
















**Stafford Manor**  
High School

# **Year 7 Spring Term 1**

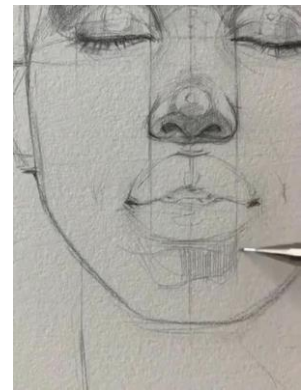
## **Core Knowledge**

-  Art
-  Design Technology
-  Digital Communications
-  English
-  French
-  Geography
-  History
-  Maths
-  PE
-  Performing Arts
-  Science
-  SEL
-  Textiles



## 1. What are portraits?

- ❖ A **portrait** is a picture or painting that focuses on a person's face or the way they look.
- ❖ It's a way to capture and show what someone looks like, often emphasizing their facial features, expressions, and personality in a visual form.
- ❖ Portraits can be created using various art techniques, such as drawing, painting, or photography.



## 2. What is wire work?

- ❖ Wire work is a technique where artists use pieces of wire to shape and form various objects or sculptures.
- ❖ This can include bending and twisting the wire to create three-dimensional shapes, figures, or decorative designs.

## 3. What is included in an artist research page?

- ❖ A title which is the artist's name.
- ❖ Images of the artist's work.
- ❖ A copy of the artist's work which is called an artist recreation.
- ❖ Information about the artist.
- ❖ A background that links with the artist.

## 4. Key word definitions:

- ❖ **Blending**: Smoothly transitioning between colours or tones.
- ❖ **Complementary Colours**: Opposite pairs for contrast.
- ❖ **Contemporary**: Reflecting current artistic trends.
- ❖ **Depth**: Illusion of three-dimensionality in art.
- ❖ **Form**: Three-dimensional representation of an object.
- ❖ **Focal Point**: Main point of interest in art.
- ❖ **Manipulation**: Altering materials for artistic effect.
- ❖ **Pattern**: Repetitive arrangement of elements.
- ❖ **Primary Colours**: Red, blue, and yellow.
- ❖ **Proportion**: Relative size and scale in art.
- ❖ **Saturation**: Colour intensity or purity.
- ❖ **Scale**: Size of elements in relation to surroundings.
- ❖ **Secondary Colours**: Green, orange, purple.
- ❖ **Shape**: Two-dimensional defined area.
- ❖ **Tone**: Lightness or darkness of colour or grayscale.
- ❖ **Vivid**: Extremely bright and intense color.
- ❖ **Wire Work**: Sculpture technique using wire.

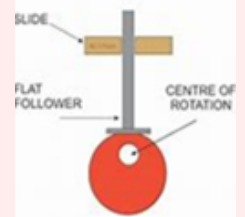
# DESIGN TECHNOLOGY

## 1. What are the four types of motion?

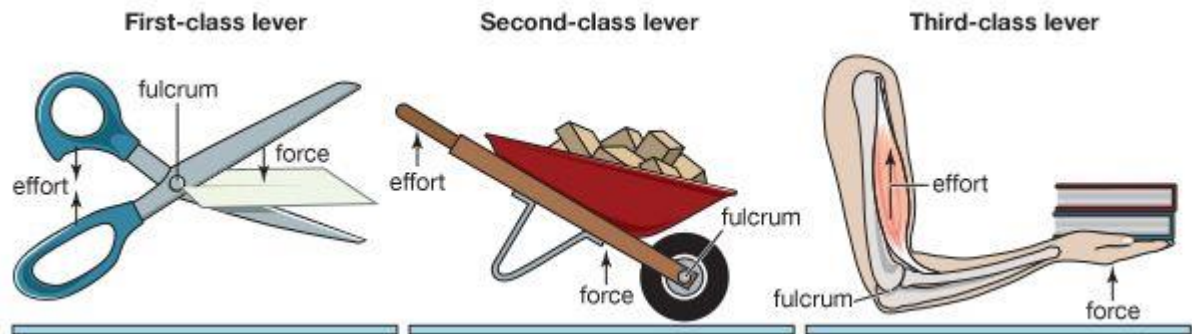
- ❖ **Linear:** Straight-line movement from one point to another.
- ❖ **Reciprocating:** Back-and-forth movement in a straight line.
- ❖ **Rotary:** Circular or spinning movement around a fixed point.
- ❖ **Oscillating:** Swinging or back-and-forth movement around a central point.

