



# Stafford Manor High School

## **Year 9 Autumn Term 1**

### **Core Knowledge**

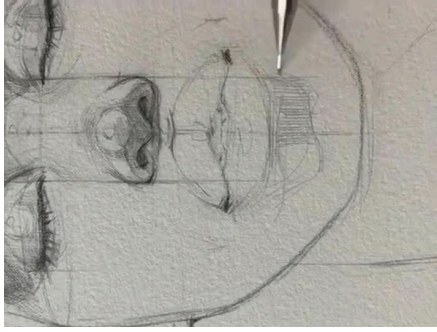
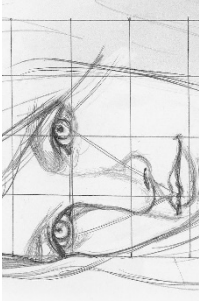
-  Art
-  Digital Communications
-  Design Technology
-  English
-  French
-  Geography
-  History
-  Maths
-  Music
-  PE
-  Science
-  Textiles

# YR9 Art Autumn Core

## Y9 Art Autumn term – Portraiture – What I need to know to succeed.

### Portraiture

You will be taught how to draw portraits using lots of different methods. The 3D element will include wire work. This will be something you could use at GCSE if you did choose Art. There will be a large selection of media involved in the drawings of portraits.



### Wire Work

You will be taught how to use wire to draw with. You will be creating a portrait using different wires and a pair of pliers. You will need to be independent to do this task.



### GCSE Options

This is the year you will be picking your GCSE options. Below are some examples of careers you can go into from studying Art at GCSE.



### Artist Analysis

We write and learn about artists so we can better understand the world of art and learn from what others have done.

**Presentation is important.** How we present work can demonstrate understanding of the art work. We present our analysis in a way that is appropriate / inspired by the artists work. We can do this by using similar colours, using similar textures, using a font that reflects the look of the work.

**To create a successful artist research page, you must include:**

A title which is the artists name.

Images of the artists work.

A copy of the artists work which is called an artist recreation. Information about the artist.

A background that links with the artist.





### 1. You and Your Data

**Data** is raw facts and figures.

**Information** is created when that data has been processed and becomes meaningful.

Data that companies store is protected under the **Data Protection Act 2018**.

### 2. Social Engineering

**Social engineering** is a set of methods used by criminals to deceive people into handing over information

**Phishing** is an attack in which the victim receives a disguised email aiming to trick them into giving up personal data.

**Blagging** is an attack in which the perpetrator invents a scenario in order to convince the victim to give up money or data

### 3. Script Kiddies

**Hacking** is gaining unauthorised access to or control of a computer system

The computer misuse act was passed in 1990 in order to help prosecute perpetrators.

### 4. Attack of the Bots

**Malware** is malicious software designed to gain access to your computer

Types of malware are: viruses, trojans, worms, adware, spyware, ransomware

### 5. There's no Place like 127.0.0.1

A **firewall** checks incoming and outgoing network traffic. It scans the data to make sure it doesn't contain anything malicious.

**Anti-Malware** is software that scans any file that is able to execute code. It looks for sequences of code that it knows are malicious.

User permissions can be set so that users of a network can only access the appropriate data for their position.

### Key Words

profiling, data protection act, computer misuse act, hacking, malware, firewalls

### Key Hero Tip

Use the shift key to quickly change one lower case letter to a capital – caps lock should only be used when you have lots of capital letters to type

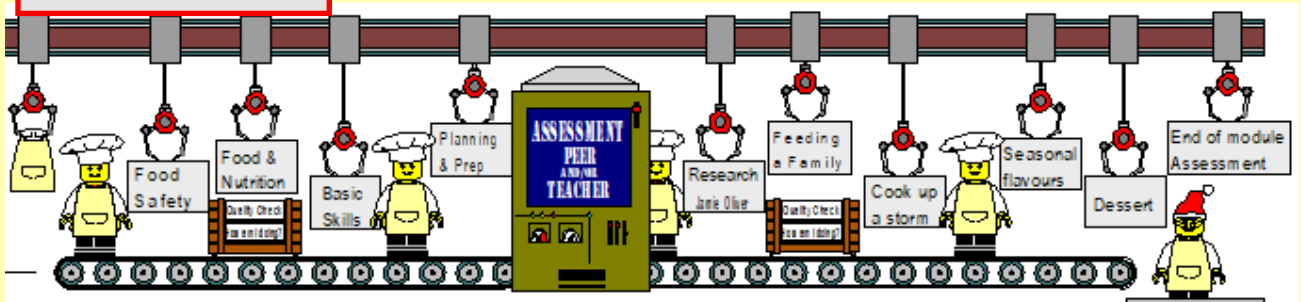


**Year 9  
Module 1**



By the end of this module you will have learned all of this awesome stuff!

