


















Stafford Manor
High School

Year 9 Autumn Term 1

Core Knowledge

-  Art
-  Biology
-  Chemistry
-  Computing
-  Design Technology (DT)
-  English
-  French
-  Geography
-  History
-  Maths
-  Performing Arts
-  Physical Education (PE)
-  Physics
-  SEL
-  Textiles



AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. What is a collage?

A subject collage is like a themed picture made by sticking together different stuff like photos, magazine cutouts, fabric, and paper. You pick these things and arrange them to show info or tell a story about the theme you've chosen.

2. What is a Collection?

A collection is like a bunch of things grouped together because they're related in some way. Collections can be big or small, and they can include all kinds of stuff. Here are a couple of examples:

1. Art Collections: These are groups of artworks like paintings, sculptures, and drawings, collected for their beauty or historical importance.

2. Book Collections: This is when people gather books on a certain topic or by a certain author. Some collectors look for rare or special editions.

3. Explore the artist, John Dilnot.

John Dilnot is an artist who loves collections. He was born in Kent and studied graphic design in Canterbury before moving to London to study fine art. Now he lives in East Sussex and creates paintings, prints, and limited-edition books.



4. What is a Monoprint?

A monoprint is a unique printmaking technique, crafting one-of-a-kind prints unlike methods that produce multiple copies from a single plate or stone. Each monoprint is distinct and cannot be precisely duplicated.

- 1. Ink Application:** Ink or paint is applied to the surface through brushing, rolling, or dabbing, allowing for multiple colors and layered effects.
- 2. Image Creation:** The artist manipulates the inked surface using various tools and techniques like drawing, pressing objects, or employing stencils to achieve the desired image.
- 3. Transfer:** A sheet of paper is placed over the inked surface and evenly pressed, transferring the image onto the paper using a press or by hand.

BIOLOGY

AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

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?

Animals	Plants	Fungi	Prokaryotes	Protista
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8. What are the 5 vertebrate groups?

- Vertebrates are animals that have a backbone.

Mammals	Reptiles	Fish	Amphibians	Birds
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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.

CHEMISTRY

AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. Describe what happened to water vapour in the early atmosphere

- ✦ It formed the **oceans** when the Earth **cooled**.
- ✦ Water vapour **condensed**.

2. Describe the three ways that carbon dioxide levels decreased

- ✦ **Dissolved** into the oceans.
- ✦ **Photosynthesis**: **Plants** turned carbon dioxide into oxygen.
- ✦ **Trapped** in shells / sedimentary rock.

3. Identify uses for each fraction of crude oil

- ✦ **Gases**: Heating and cooking
- ✦ **Petrol**: Fuel for cars
- ✦ **Kerosene**: Fuel for aircraft
- ✦ **Diesel**: Fuel for cars and trains
- ✦ **Fuel Oil**: Fuel for ships and power stations
- ✦ **Bitumen**: Surfacing roads and roofs

4. Describe the importance of recycling

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

5. Identify the products of complete combustion

- ✦ Complete combustion occurs when there is **lots** of oxygen.
- ✦ Complete combustion always produces **carbon dioxide** & **water**.

6. Describe why carbon monoxide is dangerous

- ✦ It is a **toxic gas**.
- ✦ It **stops oxygen** from getting to the cells so **respiration** can't occur.

7. State what a greenhouse gas is

- ✦ A gas that **traps heat** in the atmosphere.
- ✦ Examples: Carbon dioxide and methane.

8. Describe the effects of acid rain

- ✦ **Weathers** statues.
- ✦ **Corrodes** metal.
- ✦ **Acidifies** water so that fish / plants can't grow.
- ✦ **Damages** plants so that they can't photosynthesise.

COMPUTING

AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. What is decomposition?

Breaking a problem down into smaller, more manageable chunks.

2. Give an example of success criteria for the Tappy Tap app

The welcome screen must show logo and instructions on how to play

Or

The game must last 15 seconds before automatically moving to the final score screen.

Or

The final score must have a button to allow the user to return to the welcome screen.

3. What is event driven programming?

Where the flow of the program is controlled by events.

