















**Stafford Manor**  
High School

## **Year 8 Spring Term 2**

### **Core Knowledge**

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



## 1. What are the Art Movements?

- |                   |                 |
|-------------------|-----------------|
| • Art Deco        | • Bauhaus       |
| • Art Nouveau     | • Memphis Group |
| • Arts and Crafts | • Modernism     |
| • Post Modernism  | • Pop Art       |

## 2. What are Natural Forms?

- Natural forms refer to the shapes, patterns, and structures found in the natural world. They encompass a wide range of elements, including plants, animals, geological formations, and other phenomena shaped by natural processes. Here are some examples of natural forms: Plants, Animals, minerals and crystals, landscapes and the weather.

## 3. Why was Gaudi inspired by Natural Forms?

- Antoni Gaudí's inspiration from natural forms was deeply rooted in his personal philosophy, artistic vision, and cultural context. Several factors contributed to Gaudí's fascination with nature: Spiritual connection, observational studies, structural efficiency and artistic impression.

## 4. Working with Clay.

- Working with clay can be a rewarding and versatile artistic experience. Here are some key facts to keep in mind when working with clay: the different types of clay that can be used, the preparation before working with clay, the different kind of tools to use, different techniques, the drying, glazing and firing process of clay.

## 5. Key Word Definitions:

- **Blending:** Mixing colours or tones smoothly.
- **Clay:** A malleable material used in sculpting and pottery.
- **Collage:** Artwork created by assembling various materials.
- **Depth:** The illusion of distance or three-dimensionality.
- **Focal Point:** The main area of interest in an artwork.
- **Form:** A three-dimensional representation of an object.
- **Glaze:** A liquid finish applied to ceramics before firing.
- **Kiln:** An oven for firing clay and pottery.
- **Sketching Pencils:** Pencils for drawing and sketching.
- **Slab:** A flat, rolled-out piece of clay for sculpting.
- **Texture:** The visual or tactile quality of a surface.

# DESIGN TECHNOLOGY

## 1. What are the 6R's?

- ❖ **Reduce, Reuse, Recycle, Repair, Rethink, and Refuse**

## 2. Who are Aldo Rossi and Sir Norman Foster?

- ❖ **Aldo Rossi (1931–1997):** Influential Italian architect known for Neorationalism; notable works include San Cataldo Cemetery and Teatro del Mondo.



- ❖ **Sir Norman Foster (born 1935):** Leading British architect, founder of Foster + Partners; known for innovative and sustainable designs like "The Gherkin" and the Millau Viaduct.

## 3. Key Word Definitions:

- ❖ **Architect:** Designs buildings and structures.
- ❖ **Architecture:** Art and science of building design.
- ❖ **CAD/CAM:** Computer tools for design and manufacturing.
- ❖ **Composite:** Material from combining different substances.
- ❖ **Enhance:** Improve or add value.
- ❖ **Function:** Purpose or intended use.
- ❖ **Hardwoods:** Strong wood from deciduous trees.
- ❖ **HIPS:** Impact-resistant polymer in manufacturing.
- ❖ **Influence:** Power to affect or change.
- ❖ **MDF:** Engineered wood often used in furniture.
- ❖ **Materials:** Substances used for making things.
- ❖ **Modify:** Make changes or alterations.
- ❖ **Polymers:** Materials like plastics with large molecules.
- ❖ **Properties:** Characteristics of materials.
- ❖ **Plywood:** Engineered wood with glued layers.
- ❖ **Smart Materials:** Respond to external stimuli.
- ❖ **Softwoods:** Softer wood from coniferous trees.
- ❖ **Thermoforming:** Heat-forming plastic sheets.
- ❖ **Thermosetting:** Materials that can't be reshaped after setting.
- ❖ **Timbers:** Wood used for construction or other purposes.

# DIGITAL COMMUNICATION



## 1. Why was writing invented?

To store information.

## 2. What symbols are used in computing?

0 and 1.

These are called binary digits.

## 3. What is ASCII?

ASCII is a coding scheme used to represent text as sequences of 0s and 1s

## 4. What is the common abbreviation for a binary digit?

Bit

## 5. How many bits does ASCII use to represent a character?

7

## 6. Why does a computer only use two symbols?

Because they are built out of switches (on and off)

## 7. What is a group of eight bits called?

Byte

## 8. What multiple do each of the following prefixes represent?

kilo: thousands

mega: millions

giga: billions

tera: trillions

## 9. Who is widely known as the 'Father of Computing'?

Alan Turing

# ENGLISH

## 1. Who does Don Pedro propose to?

- ❖ Beatrice

## 2. Who is said to be 'an ass'?

- ❖ Dogberry

## 3. What is a sonnet?

- ❖ A 14 line poem written in iambic pentameter, employing one of several rhyme schemes

## 4. What does Leonato do to punish Claudio for shaming Hero?

- ❖ He tells Claudio that Hero has died and challenges him to a duel

## 5. Which two characters write love sonnets?

- ❖ Beatrice and Benedick

## 6. Have Beatrice and Benedick courted before?

- ❖ Yes, Benedick left her.