**Production Line**



**Some Key Tier 3 words**  
Cooking, Nutrition, Seasonal, Sautee, Bake, Poach, Steam, Saucepan, Skillet, Spatula, Roasting, Vitamins, Minerals, Food hygiene, Colour coding, cross contamination, food storage, taste, ingredients, feeding the family on a budget

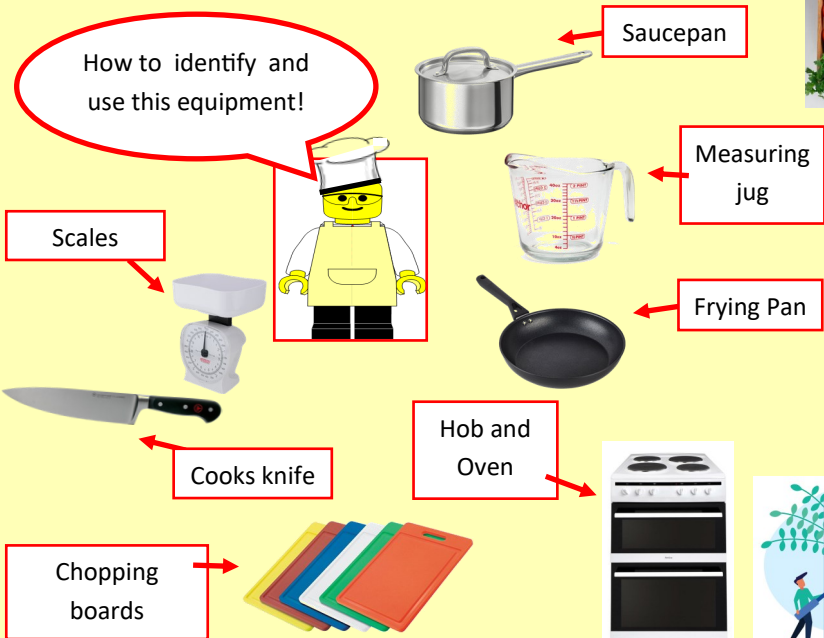
**Basic Food safety and Hygiene!**

How to wash hands, equipment and work surfaces.  
Why we have different coloured chopping boards and cross contamination.  
Safe food preparation; chopping, slicing, dicing, heating, etc



**Seasonal Nutritious ingredients**

How to identify and use this equipment!



You will develop an understanding of how some ingredients are 'Seasonal' meaning that they grow at different times of the year. Linked in with this you will learn about how to make meals that are good for you while still being super tasty.

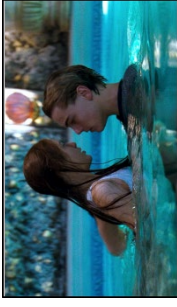
You will learn how to feed a family without spending a fortune. A key factor in the current financial climate.