## 2. What is an eccentric cam?

- ❖ An eccentric cam is a cam with its rotational axis off-center, creating irregular and unique movements in mechanical systems.



## 3. What are the different types of levers?



## 4. Key Word Definitions:

- ❖ **Amplify:** Increase magnitude or intensity.
- ❖ **Automata:** Mechanical devices imitating human actions.
- ❖ **Axel:** Shaft on which a wheel rotates.
- ❖ **Crank:** Mechanical arm converting rotary to linear motion.
- ❖ **Direction:** Path along which something moves.
- ❖ **Effort:** Force applied to perform work.
- ❖ **Expand:** Increase in size or scope.
- ❖ **Follower:** Component moving in response to a cam.
- ❖ **Force:** Push or pull causing acceleration.
- ❖ **Gears:** Toothed wheels transmitting motion or changing speed.
- ❖ **Lever:** Rigid bar rotating around a fixed point.
- ❖ **Limits:** Maximum or minimum values.
- ❖ **Load:** External force or resistance.
- ❖ **Movement:** Change in position or condition.
- ❖ **Pivot/Fulcrum:** Fixed point for rotation.
- ❖ **Ratio:** Quantitative relation between two amounts.
- ❖ **Slider:** Component moving linearly within a guide.

# DIGITAL COMMUNICATION



## 1. What is the purpose of a computer?

The purpose of a computer is to execute programs that operate on data.

## 2. What is hardware?

The physical components of a computing system.

## 3. What is software?

The programs that a computing system executes.

## 4. What four parts should all computer systems include?

Processor  
Memory  
Storage  
Communication

## 5. Name four common storage devices

Hard disk drive (HDD), solid-state drives (SSD), USB flash drives, SD cards

## 6. What is memory used for?

Memory stores the programs and data that the computer system is currently using. It is volatile, so is lost when the power is turned off.

## 7. What does CPU stand for?

Central Processing Unit

## 8. How many programs can be executed at the same time?

Only one.

## 9. What is an operating system?

The operating system is a set of programs that control the operation of a computer system.

## 10. Name four examples of operating systems

Windows, Linux, iOS, ubuntu

# ENGLISH

## 1. What is a Tempest?

- ❖ A violent windstorm, especially one with rain, hail, or snow



## 2. Who are the main characters in 'The Tempest'?

- ❖ Prospero, Ariel, Miranda, Caliban, Alonso, Ferdinand

## 3. Where is the play set?

- ❖ An Island

## 4. What happens in the first scene?

- ❖ There is a storm (Tempest) and the royal ship gets stranded

## 5. What are the main themes in the play?

- ❖ Treason, supernatural, disobedience, obedience,

## 6. How long have Prospero and Miranda been on the Island?

- ❖ 12 years

## 7. How did Prospero end up on the Island?

- ❖ Prospero was usurped by his brother, Antonio. Prospero fled on a boat with his daughter, Miranda.

