

Learning how to:
Safe handling of raw meat, using the oven, threading a kebab, preparation of vegetables, checking temperatures, making a marinade, using the oven.

Method

1. Preheat oven to 200°c and line a baking tray. Wet skewers.
2. Collect all your equipment from the table.
3. Wash your peppers and courgette, slice your onion into big chunks, slice your peppers and courgettes into big pieces.
4. Get your marinated chicken from the fridge.

5. Thread alternate meat and vegetables onto your skewers and place onto your baking tray. Do not leave gaps between each piece.
6. Cook for 10 mins then turn each skewer. Cook for another 10 mins then check the meat is at 75°c.
7. Present in your container. Consider adding fresh herbs/salad or a drizzle/sauce/dressing. You could bring a salad garnish for the plate prepared at home.

Read the following Recipe **Date of Practical:**_____

Puff Pastry Pizzas

Ingredients

Please bring the following ingredients, weighed at home

1 pack puff pastry
Passata, pizza topping sauce or tomato puree
50g cheese (already grated)
Fillings (choose from and please bring already prepared):
½ onion (diced)
Tuna (drained)
Ham (sliced)
2 tbsp Sweetcorn (drained)
Other toppings suitable for a pizza work well.
Named container to take your pastry home in.

Learning how to:
Rolling out, shaping and cutting dough. Using the oven.

Method

1. Collect all your equipment from the table and pre-heat oven to 200°c.
2. Turn out pastry onto a floured surface, roll out, cut into circles or rectangles or make a full pizza and place onto a flat baking tray. Prick gently with a fork.
3. Spread with tomato sauce, add grated cheese.
4. Arrange your toppings as you would with a pizza.

Bake in the oven for 30 mins. Remove then place individually onto a cooling rack.

Read the following Recipe **Date of Practical:**_____

Pastry – Filo Cups

Ingredients

Please bring the following ingredients, weighed at home

1 pack of filo pastry
For the egg filling (you can leave this out and just make savoury tarts)
2 eggs
125mls milk
50g cheese (already grated)
Fillings (choose from and please bring already prepared):

	½ onion (diced) Tuna (drained) Ham (sliced) 2 tbsp Sweetcorn (drained) Other toppings suitable for a pizza work well. **Named container to present your tarts in and take it home in** **<u>Method</u>** 1. Collect all your equipment from the table and pre-heat oven to 200°c. 2. Prepare filling ingredients, measure milk in jug and break egg into this, whisk with a fork. 3. Grease your tray and lay two sheets of pastry in a hole of a bun tin. 4. Put the fillings into cases then cover with the egg custard being careful not to go over the edge. Leave the egg custard if only making savoury tarts. 5. Bake in the oven for 12 – 15 mins. Remove then place individually onto a cooling rack. **Learning how to:** Basics of shaping pastry, making an egg custard, preparation of fillings. Using the oven.

ART: KS3 HW

https://www.bbc.co.uk/bitesize/articles/z7thd6f

Meet Tegan, 24, from Wiltshire. She works in London as an architectural apprentice for Gensler, a design and architecture firm.

What is your job?

Architecture is all about **designing buildings**. I do a lot! My job involves figuring out the needs of the client, how we translate that into design and then translating it back to the client. Sometimes I make **site models** for clients, and other times I might be sitting at the computer doing **3D models**, or **2D plans** and **hand sketches**.

What skills do you use in your work?

Knowing how to talk to **communicate** with people in the right way is very important. **Research** is also crucial because it informs the rest of your design decisions. **Time management** is critical because I've had to learn to juggle my coursework at uni, my job here at the office and my disabilities (arthritis and chronic migraines). Also, **presentation skills** – I had to do a big presentation for university recently.

What subjects did you study?

At GCSEs I did **Design & Technology**, and at **A-level I did History, Maths, Physics and Chemistry** (I dropped Chemistry). I got my A-levels and then went to university, but half way through my second year I got quite seriously ill, so I had to pause my studies. Instead of staying in bed recovering, I did an **Art A-level**. After getting back on my feet I finished my degree and now I'm doing my **masters degree**! My illness has left me with some long-term health issues but it hasn't stopped me achieving or doing the job I love.

What subjects do you draw on?

History and **Art** have been the most useful of the A-levels that I've done.

How did you get into your job?

My **lecturer** in my third year of uni **told me about the apprenticeship**, and I was attracted to the fact that this is such a huge firm, so there's worldwide opportunities to move, a wealth of knowledge and a research institute.