# Independent Study Knowledge Organiser

## 'Romeo and Juliet' by William Shakespeare

<p><b>Keywords</b></p> <ol style="list-style-type: none"> <li>1. Soliloquy</li> <li>2. Dramatic irony</li> <li>3. Pun</li> <li>4. Oxymoron</li> <li>5. Modal verbs</li> <li>6. Fate</li> <li>7. Free Will</li> <li>8. Honour</li> <li>9. Society</li> <li>10. Family</li> <li>11. Feud</li> <li>12. Rhyming couplet</li> </ol>	<p><b>Key quotations</b></p> <p><b>Beginning</b></p> <ol style="list-style-type: none"> <li>1) <b>Prologue:</b> "The fearful passage of their death-marked love, and the continuance of their parents' rage" (Prologue)</li> <li>2) <b>Tybalt:</b> "...Peace! I hate the word, As I hate hell, all Montagues and thee." (Act 1.1)</li> <li>3) <b>Prince:</b> "If you ever disturb our streets again, Your lives shall pay the forfeit of the peace" (Act 1.1)</li> <li>4) <b>Juliet:</b> "My only love sprung from my only hate. To early seen unknown, and known too late." (Act 1.5)</li> </ol> <p><b>Middle</b></p> <ol style="list-style-type: none"> <li>1) <b>Romeo:</b> "With love's light wings did I o'erperch these walls. For stony limits cannot hold love out." (Act 2.2)</li> <li>2) <b>Romeo:</b> "Then plainly know my heart's dear love is set on the fair daughter of rich Capulet" (Act 2.3)</li> <li>3) <b>Friar Lawrence:</b> "These violent delights have violent ends and in their triumph die, like fire and powder." (Act 2.5)</li> <li>4) <b>Mercutio:</b> "A plague on both your houses! I am sped. Is he gone and hath nothing?" (Act 3.1)</li> </ol> <p><b>End</b></p> <ol style="list-style-type: none"> <li>1) <b>Romeo:</b> "O I am fortune's fool." (Act 3.1)</li> <li>2) <b>Juliet:</b> "I'll to the Friar to know his remedy; if all else fail, myself have power to die." (Act 3.5)</li> <li>3) <b>Juliet:</b> "O happy dagger! This is thy sheath. There rust and let me die." (Act 5.3)</li> <li>4) <b>Prince:</b> "For never was a story of more woe than this of Juliet and her Romeo." (Act 5.3)</li> </ol>	
<p><b>Themes</b></p> <p><b>Love –</b> The love of Romeo and Juliet is beautiful, pure and passionate; it is also impulsive and leads to death and destruction.</p> <p><b>Fate –</b> Romeo and Juliet's love is doomed from the start.</p> <p><b>Hate –</b> The hate between the families leads to the deaths of 4 characters.</p> <p><b>Religion –</b> Religion is a powerful and force and is behind all the decisions in the play.</p> <p><b>Family and Honour -</b> Both are responsible for the actions of the characters that eventually lead to death</p>	<p><b>Characters</b></p> <p><b>Romeo Montague</b> Intense, intelligent, quick witted and loved by his friends, but impulsive</p> <p><b>Juliet Capulet</b> Naive and sheltered at the beginning. Grows during the play</p> <p><b>Mercutio</b> Romeo's best friend. Cousin to the Prince. Wild and sarcastic</p> <p><b>Tybalt</b> Juliet's cousin. Consumed by family honour; hates the Montagues</p> <p><b>Benvolio</b> Romeo's cousin. A peacemaker.</p> <p><b>Friar Lawrence</b> A Franciscan monk. Friend to both R and J</p> <p><b>The Nurse</b> Juliet's friend and confidante. In many ways, Juliet's mother figure</p> <p><b>Prince Escalus</b> Leader of Verona. Wants to keep the peace.</p>	<p><b>Plot Tracking</b></p> <p><b>Act 1</b> In Italy, two noble families have long been at war. Romeo is depressed, as a result, Benvolio persuades him to attend a masked ball at the Capulets. There he meets a girl who he learns is Juliet, the daughter of Capulet. They seal their love with a kiss.</p> <p><b>Act 2</b> Romeo lingers in the Capulet's garden beneath Juliet's balcony. He sees Juliet leaning over the balcony and hears her calling out his name and wishing he wasn't a Montague. He reveals his presence and after an ardent love scene they resolve to marry in secret.</p> <p><b>Act 3</b> Tybalt encounters Romeo after his marriage to Juliet and gets angry when Romeo refuses to be drawn into a fight. Mercutio grapples with Tybalt and is killed. Angered at his friend's death, Romeo fights Tybalt and kills him.</p> <p><b>Act 4</b> In despair, Juliet visits Friar Lawrence who gives her a potion to make her appear dead. On the morning of her wedding she is carried to her family's vault, where Romeo will come to take her away.</p> <p><b>Act 5</b> The Friar's letter fails to reach Romeo who learns of Juliet's 'death' and returns to Verona. He finds Juliet's body and takes a potion to kill himself. Juliet wakes, finds Romeo's body and stabs herself. The devastated families decide to make peace.</p>

**Context:** When Shakespeare was writing his plays, Queen Elizabeth 1, then King James VI were on the throne. The nobility were seen as more important than the servants. Men were more powerful than women, Masculinity meant that men would fight for their honour. Parents were much more strict and would usually choose who their daughter would marry. Most people believed in Christianity, so believed in heaven and hell. Christians went on journeys (pilgrimage) to important religious places (shrines) to pray. The people are called pilgrims. Many people believed in Fate and that their life is pre-destined.



### Genre conventions:

Play – dialogue with stage directions. Tragedy, comedy and History

Newspaper article – Headline, 5Ws (Who? What? Where? When? Why?), quote from an eyewitness, AFOREST, third person (he/she/they)

Diary writing – first person perspective (I), emotive language, variety of tenses (past/present/future)

Essay writing – PEE/PETER paragraphs (Point, example, subject term, explanation, response), paragraphs (TIPTOP), conjunctions, evaluate, conclusion



# Yr 9 Key



## Vocabulary 1.1

Negatives: *ne pas*; *ne jamais*  
(around the verb to make a verb sandwich): je **ne** dois **pas** aller (I don't have to go); je **ne** veux **jamais** aller (I never want to go)

Talking about identity (1): Describing self and others

Cultural events [1]: Le festival de Dieppe

Motivations and goals

Work Experience

Talking about what needs to happen

Talking about what, where, and who you know

Things that always, sometimes and never happen

l'entreprise (f)	company
l'attitude (f)	attitude
le collègue	colleague (m)
la collègue	colleague (f)
le directeur	headteacher, manager (m.)
la directrice	headteacher, manager (f)
la piscine	swimming pool
le stage	work experience
actif	energetic (m)
active	energetic (f)
négatif	negative (m)
négative	negative (f)
positif	positive (m)
positive	positive (f)
sportif	sporty (m)
sportive	sporty (f)