# FRENCH

## 1. What is the masculine indefinite article (word for a /an)?

☒ un

## 2. What is the feminine indefinite article (word for a / an)?

☒ une

## 3. What is a noun?

☒ A thing, place, person

## 4. What is an adjective?

☒ A word that describes a noun

## 5. What are the masculine and feminine forms of the adjective expensive?

☒ Cher (m) chère (f)

## 6. What are the masculine and feminine forms of quick?

☒ Rapide (m/f) It does not change, as already has an 'e' at the end

## 7. How do you say 'I have'?

☒ J'ai

## 8. How do you say 'you have'?

☒ Tu as

## 9. How do you say 'he has' and 'she has'?

☒ Il a            Elle a

## 10. How can you make a statement a question?

☒ Raise your pitch at the end of a statement

## 11. Where do most adjectives go in French?

☒ After the noun

## 12. Which is correct? Une voiture cher / une voiture chère

☒ Une voiture chère

## 13. Is this correct? Un vélo rapide

☒ Yes! (see number 6)

## 14. What does a 'silent final e' mean to pronunciation?

☒ It means we pronounce the consonant before the final e  
☒ For example Un monde (a world)

# GEOGRAPHY

## 1. What is weather?

- ☞ Day to day changes in atmospheric conditions

## 2. What instruments are used to measure weather?

- ☞ Rain gauge, thermometer, barometer, windsock, wind vane, anemometer

## 3. What is the correct name for someone who studies weather?

- ☞ Meteorologist

## 4. What types of rainfall affect the UK?

- ☞ Frontal rainfall, relief rainfall, convectional rainfall

## 5. What weather conditions do you experience during low pressure zones?

- ☞ Cloudy, wet, windy, stormy

## 6. What weather conditions do you experience during high pressure zones?

- ☞ Clear sunny skies – warm in summer and cold in winter

## 7. Explain the differences between weather and climate.

- ☞ Weather is day to day atmospheric conditions whereas climate is the long term atmospheric conditions.

# HISTORY

## 1. Who was King of England before Edward I?

- 🚫 Henry III (1216 – 1272)

## 2. What are the years for Edward I's reign?

- 🚫 1272 - 1307

## 3. What problems did Edward I have at the start of his reign?

- 🚫 Rebellious and disgruntled barons
- 🚫 Increasing crime
- 🚫 Parliament

## 4. Which part of Parliament did Edward I create?

- 🚫 The Commons

## 5. Where did Edward I invade?

- 🚫 Scotland and Wales

## 6. Who did Edward I expel from England?

- 🚫 The Jews

## 7. When did Edward I expel the Jews?

- 🚫 1290



# MATHS

## 1. Key word definitions:

🔗 **Algebra:** how we work with numbers that we don't know.

## 2. What is a term?

A term is a single number or variable

## 3. What is an expression?

An expression is a collection of terms.

## 4. What is an equation?

An equation usually has one variable, and that variable usually has only one value that is true.

## 5. What is an inequality?

An equation usually has one variable, but that variable has *a set of* values that is true.

## 6. How should you remember to plot coordinates?

Along the corridor, and then the stairs.

## 7. How do these common expressions simplify?

$$a + a = 2a$$

$$b \times b = b^2$$

$$c \times c \times c = c^3$$

$$d + e = d + e$$

$$2 \times f = 2f$$

$$g \times h = gh$$

# PERFORMING ARTS

## 1. How are the following techniques used in performances?

- ❖ **Naturalism:** A style of performance where actors and designers try to create the illusion that what is happening on stage is 'reality'.
- ❖ **Target Audience-** Who the play was intended for
- ❖ **Protagonist-** The good guy/Main character
- ❖ **Antagonist-** The bad guy/ Evil Villain
- ❖ **Props-** Short for properties and used in performances like a hair brush, mop, books etc.
- ❖ **Project-** To project your voice so you can be heard
- ❖ **Multi-role playing:** An actor plays multiple characters.
- ❖ **Fourth Wall:** An imaginary wall between the actor and the audience.

## 2. What are "genres" in performing arts?

- ❖ The genre refers to the type or style.

### Examples:

- |             |            |            |
|-------------|------------|------------|
| ❖ Action    | ❖ Musical  | ❖ Sci-fi   |
| ❖ Adventure | ❖ Mystery  | ❖ Soap     |
| ❖ Comedy    | ❖ Romantic | ❖ Thriller |
| ❖ Drama     | ❖ Romantic | ❖ Tragedy  |
| ❖ Horror    | ❖ Comedy   |            |

## 3. What are "themes" in performing arts?

- ❖ Themes refer to what the performance is about.