## 7. What term best describes Dogberry's verbal comedy?

- ❖ Malapropism

# FRENCH

## 1. What does pourquoi mean?

- Why

## 2. What does quand mean?

- when

## 3. what does où mean?

- where

## 4. What does comment mean?

- how

## 5. What does qu'est ce que mean?

- What?

## 6. Two ways you can ask a question in French?

- Take a statement and raise the tone of your voice at the end
- Put 'est-ce que' in front of the statement

## 7. What does 'qui' mean ?

- who

## 8. What do quel, quelle, quels, quelles mean?

- which

## 9. What is the difference between quel, quelle, quels, quelles?

- Quel = masculine singular; quelle = feminine singular; quels = masculine plural; quelles = feminine plural

## 10. Which is correct? Le premier mai / le un mai?

- Le premier mai

## 11. What is the difference between ordinal and cardinal numbers ?

- Ordinal numbers = first / 1st, second / 2nd, third / 3rd, fourth / 4th, fifth / 5th etc
- Cardinal numbers = one / 1, two / 2, three / 3, four / 4, five / 5 etc

## 12. Which is correct? Le vingt-premier mars / le vingt-et-un mars?

- Le vingt-et-un mars. The first of the month (le premier) is the only time ordinal numbers are used in French dates

# GEOGRAPHY

## 1. What is bamboo?

- ❖ Bamboo is a type of grass that thrives in warm and wet climates.

## 2. What are the uses of bamboo?

- ❖ Fuel
- ❖ Food
- ❖ Clothing and textiles
- ❖ Musical instruments
- ❖ Paper
- ❖ Ropes
- ❖ Medicine

## 3. How bamboo is sustainable resource for the future?

- ❖ It regrows from roots when the stems are cut.
- ❖ It is extremely fast growing.
- ❖ It has many uses.
- ❖ It requires no irrigation.
- ❖ It produces more oxygen and absorbs more CO<sub>2</sub> than trees

## 4. What are the characteristics of a deciduous forest?

- ❖ Woodland ecosystem where trees lose their leaves in winter

## 5. What are large scale ecosystems called?

- ❖ Biomes

## 6. Explain the Mediterranean Biome.

- ❖ A biome that has long hot summers with little rainfall

## 7. Describe a coral reef.

- ❖ An underwater ecosystem made up of a ridge or mound of coral.

# HISTORY

## 1. Who became King after Charles II?

🚫 James II

## 2. Why did Parliament not like James II?

🚫 He was a Catholic

## 3. Who did Parliament ask to invade England and replace James II?

🚫 William and Mary

## 4. What's the Bill of Rights?

🚫 An agreement of promises William and Mary made with Parliament

## 5. When was the Battle of the Boyne?

🚫 1690

## 6. Which clan was massacred at Glencoe?

🚫 The MacDonald clan

## 7. Who ruled after William and Mary?

🚫 Queen Anne

## 8. What was the Act of Union, 1707?

🚫 England, Wales and Scotland were united with one Parliament

## 9. What was the Act of Settlement?

🚫 A law that stated that after Anne's death the throne would pass to the nearest Protestant heir