### Modal verbs

*devoir* = to have to (present tense)

Je dois

Tu dois

Il / elle / on

doit

Nous

devons

Vous devez

Ils / elles

doivent

Verbs; nouns;  
grammar rule;  
adjectives;  
adverb

Modal Verbs *vouloir* to want to (present tense)

Je veux

Tu veux

Il / elle / on veut

Nous voulons

Vous voulez

Ils /ells veulent

Modal Verbs *pouvoir* to be able to (present tense)

Je peux

Tu peux

Il / elle / on peut

Nous pouvons

Vous pouvez

Ils /ells peuvent

**Adjectives** change when they describe a **feminine** noun. The most common change is to add 'e' to the end of the adjective.



**un oiseau vert**



**une voiture verte**

The other rules for making adjectives agree with feminine nouns:  
Adjectives ending in -eux change to -euse: dangereux, dangereuse  
Adjectives ending in -l change to -lle: traditionnel; traditionnelle  
Adjectives ending in -n change to -nne: bon, bonne  
Adjectives ending in SFe stay the same: jaune, jaune.

We often add -s to make **adjectives** agree with **plural** nouns:



**des chats noirs**



**des guitares noires**

Adjectives ending in -s or -x stay the same when plural: un chat gris, des chats gris / un chat paresseux, des chats paresseux

### **Pour and sans + infinitive**

**Pour** means '(in order) to' and **sans** means 'without'.

To say '(in order) to do something' or 'without doing something', we use pour/sans before a verb in the infinitive (long form).

Elle travaille dur **pour** réussir. She works hard (in order) to succeed.

Elle travaille dur **sans** réussir. She works hard without succeeding.

Regular er verb endings in present tense:

Je regarde    tu regardes    il / elle /on regarde

Nous regardons    vous regardez    ils / elles regardent

**qui:** who

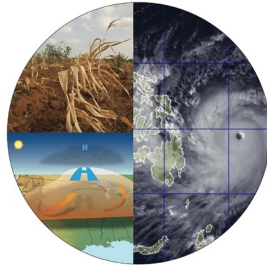
**comment:** how

**quand:** when

**quoi:** what

**où:** where

**pourquoi:** why



**GEOGRAPHY CORE KNOWLEDGE**  
**Climate change**  
**Y9**

**1. What impact did the Somerset Floods have on people, economy and environment?**

County, saturation, dredging, homes destroyed, roads blocked, relief, climate, prolonged heavy rainfall, cost, loss of habitats, water sources contaminated, loss of income.

**2. How do you know climate change is real, what is the evidence?**

Ice cores, tree ring analysis, pollen analysis, paintings from the past, satellite imagery (Arctic Sea melt), permafrost melt, hazard frequency and sea level rise.

**3. Describe the natural causes of climate change.**

Milutin Milankovitch, Orbital Change, Eccentricity, Axial tilt, sunspots and volcanic activity

**4. To what extent are humans to blame for climate change?**

Enhanced greenhouse effect, fossil fuels, cars, factories, burning coal for energy,

**5. Describe the strategies used to reduce the effects of climate change.**

Afforestation, International agreements – such as the Paris Accord, Kyoto Protocol and COP, renewable energy, carbon capture.

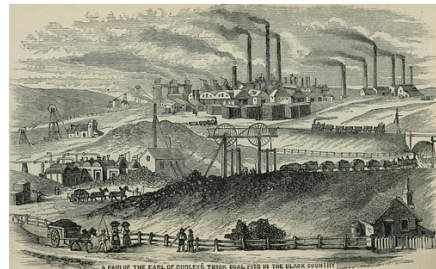
**6. Explain how humans have started to adapt to climate change.**

Agricultural changes, managing water supply, reducing the risk of rising sea levels, vermicomposting, plinths, the role of non-governmental organisations



**1. What was the Industrial Revolution?**

- Between 1750 and 1850, Britain became the world's first industrial nation.
- For centuries people had worked in their homes or in the fields.
- After 1780, new machines were invented that completely changed the way people worked.
- People moved to industrial areas to take jobs in factories, workshops, warehouses, shipyards and mines.
- Many places on Britain's coast became busy ports and centres of shipbuilding.
- In the Midlands, foundries and factories started to make an enormous range of metal goods.
- Mines all over Britain were opened to produce the coal that was needed to power the steam engines that drove the machinery.
- In northern England, hundreds of textile factories (often known as 'mills') began to produce huge quantities of woollen and cotton cloth.
- Road and canals were built across Britain.
- From the 1840s, railways transformed travel.