### Examples:

- |            |             |              |
|------------|-------------|--------------|
| ❖ War      | ❖ Sacrifice | ❖ Desire     |
| ❖ Crime    | ❖ Death     | ❖ Jealousy   |
| ❖ Bullying | ❖ Love      | ❖ Witchcraft |
| ❖ Revenge  | ❖ Hate      | ❖ Magic      |

## 4. How can we be safe when performing?

- |  |  |
|--|--|
| ❖ Listen to instructions.                            | ❖ Ensure the stage is clicked together properly.   |
| ❖ No running in the drama space.                     | ❖ Be aware of the space on the stage. Do not step back without checking how close you are to the edge. |
| ❖ No eating.   | ❖ Ensure backstage is clear of obstructions.   |
| ❖ Ensure equipment is put away.                      | ❖ Tape any wires down- trip hazard.  |
| ❖ Be careful when using props especially breakables. |  |
| ❖ Ensure the space is clear of obstructions.         |  |

# PHYSICAL EDUCATION

## 1. Handball

### Key Skills:

Offensive and defensive movement:

- Feinting with the body
- Feinting a shot
- Feinting a pass

Advanced skills, (applies to all positions, except where stated) to include: Catching:

(one handed assisted on both sides)

- At a variety of heights
- Stationary
- On the move
- From the bounce

Jumping Catching/shot stopping: (one handed assisted on both sides, goalkeeper only)

- At a variety of heights
- Stationary
- On the move



## 2. Tactics and Strategies

### Key Content and Terms to learn:

- Attacking positioning on the field
- Defensive positioning on the field
- Defensive ploys – man to man marking, zonal marking

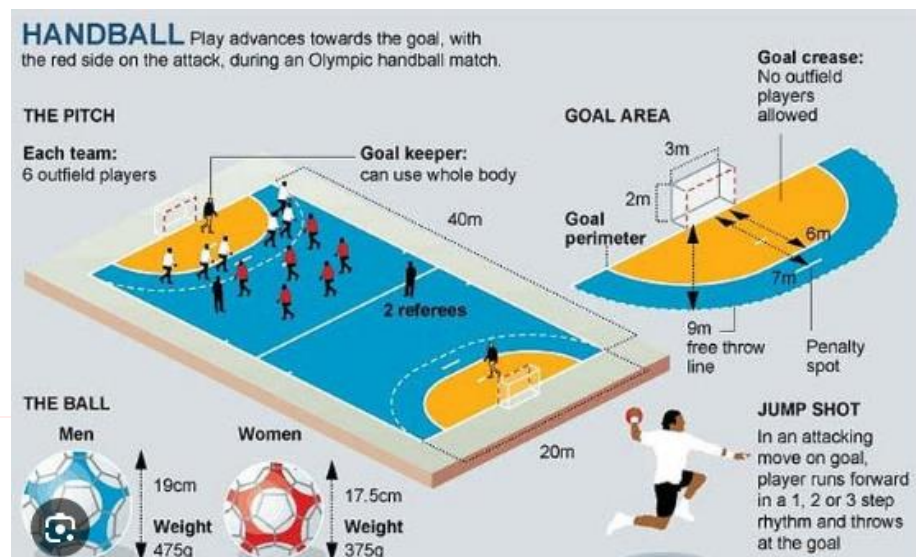
Awareness of strengths/weaknesses and actions of other players e.g. adopt a variety of roles in attack and defence in the game

## 3. Rules & Regulations

### Rules

- A match consists of two periods of 30 minutes each.
- Each team consists of 7 players; a goalkeeper and 6 outfield players.
- Outfield players can touch the ball with any part of their body that is above the knee.
- Once a player receives possession, they can pass, hold possession or shoot.
- If a player holds possession, they can dribble or take three steps for up to three seconds without dribbling.
- Only the goalkeeper is allowed to come into contact with the floor of the goal area.