Was it a smooth ride?
No! When I started uni, if someone had told me what would happen with **my health** over the next six years, I wouldn't have believed them! I feel like there's good in it happening, because it's changed my perspective on what I'm doing and how I'm going to approach it. It's **made me far more sympathetic to the accessibility issues in architecture.**

Top tips

- I asked my teachers what A-levels they would recommend, but I wish I'd done a little bit more of my **own research**
- **Question everything** and start delving into topics and explore them – figure out what it is you like
- **Look after your health**. When you're at your healthiest you're performing your best.

After completing your education and training, there are many careers open to architects, for example designing new buildings and the spaces around them, and working on the restoration and conservation of existing buildings.
What to expect if you want to be an architect

- **Architect average salary**: £27,500 to £90,000 per year
- **Architect typical working hours**: 35 to 40 hours per week

What qualifications do you need to be an architect?
You could get into this role via a university course, an apprenticeship or working towards the role.

ANSWER THE FOLLOWING QUESTIONS
https://forms.office.com/Pages/DesignPageV2.aspx?origin=NeoPortalPage&subpage=design&id=WnSRoNi3ek2yphNZBT1FECFv4HeDi3pLoWrqdE0O0dhUQTc0SDJRODMxREhWUVU5NjVTTjJBMUVGRy4u

What does Tegan go to help show her clients her design ideas?

Tegan says the following skills are most useful: Communication; Research; Time management and Presentation skills. Choose the one YOU think is most important and say why?

Tegan studied History, Maths, Physics and Art at A Level. Which did she find most useful for her career as an Architect?

What company is Tegan doing her Architecture Apprenticeship with?

Tegan has given 'Three Top Tips'. Which one is the most important for you?

RE

Islam: the basics!

KEYWORDS

Tawhid = the belief in the oneness of Allah

Allah = God

Qur'an = the holy book of Islam

Prophet = a messenger of God

Muslim = a follower of Islam

Commandment = rule

Revelation = new information that is given (revealed)

Orphan = a child whose parents have died

Immortal = will never die

Mosque = the holy building for Muslims

Congregation = the group of people that have gather together for the religious service

Adhan = the call to prayer. So people know it is time to stop what they are doing and to go and dedicate time praying to Allah

Muezzin = the person who calls Muslims to prayer from a minaret five times a day

THE NATURE OF ALLAH

Muslims believe in one God, Allah, whose word was received by the Prophet Muhammad on behalf of humankind. Belief in Allah's oneness means that Allah must be the creator of everything since he is the only God. It also means that Allah must be all-powerful and in control of everything and that Allah must be present in the universe He has created.

Many Muslims understand this to be THE MOST important belief in Islam as it is this belief that motivates Muslims to follow his commandments.

"Allah has promised those who believe (in him) and do good deeds that for them is forgiveness and great reward."

In the Qur'an a number of different names are used for Allah. These names, or adjectives, give Muslims an insight into the nature of what Allah is like.

Many Muslims commit these names to memory and are able to pray and meditate using these names.

THE PROPHET MUHAMMAD

Muhammad is the final prophet in Islam, known as the 'Seal of the Prophets'. Muslims believe that the Qur'an is formed from God's revelations to Muhammad, given through the Angel Jibril. According to Islamic belief, no further prophets will come after him.

Key events in Muhammad's life

- Muhammad was born around AD570 into the Quraysh tribe in Arabia. At this time, people worshipped many gods within their tribes.
- Muhammad was orphaned and brought up by his uncle, Abu Talib.
- Muhammad married Khadijah.
- Following the Night of Power, Muhammad began preaching, which made the leaders of Makkah angry.
- Muhammad left Makkah to live in Madinah.
- There was a war in Makkah between Muhammad and the Quraysh tribe, and Muhammad won. He smashed all the statues of gods in the Ka'aba, teaching Muslims that they should believe in one God, Allah.

THE 5 PILLARS

These are 5 duties / actions that Muslims **must** carry out. Following these shows dedication, and ensures the people are living how God wants them to.

PRAYER (SALAH)

Salah is the second Pillar of Islam for Sunni Muslims, and the first of the Ten Obligatory Acts for Shi'a Muslims. Salah means 'prayer and connects Muslims to Allah. Muslims must pray five times a day, mainly in the mosque or at home.

What is Salah?

Salah is a physical, spiritual, and mental act of worship following prescribed words and actions

Salah is offered at fixed times during the day.

Salah is performed today in the same way it was performed by the Prophet Muhammad.

Salah aims to purify the mind and soul and helps Muslims develop a closeness to Allah.

QUESTIONS

1. What is the name of the Muslim God?

2. What is the Prophet Muhammad also known as? Why is he known as this?

3. What is meant by the 5 pillars of Islam?

4. How many times a day do Muslims pray? Why is this important?