**2. The working lives of men.**

- Coal mines and textile factories brought new opportunities for working men.
- There was plenty of work for skilled labourers like shoemakers, tailors, carpenters, metalworkers and shipwrights.
- There was lots of work for unskilled builders.
- Many men called navvies, built canals, roads, factories and warehouses.
- From the 1840s, navvies build hundreds of miles of railways across Britain.



**3. The working lives of women**

- Factory owners liked to employ women because they could pay them lower wages than men.
- Thousands of young women in the north found work in textile factories.
- Most women left the factories when they had children.
- Some women worked at home producing clothing or food that they could sell to make extra money.
- Some women worked in service for wealthier neighbours.



**4. The working lives of children**

- There was a lot of demand for young children to work in the mills and mines.
- Many children in industrial areas worked long hours.
- Children faced many dangers working in factories and mines.





### Symbols

<	>	≤	≥	=	≠
less than	greater than	less than or equal to	greater than or equal to	equal to	not equal to
$-4 < 3$	$18.39 > 18.35$	$16, 17, 18 \leq 18$	$3 + 9 \geq 7$	$2 + 3 = 3 + 2$	$2 + 3 \neq 4 - 1$

### Finance

<b>credit</b> money going <u>into</u> a bank account	<b>debit</b> money going <u>out</u> of a bank account
---	--

### Times Tables

The eight times table: 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96, 104, 112, 120

### Order of Operations

Brackets or Powers  
Multiply or Divide  
Add or Subtract

### Vocabulary

<b>digit:</b> a single symbol used to make a number	<b>integer:</b> a whole number	<b>significant figure:</b> the first digit that holds the highest value	<b>rounding:</b> when we write a number to a degree of accuracy
---	--------------------------------	---	---

### Four Power Facts

$n^0 = 1$	$n^1 = n$	$n^{-1} = \frac{1}{n}$	$n^{-2} = \frac{1}{n^2}$
-----------	-----------	------------------------	--------------------------

### Standard Form

Very large or very small numbers can be written in standard form to make them easier to read

$$300000 = 3 \times 10^5$$

$$0.0000002 = 2 \times 10^{-7}$$

$$350000 = 3.5 \times 10^5$$

### Other Key Words

root, cube, decimal, operation, estimate

### Top Links

[www.corbettmaths.com](http://www.corbettmaths.com)



Stafford Manor  
High School

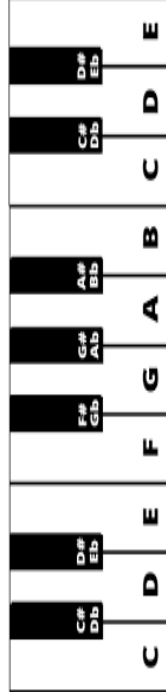


## Film Music

### 1. Understanding the main key words

Pitch	How high or low a note is
Tempo	How fast or slow the music is
Dynamics	How loud or quiet the music is
Duration	How Long of short the note/music is
Texture	How many musicians/instruments are playing
Timbre	The sound of the instrument. Tinny/Wooden
SOUNDTRACK	The music and sound recorded on a motion-picture film.
STORYBOARD	A graphic organiser in the form of illustrations and images displayed in sequence to help the composer plan their soundtrack.
CUESHEET	A detailed listing of <b>MUSICAL CUES</b> matching the visual action of a film so that composers can time their music accurately

### 2. Know where the notes are on the piano



#### Famous Film Composers

John Williams, Hans Zimmer, Bernard Herrman, Ennio Morricone, Henry Mancini, Alan Silvestri, Michael Giacchino, John Barry, James Horner, Rachel Portman.

#### Film Music Genres

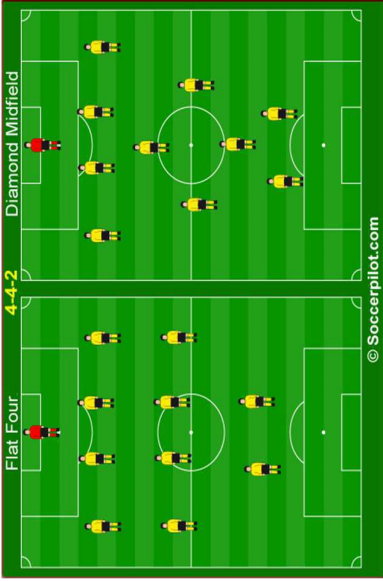
Action Adventure Fantasy  
Sci-fi Murder Mystery  
Thriller Horror Romance  
Comedy Crime Drama