Goalkeepers are allowed out of the goal area but must not retain possession if they are outside the goal area.



# PHYSICAL EDUCATION

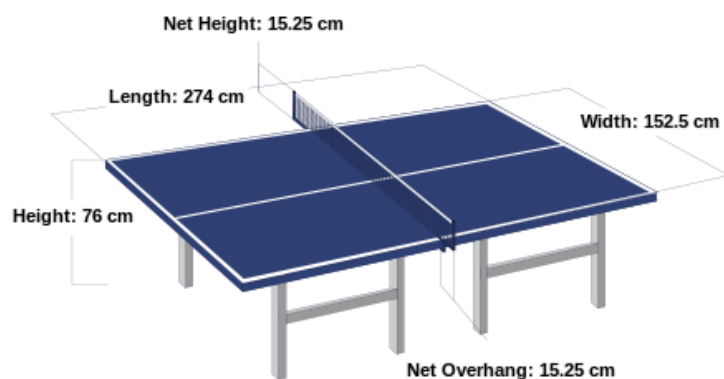
## 1. Table Tennis

### Key Skills

- Forehand drive - is the most basic and fundamental stroke. It returns aggressive/attacking strokes and is played with your palm facing your opponent.
- Backhand drive - is the mirror of the forehand drive, intended to return attacking shots with the reverse of your hand
- Backhand Push - returns short balls, and prevents your opponent from making an attacking return.
- The forehand push - is also designed for returning short balls and preventing attacking shots.
- Serve - is the final basic skill, you perform the serve to begin each point in the match by playing the ball against both sides of the table. The ball must rest on an open hand and be tossed approximately 10cm before hitting

## 2. Tactics and Strategies

- Attacking and defending
- Create space and cut down space
- Changes of speed
- Changes of direction
- Use of disguise Use of spin – backspin/topspin
- Timing
- Decision making



## 3. Rules & Regulations

### SCORING

A match is played as the best of 1, 3 or 5 games

For each game, the first player to reach 11 points wins the game. However a game must be won by at least a 2 point margin

A point is scored at the end of each rally

The edges of the table (but not the sides) are part of the legal table surface

### A POINT IS LOST IF A PLAYER

Fails to make a good serve, Fails to hit the ball onto their opponents side, Fails to hit the ball, Hits the ball before bounces (volley)

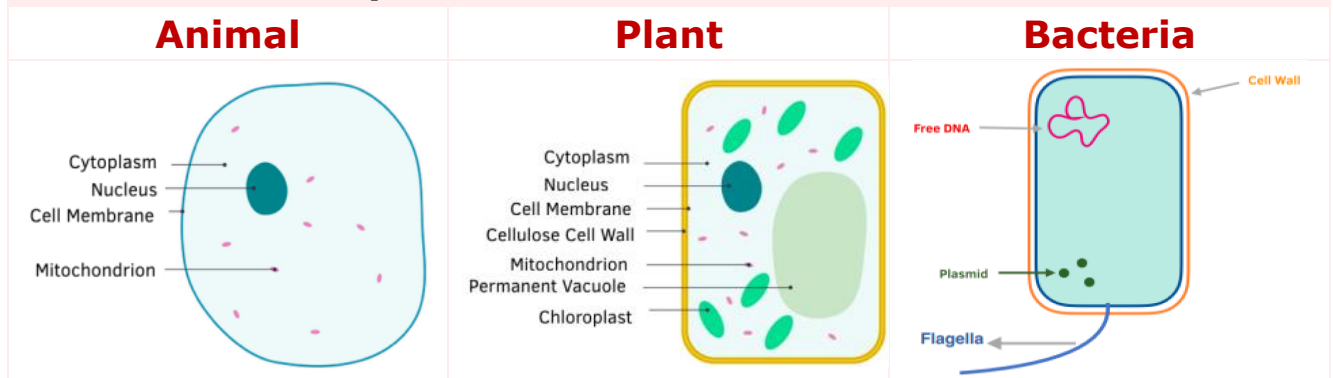
A GOOD SERVE - The ball must rest on the palm of the open hand. Toss it up at least 15 cm (6 inches) and strike it so the ball first bounces on the server's side and then on the opponent's side