## 10. Where did King George I come from?

🚫 Hanover, a region in Germany

## 11. What was a Jacobite?

🚫 A person who supported James and wanted to remove George I

## 12. When was the first Jacobite rebellion?

🚫 1715

## 13. When was the second Jacobite rebellion?

🚫 1745

## 14. At which battle were the Jacobites wiped out?

🚫 Battle of Culloden



# MATHS

## 1. What is a polygon?

A 2D closed shape

## 2. What are parallel lines?

Equidistant lines that will never meet

## 3. What are perpendicular lines?

A straight line that makes a right angle with another line

## 4. What is an acute angle?

An angle less than 90 degrees

## 5. What is an obtuse angle?

An angle which is greater than  $90^\circ$  and less than  $180^\circ$

## 6. What is a reflex angle?

Any angle that is more than 180 degrees and less than 360 degrees

## 7. Name the 3 kinds of angle found in parallel lines

alternate, corresponding and allied

## 8. Name 6 different 3D shapes

Cube, cuboid, cylinder, sphere, cone, square based pyramid, triangular prism

## 9. What is the formula used to calculate the volume of a cuboid?

Length x base x height

## 10. What is the formula used to calculate the volume of a prism?

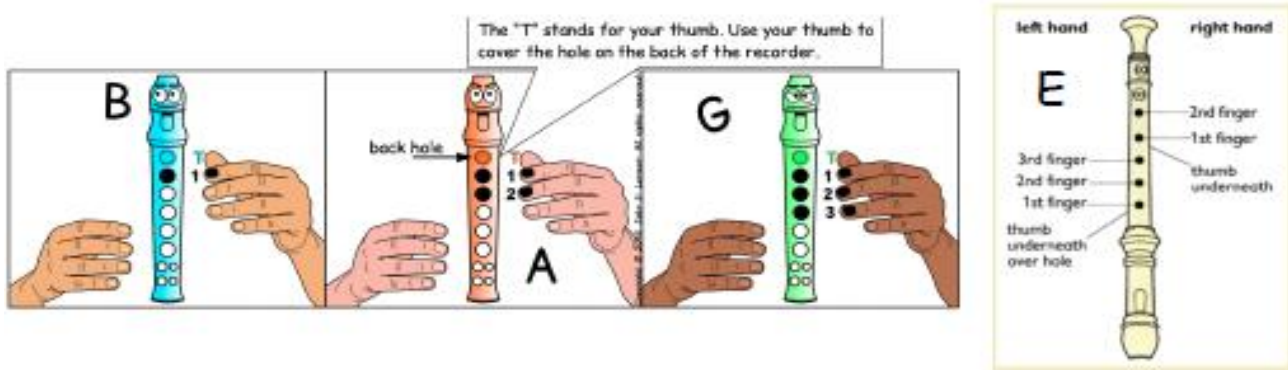
Area of cross section x depth

# PERFORMING ARTS

## 1. Facts about the recorder

- ❖ **Ancient Origins:** The recorder, with roots in the Middle Ages, gained popularity during the Renaissance and Baroque periods.
- ❖ **Woodwind Instrument:** The recorder, once made of wood but often plastic today, is a woodwind instrument.
- ❖ **Fingering System:** Recorders have eight finger holes - seven on the front and one on the back. Relatively simple compared to other woodwind instruments.
- ❖ **Range:** Recorders come in various sizes, each with its own distinct range. The most common types are soprano, alto, tenor, and bass recorders. The soprano recorder is the smallest and has the highest pitch.

## 2. Notes on the recorder



## 3. Key words for the recorder lessons

- ❖ **Pitch:** How high or low a note/song is
- ❖ **Tempo:** How fast or slow the music is
- ❖ **Duration:** How long or short the note or music is
- ❖ **Dynamics:** How loud or quiet the music is
- ❖ **Melody:** the main tune played
- ❖ **Woodwind:** The family the recorder belongs to

## 4. These are the different types of recorders

From left to right:

- ❖ **Great Bass**
- ❖ **Bass**
- ❖ **Comfort Tenor**
- ❖ **Tenor with Keys**
- ❖ **Alto**
- ❖ **Sop**
- ❖ **'Nino**
- ❖ **Alto (415Hz)**



# PHYSICAL EDUCATION

## 1. Badminton -Key Skills

### Key Skills:

**READY POSITION** – balanced position, side on, racket up and ready, on toes.

**GRIP**- shake hands with the racket sideways on. Wrap fingers round the tape.

**SERVING** –There are several types of serve – short/backhand, long ,flick. A backhand serve should land close to the service line on your opponents side of the net. The racket head must start from below the waist.

**UNDERARM CLEAR** (long serve) – This shot is played high to the back of your opponents court. Start sideways on and use a whip action with the wrist to create power.

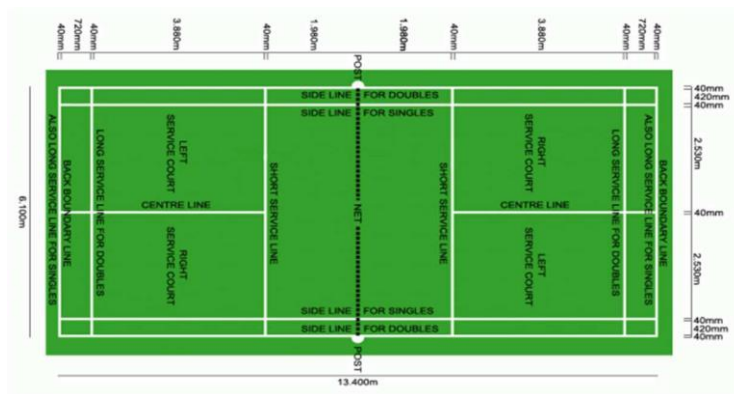
**OVERHEAD CLEAR** – Played to the back of your opponents' court and is a defensive shot. Start sideways on, racket up and behind you, focus on making contact with the shuttle in front of you.