twinkl.co.uk

# Stafford Manor High PE Department

## Knowledge Organiser – YR 9 Football



<p><b>Activity:</b> Football</p>	<p><b>Year:</b> 9</p>
<p><b>Key Skills:</b></p> <ul style="list-style-type: none"> <li>Controlling the ball – using different parts of the body – this could be the feet, thigh, chest and head. Use both feet. Remember to cushion the ball.</li> <li>Passing – there are 3 types of passes. Side foot pass, driven pass with the laces and a lofted pass. Using the side of the foot allows you to pass accurately over a short distance; a driven pass allows you to pass the ball on the floor, but a greater distance. Finally, a lofted pass allows you to lift the ball in the air over players and change direction. Remember to keep your standing foot next to the ball when you make the pass.</li> <li>Dribbling – dribbling allows you to move the ball quickly around the pitch using the inside and outside of your feet and keeping, the ball close to your feet and your head up.</li> <li>Turning with the ball and outwitting a defender – turning with the ball allows you to change direction using different techniques, such as dragging the ball back with the sole of your boot. Outwitting and opponent allows you to beat a defender using different techniques such as a step over.</li> <li>Shooting – there are different types of shots that allows you to score goals. You instep can be used to control and place the ball into the goal. If you use your laces then this allows more power to be produced. Try and use your non dominant foot.</li> <li>Heading – you can use an attacker header, a defensive header or a controlled header, which might be passing the ball back to someone with your head.</li> <li>Attacking – keeping possession – making a number of passes allows your team to keep possession and advance up the field.</li> <li>Tackling techniques – tackling, jockeying and forcing the player onto their weaker foot.</li> </ul>	 <p><b>Strategies and Tactics:</b></p> <p><b>Attacking</b> – using the width is very important when attacking. It is important teams keep possession and play one and two touch to move the ball quickly. Also, another effective strategy is to ‘switch’ the play using a lofted pass. To keep possession some teams may use the depth of the pitch to keep possession and build an attack.</p> <p><b>Defending</b> – players are normally marked man to man, but can be marked zonal from corners. It is also important that defenders keep a good line, which may allow them to play the opposition offside. This also means the defending team isn’t too deep near their goal.</p>
<p><b>Stretch and Challenge Task:</b></p> <ul style="list-style-type: none"> <li>Why is it important to move the ball quickly when keeping possession?</li> <li>How can width be provided in different formations like 4-4-2, 4-3-3 or 5-3-2?</li> <li>What is zonal marking?</li> </ul>	<p><b>Key Content and Terms to learn:</b></p> <p>Passing, dribbling, shooting, heading, attacking, defending, possession, width, depth, different formations, offside rule, ‘switching’ play</p>

# Stafford Manor High PE Department

## Knowledge Organiser – YR 9 NETBALL



### Key Skills:

**Passing and receiving** – different types of passes include chest pass, bounce pass, shoulder pass and overhead pass.

**Attacking** – getting free from an opponent in order to receive the ball. Includes the skills of sprinting, dodging and changing direction, roll and sprint.

**Shooting** – With one hand under the ball and the other steadying it at the side, keep your eyes on the hoop, bend your knees and push the ball with the fingers.

**Defending** – Marking your opposite player both with and without the ball.

**Footwork** – You must land with a 1-2 landing or with 2 feet. You must then not move the landing foot.

**Holding space** – trying to keep space in which to receive a pass. Especially useful in the circle and on the circle edge..

### POSITIONS AND RESPONSIBILITIES

**Goal Shooter (GS)** – To score goals and work in and around the circle with the GA. Marks the GK.

**Goal Attack (GA)** – To feed the ball to the GS and to score goals. Marks the GD.

**Wing Attack (WA)** – To feed the ball into the circle and to help move the ball down to the teams attacking third. Marks the WD.

**Centre (C)** – To take the centre pass and to act as a link between defence and attack. Moves the ball down the court. Marks the opposite C.

**Wing Defence (WD)** – To look for interceptions and move the ball down into attack. Marks the WA.

**Goal Defence (GD)** – To get the ball from the attack and help pass it back down the court. To prevent the GA from scoring. Marks the GA.

**Goal Keeper (GK)** - To work with the GD and to prevent the GA/GS from scoring. Marks the GS

### Homework

- Watch an international or super league game of netball online.
- What is the order you should pass the ball through starting from GK?
- Do/should the defenders always stay with their opposite player? If not, why not? What do international players do?
- Why might you get a penalty pass when playing netball? What is the difference when a penalty happens in the circle?

**Rules:** The game starts with a centre pass and the ball must be caught in the centre third. You must comply with the footwork rule e.g. a 1-2 landing or a 2-footed landing. You only have 3 seconds to release the ball.

When defending you must be 1 metre away from the player.

There must be no contact with an opposing player.

Only GS and GA may score a goal.