A 'let' service is called if the ball touches the top of the net and goes over and onto the table •Let serves do not score points and the server

MATCH FLOW - Each player serves 2 points alternately. If a game reaches 10 all, each player serves 1 point alternately until the game is won by 2 clear points. After each game players change ends •In the final game players change ends after the first player reaches 5 points

# SCIENCE: LIVING SYSTEMS

## 1. Label animal, plant and bacteria cells



## 2. Describe the functions of parts of the cell

- ❖ **Nucleus:** Controls what happens inside the cell; contains DNA.
- ❖ **Cytoplasm:** Where chemical reactions happen.
- ❖ **Cell Membrane:** Controls the movement in & out of the cell.
- ❖ **Mitochondrion:** Where most respiration reactions happen.
- ❖ **Chloroplast:** Contains green chlorophyll for photosynthesis.
- ❖ **Cell Wall:** Made of cellulose and supports the cell structure.

## 3. Describe how to use a microscope

- ❖ Place your object on to a glass **slide** and add a **stain**.
- ❖ Add a **cover slip** and place the slide on to a **stage**.
- ❖ Turn the **focusing wheel** until focused.

## 4. State how to calculate magnification

$$\text{Total magnification} = \text{Eyepiece lens magnification} \times \text{Objective lens magnification}$$

## 5. Describe different specialised cells

- ❖ **Red blood cells:** No nucleus to fit in more oxygen.
- ❖ **Nerve cells:** Long to carry electrical impulses faster.
- ❖ **Egg cells:** Contain cytoplasm to give fertilised cell nutrients.
- ❖ **Sperm cells:** Tail to swim to the egg for fertilisation.
- ❖ **Root hair cells:** Large surface area to absorb lots of water.
- ❖ **Palisade cells:** Lots of chloroplast for lots of photosynthesis.

## 6. Define cellular diffusion

- ❖ Diffusion is the movement of particles from **higher** to **lower concentrations**.

## 7. Define osmosis

- ❖ The movement of water across a permeable membrane from **higher** to **lower concentrations** of water.

# SCIENCE: ENERGY

## 1. What are the energy stores?

- |                            |                                  |
|----------------------------|----------------------------------|
| ⊗ <b>Thermal</b>           | ⊗ <b>Magnetic</b>                |
| ⊗ <b>Kinetic</b>           | ⊗ <b>Gravitational Potential</b> |
| ⊗ <b>Chemical</b>          | ⊗ <b>Electrostatic</b>           |
| ⊗ <b>Elastic Potential</b> | ⊗ <b>Nuclear</b>                 |

## 2. What is chemical energy?

- ⊗ The **energy stored** in **food**, **fuel** and **batteries**.
- ⊗ It needs a **chemical reaction** for energy to be released.

## 3. How do we calculate work done?

- ⊗ **Work done (J) = force (N) x distance (m)**

## 4. What are energy transfers?

- ⊗ Energy can **transfer** or move from one store to another.
- ⊗ **Mechanical transfer**: When a force acts on an object causing the motion or position of the object to change.
- ⊗ **Electrical transfer**: Energy is transferred when an electrical circuit is complete.
- ⊗ **Transfer by radiation**: Electric lamps and burning fuels transfer visible and infrared light to the surroundings.
- ⊗ **Transfer by heating**: Energy is transferred by conduction, convection or thermal radiation
- ⊗ **Describing energy transfers**: You should describe the energy store at the beginning and the energy store at the end of the energy transfer

## 5. What is the conservation of energy?

- ⊗ Energy can be **stored** or **transferred**, but it *cannot* be **created or destroyed**.