**DROP SHOT**- a shot played with finesse to land the shuttle as close as possible to the net on your opponent's side.

## 2. Tactics

- Hitting into space – moving partner around the court
- Shot selection – selecting the right shot for the right situation
- Targeting opponents weaknesses

## 3. Rules



- Game starts with a diagonal serve- right hand side to right hand side Serve must land over the service line
- Play to 21 points – but must win by 2 clear points. A point is won every rally
- Whoever wins the point serves next
- When score is even, serve from right, when score is odd, serve from left
- Court is long and thin for singles, short and wide for doubles
- You cannot hit the net with your racket or body

# PHYSICAL EDUCATION

## 1. Fitness and the importance of the warm up/ cool down

### Three Elements of a Warm up

- **Pulse raiser** – This allows us to increase our heart rate and the amount of blood pumped around our body which carries more oxygen to the muscles we are using.
- **Stretching** – Increased blood flow to the muscles. Increased range of motion at the joints. Reduced risk of injury.
- **Increased intensive activity** – This allows the participant to take part in activities relevant to the sport/ activity to be undertaken. Increase mental preparation.
- **Purpose of a cool down** – Return heart rate to resting levels gradually. Remove LACTIC ACID from the body (reduce muscle soreness).

## 2. Effects of exercise

Effects of exercise on the body – Breathing and Heart Rate increase with intensity of exercise.

**Pulse rate** – Pulse rate (the number of times your heart beats in a minute) can be taken at either your wrist or neck. The normal rate

=70-100BPM

**How to take your pulse rate:** -

Gently place 2 fingers of your other hand on this artery.

1. Do not use your thumb, because it has its own pulse that you may feel.

Count the beats for 30 seconds, and then double the result to get the number of beats per minute.

## 3. Fitness Tests

**Key Skills: Components of Fitness/ Tests for Components of Fitness:- Muscular endurance-** The ability to use muscles repeatedly for a long period. **1 Minute Sit-Up Test &**

**1 Minute Press-Up Test**

**Cardiovascular/Aerobic Endurance** - Being able to exercise the whole body for a long period using oxygen and nutrients efficiently. **Cooper 12-Minute Test; multi stage & Harvard Step Test**

**Muscular Strength-** The amount of force that muscle produces in one contraction. **Grip Dynamometer**

**Flexibility-** The range of movement possible at a joint. **Sit and Reach Test** **Body Composition-** The

measure of how much of your body is made up of fat-free mass, vital organs and fat. **Body Mass Index**

**Agility-** The ability to change direction at speed (quickly) without losing balance. **Illinois Agility Run Test**

**Balance-** The ability to maintain centre of mass over a base of support. **Stork Balance Test**

**Co-ordination-** The smooth flow of movement needed to perform a motor task efficiently and accurately using two or more body parts together.

**Alternate Hand Wall Toss Test**

**Power-** Speed X Strength **Vertical Jump Test**

**Reaction time-** How quickly someone can react to a stimulus. **Ruler Drop Test**

**Speed-** How quickly an object or human moves from 'A' to 'B'. **30m/40m Sprint Test**

# SCIENCE:

## REPRODUCTION AND GROWTH

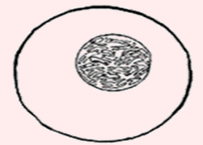
### 1. Explain the adaptations of the sperm cell

- ❖ **Head:** The head contains acrosome, which contains enzymes so that a sperm can penetrate an egg.
- ❖ **Haploid Nucleus:** The nucleus contains the genetic material for fertilisation from the male.
- ❖ **Mitochondria:** Releases energy needed for the sperm to swim and fertilise the egg.
- ❖ **Tail:** The tail enables the sperm to swim



### 2. Explain the adaptations of the egg cell

- ❖ **Cytoplasm:** The cytoplasm contains nutrients for the growth of the early embryo.
- ❖ **Haploid Nucleus:** The haploid nucleus contains the genetic material for fertilisation.
- ❖ **Cell Membrane:** The cell membrane changes after fertilisation by a single sperm so that no more sperm can enter.
- ❖ **Mitochondria:** The mitochondria provide energy needed for fertilisation.