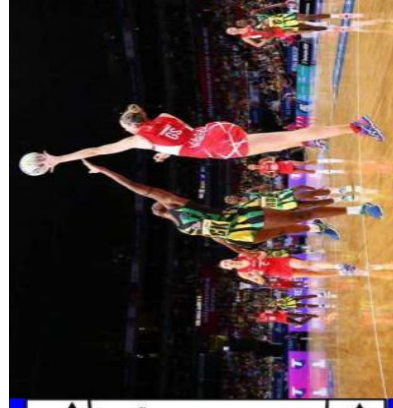
You must stay in the correct area of the court for your position.

Teams take it in turns to take a centre pass.

The ball must be touched in each third of the court.

You cannot catch the ball, drop it and then try to catch it again or bounce the ball.

When shooting the ball must touch the ring or net or it is counted as passing the ball to yourself and is a free pass to the other team.



### Key content and Terms to learn

- Passing and receiving
- Attacking
- Defending
- Footwork
- Contact
- Shooting
- Umpiring
- Possession
- Holding space
- Dodging



# ECOSYSTEMS CORE KNOWLEDGE

## 1. Where do we get our energy from?

- ✿ All our energy comes from the **sun**.

## 2. What are food chains and webs?

- ✿ Food chains show what eats what. They always start with a producer: **Carrot** → **Rabbit** → **Fox**
- ✿ Food webs show us all the food chains in an area.

## 3. What are producers, consumers, carnivores & herbivores?

- ✿ **Producer**: An organism that makes its **own food** (e.g. plant)
- ✿ **Consumer**: An organism that **eats** another organism.
- ✿ **Carnivore**: An animal that eats **meat**.
- ✿ **Herbivore**: An animal that eats **plants**.

## 4. What are the ecosystem key words?

- ✿ **Ecosystem**: All the **plants and animals** that live in an area.
- ✿ **Conservation**: The **preservation** of animals & plants.
- ✿ **Biodiversity**: How many **different** species in an ecosystem.
- ✿ **Population**: All the members of **one** species that live in a habitat.
- ✿ **Community**: All the populations of different organisms that live together in a habitat.

## 5. What are the adaptations of polar bears and giraffes?

- ✿ Polar Bears: Thick white fur, fat, large feet & eyes at the front.
- ✿ Giraffes: Long necks, long legs and eyes at the side.

## 6. What is eutrophication?

- ✿ Fertilisers wash into water causing **algae** to grow.
- ✿ Light cannot get through, so **photosynthesis** can't occur.
- ✿ No oxygen in the water **kills animals** and plants.

## 7. What are the 5 kingdoms?

<b>Animals</b>	<b>Plants</b>	<b>Fungi</b>	<b>Prokaryotes</b>	<b>Protista</b>
----------------	---------------	--------------	--------------------	-----------------

## 8. What are the 5 vertebrate groups?

- ✿ Vertebrates are animals that have a backbone.

<b>Mammals</b>	<b>Reptiles</b>	<b>Fish</b>	<b>Amphibians</b>	<b>Birds</b>
----------------	-----------------	-------------	-------------------	--------------

## 9. How can we sample the number of daisies in a field?

- ✿ Place a **quadrat** randomly on the field and count the daisies.
- ✿ Repeat in different areas of the field and calculate the **mean**.
- ✿ Estimate the total by multiplying this by the **size** of the field.

# ENERGY IN REACTIONS

## CORE KNOWLEDGE

### 1. Describe the word "exothermic"

- Heat is **given out** to the surroundings.
- The temperature **increases**.



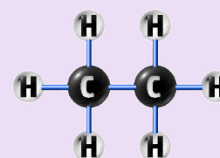
### 2. Describe the word "endothermic"

- Heat is **taken in** from the surroundings.
- The temperature **decreases**.

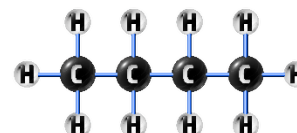
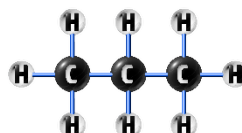
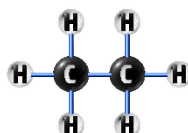
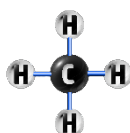


### 3. Describe what a hydrocarbon is

- A compound made up of **hydrogen** and **carbon**...
- ...**ONLY!**



### 4. Draw the first 4 alkanes



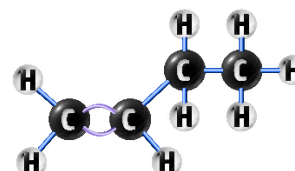
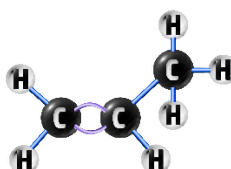
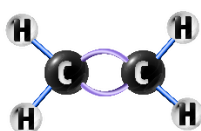
**Methane, CH<sub>4</sub>**

**Ethane, C<sub>2</sub>H<sub>6</sub>**

**Propane, C<sub>3</sub>H<sub>8</sub>**

**Butane, C<sub>4</sub>H<sub>10</sub>**

### 5. Draw the first 3 alkenes



**Ethene, C<sub>2</sub>H<sub>4</sub>**

**Propene, C<sub>3</sub>H<sub>6</sub>**

**Butene, C<sub>4</sub>H<sub>8</sub>**

### 6. Identify 4 ways to speed up a reaction

- Increase the **temperature**.
- Increase the **concentration**.
- Increase the **surface area** (crush it up!).
- Use a **catalyst**.