## 6. How do we calculate efficiency?

- ⊗ **Efficiency = useful energy ÷ total input energy**

## 7. What are the renewable energy resources?

- |                |                           |
|----------------|---------------------------|
| ⊗ <b>Solar</b> | ⊗ <b>Geothermal</b>       |
| ⊗ <b>Wind</b>  | ⊗ <b>Hydroelectric</b>    |
| ⊗ <b>Tidal</b> | ⊗ <b>Biomass and Wood</b> |
| ⊗ <b>Wave</b>  |                           |

## 8. What are the non-renewable energy resources?

- |               |                      |
|---------------|----------------------|
| ⊗ <b>Coal</b> | ⊗ <b>Natural Gas</b> |
| ⊗ <b>Oil</b>  | ⊗ <b>Nuclear</b>     |



### 1. **Democracy means:**

- ❖ Allow the people to have a say in who leads the country
- ❖ Respect for Human rights and the individual
- ❖ Protection from abuse of power
- ❖ Equal opportunities
- ❖ Limited majority rule
- ❖ Legal protection for all

### 2. **Dictatorship means:**

- ❖ Strong and stable leadership
- ❖ Decisions get made quickly
- ❖ There is no opposition to planned actions and policies
- ❖ Prompt and swift action is taken in times of need

### 3. **How does politics impact you and your family's life?**

- |                        |                       |
|------------------------|-----------------------|
| ❖ Health service       | ❖ Access to transport |
| ❖ Education            | ❖ Environment         |
| ❖ Crime and punishment | ❖ Benefits            |

### 4. **The main roles of parliament include:**

- ❖ Examine and check government policy
- ❖ Debate the major issues of the day
- ❖ Give approval to the government's plans for raising and spending money
- ❖ Examine amendments and proposals for new laws and existing laws
- ❖ Represent the will of the people and by the custodians of democracy

### 5. **The highest elected political parties include:**

- |                 |                                 |
|-----------------|---------------------------------|
| ❖ Conservatives | ❖ Scottish National Party (SNP) |
| ❖ Labour        | ❖ Liberal Democrats             |

### 6. **The three ways to vote during an election include:**

- ❖ Postal vote
- ❖ Vote in person
- ❖ Proxy vote

### 7. **Debate means:**

- ❖ A discussion between people in which they express different opinions about something.



# TEXTILES

## 1. The bookmark Story

- ✿ The earliest existing **bookmark dates from the 6th century AD** and it is made of ornamented leather lined with vellum on the back and was attached with a leather strap to the cover of a Coptic codex (Codex A, MS 813 Chester Beatty Library, Dublin). ... The modern abbreviation is usually 'bookmark'.
- ✿ **Who invented the first bookmark?**
- ✿ In fact, it is said that one of the earliest references to the use of bookmarks was in 1584 when the Queen's Printer, **Christopher Barker**, presented Queen Elizabeth I with a fringed silk bookmark.
- ✿ **What is the purpose of a bookmark?**
- ✿ A bookmark is a web browser feature **used to save a web site's URL address for future reference**. Bookmarks save user and browser time, which is especially useful for Web pages with long URLs or accessing a specific part of the site that might not be the homepage for the site.
- ✿ **What are bookmarks made out of?**  
**Cardstock** is of the most widely available and easiest materials for making bookmarks. However, bookmarks are more popular with sewing techniques including binca.

## 2. Artist information – Micha Bulter

### Who is Tina Leahey?

Micha Bulter is a free lance craft artist from Norwisch in the UK who sells her work online. She has a page on Etsy where she takes commissions. Her work involves accessorises with embroidery and cross stitch. Her most successful work is binca bookmarks.

Her work involves a variety of embellishment and hand sewing techniques. She uses natural fabrics such as binca. Cotton Binca Fabric is **composed of 100% cotton** and is 50cm wide. Cotton Binca is a superior quality embroidery fabric suitable for creating a wide range of embroidery and cross stitch designs.