### 3. Describe the stages of the menstrual cycle

- ❖ **Days 1-5: Menstruation:** The lining of the uterus breaks down.
- ❖ **Days 6-13: The Uterus Thickens:** The lining of the uterus begins to re-grow and an egg cell starts to mature.
- ❖ **Day 14: Ovulation:** The mature egg cell is released from the ovary (**ovulation**) and moves towards the uterus.
- ❖ **Days 15-28: Lining Maintained:** The thickness of the uterus lining is maintained until fertilisation occurs. If it does not occur, the cycle repeats.

### 4. Describe the role of hormones in the menstrual cycle

- ❖ **Follicle stimulating hormone (FSH)** causes the maturation of an egg in the ovary.
- ❖ **Luteinising hormone (LH)** stimulates the release of the egg.
- ❖ **Oestrogen** is involved in repairing and thickening the uterus lining.
- ❖ **Progesterone** maintains the lining of the uterus.

# SCIENCE:

## METALS AND NON-METALS

### 1. State the main physical properties of metals

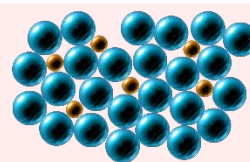
- ❖ **High** Melting Points and Boiling Points
- ❖ **Good** conductors of heat and electricity
- ❖ **Malleable**
- ❖ **Ductile**
- ❖ **Shiny**

### 2. Describe what malleable, ductile and brittle mean

- ❖ **Malleable**: Can be hammered into shape
- ❖ **Ductile**: Can be stretched into wires
- ❖ **Brittle**: Shatters (breaks) easily

### 3. Describe what an alloy is

- ❖ A metal made stronger by combining two or more elements with **different sized particles**



### 4. Describe the test for hydrogen

- ❖ Add a **lit splint** into the gas...
- ❖ ...and you will hear a **squeaky pop** (if hydrogen is present).

### 5. Describe how to extract gold

- ❖ **Dig** out of the ground.
- ❖ ...because the metal **does not react** (is found uncombined)

### 6. Describe how to extract iron

- ❖ **Heat** with carbon
- ❖ ...because iron is **less reactive** than carbon.
- ❖ ...and it is **cheaper** than electrolysis.

### 7. Describe how to extract aluminium

- ❖ **Electrolysis**
- ❖ ... because aluminium is more reactive than carbon.

### 8. Why is it important to recycle?

- ❖ **Conserves Earth's Natural resources.**
- ❖ We don't have to **mine** for more, meaning:
  - Less **noise** / **visual** / **dust** pollution
  - Less **animals'** habitats damaged

### 9. Explain how to dispose of plastics

- ❖ **Recycle**: Conserves Earth's natural resources **but** takes time and money.
- ❖ **Burn it**: Quick **but** can produce toxic gases or greenhouse gases.
- ❖ **Bury it in landfills**: Quick **but** landfills fill up because they are non-biodegradable (don't break down).



### 1. Features of a **healthy** relationship include:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>Trust</li><li>Communication</li><li>Support</li><li>Enjoyment</li><li>Attraction</li></ul> | <ul style="list-style-type: none"><li>Affection</li><li>Boundaries respected</li><li>Safety</li><li>Independence</li></ul> |
|--|--|

### 2. Features of an **unhealthy** relationship include:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>An imbalance in power</li><li>Arguments over small things</li><li>Keeping secrets from each other</li><li>Never spending time apart</li></ul> | <ul style="list-style-type: none"><li>Talking over each other</li><li>Keeping the relationship a secret</li><li>Constant communication</li></ul> |
|---|--|

### 3. Strategies to deal with conflict are?

- Cool off and take a moment before something is said you may regret.
- Listen to what the person has to say
- Try to compromise
- Confront the cause of the issue
- Get advice from people outside of the conflict

### 4. What does **LGBTQ+** mean?

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>L = Lesbian</li><li>G = Gay</li><li>B = Bisexual</li></ul> | <ul style="list-style-type: none"><li>T = Transgender</li><li>Q = Queer or questioning</li><li>+ = Many more</li></ul> |
|--|--|

### 5. The purpose of contraception is? Include examples

- Contraception should be used to prevent the spread of sexually transmitted infections and unwanted pregnancy.
- Examples include; condom, contraceptive pill, implant, IUD or Coil, Vasectomy

### 6. What are the four phases of the menstrual cycle and how long does it last?

- Menstrual Cycle Phase
- Follicular Phase
- Ovulation Phase
- Luteal Phase
- 28 Days

# 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 Norwish 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.