### 7. Describe what is needed for a chemical reaction to occur

- A **collision**...
- ...with enough **energy** to make it successful.

### 8. Describe what a catalyst is

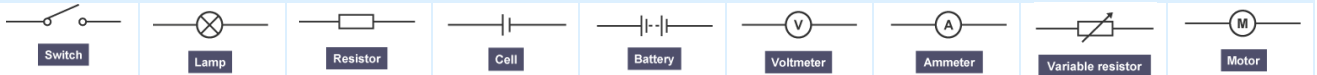
- Speeds up** a chemical reaction.
- Doesn't get used up**.



# ELECTRICITY AND MAGNETISM

## CORE KNOWLEDGE

### 1. How do you draw circuit symbols?



### 2. What is electric current?

- Current is a measure of how much **electric charge** flows through a circuit.
- The **more charge** that flows, the **bigger the current**.

### 3. What is voltage?

- Voltage is a measure of the **difference in energy** between two parts of a circuit.
- The bigger the difference in energy, the bigger the **voltage**.

### 4. How do you measure current?

- Current is measured in **amperes** (A).
- You use an **ammeter**, placed in **series**.

### 5. How do you measure voltage?

- Voltage is measured in **volts** (V).
- You use an **voltmeter**, placed in **parallel**.

### 6. How do you calculate resistance?

- Resistance ( $\Omega$ ) = potential difference (V)  $\div$  current (A)**

### 7. What are the magnetic metals?

Iron

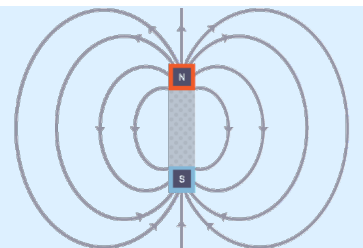
Steel

Cobalt

Nickel

### 8. What do magnetic field lines look like?

- The field lines are loops.
- The field lines do not overlap.
- The field lines flow **from** the **north** pole to the **south** pole.



### 9. How are negative and positive charges built?

- Negative:** When something **gains negative electrons**.
- Positive:** When something **loses negative electrons**.

### 10. How does friction cause static electricity?

- Friction transfers electrons** from one material to another.
- The material that **gains** electrons will have a **negative** charge.
- The material that **loses** electrons will have a **positive** charge.
- Both materials will have the **same size charge**.

## Y9 Textiles: Circular Weave **WHAT I NEED TO KNOW!!!!!!**

Textiles also called fabrics can be made from either **Natural** or **Synthetic** fibres.

### Natural fabrics

- Can be harvested from plants animals. For example cotton comes from plants and wool from sheep



### Synthetic fabrics (manmade)

- These are made from polymers (long chains molecules)
- These mainly come from oil and coal- non renewable fossil fuels



### Who is Tammy Kanat?

**Tammy Kanat** is a Melbourne-based artist whose recent work has focused on tapestries woven around an oval-shaped copper frame. ... Throughout her career, **Kanat** has explored the representation of natural forms in tapestry – the concentric circles in these four works recall cut agate, living coral and aerial landscape scenes.



### What is a circular weave?

Circle weaving, also known as circular weaving or round weaving, is **similar to regular weaving, but it's done on a round loom instead of a rectangular loom**. When you string the loom, your warp strings look like bicycle spokes, and you weave in and out of these spokes (or warp strings) in a circular direction.



**Embellishments:** a decorative detail or feature added to something to make it more attractive.



Buttons



Beads



Sequins

### Keywords for the project:

<b>Keyword</b>	<b>Definition</b>
<b>Circular Weave</b>	Comes from Prince Albert from Germany.
<b>Natural fabrics</b>	Can be harvested from plants animals. For example cotton comes from plants and wool from sheep
<b>Tammy Kanat</b>	Textile Weave Artist. <b>Tammy Kanat</b> is a Melbourne-based artist whose recent work has focused on tapestries woven around an oval-shaped copper frame.
<b>Embellishment</b>	a decorative detail or feature added to something to make it more attractive.

### Model Example:



### Success Criteria of gaining high marks

- Variety of colours
- Lots of layers and detail.
- Creative design and composition.
- Related back to artist
- Use of embellishment