4. Give an example of an event

Mouse click

Touch screen press

Hovering over a picture

Voice input

5. Give an example of user input in an app

Text box (allowing the user to input a string of text)

Checkbox (allowing the user to indicate yes or no)

Button (linked to an event that will capture and process the data)

DESIGN TECHNOLOGY

AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. What are some examples of Papers and Boards

- ❖ Matt bleached white paper
- ❖ Coloured matt pastel paper
- ❖ Glossy paper
- ❖ White card
- ❖ Corrugated Card
- ❖ Foam core board

2. How is paper made?



3. Graphical communication and Marketing

- ❖ It is crucial when advertising a product that some simple points are observed: Things should stand out, not be too wordy, be clear and easy to read, communicate effectively the information that it contains, remain in the memory after seeing it.

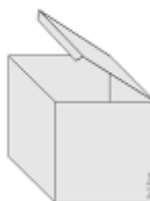
4. What are some Tier 3 terms I need to know?

- ❖ **Typography** – different types of font/writing styles
- ❖ **Graphics** – the study of communication through visual means
- ❖ **Rendering** – colouring in
- ❖ **Marketing** – the process of advertising
- ❖ **Properties** – characteristics that the materials have
- ❖ **Thermal** – to do with temperature

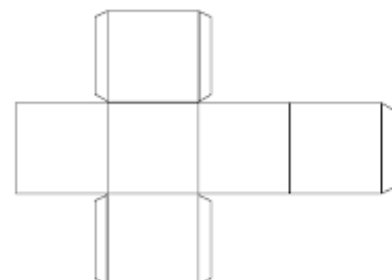
5. What is a net development?

- ❖ Where a package is opened to its flat 2D state

CUBE PACKAGING



CUBE NET / DEVELOPMENT



1. What are the themes in Blake's poem 'The Chimney Sweeper'?

- ❖ Innocence & Social Injustice: The speaker contrasts the innocence of children with the corruption of adults.
- ❖ The power of imagination: The sweeper's ability to imagine a better life helps him to endure his difficult circumstances.

2. What is a trope?

- ❖ a significant or recurrent theme - a motif.

3. What was 'The Enlightenment' known for?

- ❖ It was an intellectual movement in the eighteenth century that emphasized reason and science.

4. What are the themes in The Tell-Tale Heart?

- ❖ Madness and sanity: the narrator's attempt to prove his sanity as he explains his meticulous plans for killing the old man.
- ❖ The pressure of guilt: the narrator's guilt manifests in the sound of the dead man's beating heart.
- ❖ The passage of time: the recurring references to time emphasize the narrator's obsession and its effect on his psyche.

5. What is a soliloquy?

- ❖ One character, alone on stage, sharing their inner thoughts and feelings.

6. What do you understand by the terms 'WHAT', 'HOW' and 'WHY'?

- ❖ Analysis: WHAT: What is the POINT you want to make? HOW: How has the writer expressed their ideas? What words/ phrases/ techniques or structural features has the writer used to express this idea? Include a quotation from the text. WHY: Why do you think the writer has expressed their ideas in this way? What is the writer's intention?

7. What is a patriarchal society?

- ❖ Women were considered inferior to men in Elizabethan England, despite a powerful female on the throne defending her country against threats from the Spanish Armada and even courtiers within the English court. This patriarchal society was also the case in much of Europe

FRENCH

AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. What is the perfect tense? 3 points

- It is a past tense; a completed action; a compound tense (2 verbs)

2. What is the first verb called?

- The auxiliary verb

3. What is the second verb called?

- The past participle

4. What verb is usually used (in its present tense form) as the auxiliary verb?

- avoir

5. What are the regular past participle endings for er, ir and re verbs?

- er = é ir = i re = u (joué; fini; rendu)

6. What are the past participles for boire (to drink), lire (to read), voir (to see)?

- bu, lu, vu

7. What is the past participle for faire (to do, to make)?

- fait

GEOGRAPHY

AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. What do we call it when we see changes in climate as a result of natural or human causes?

🌱 Climate Change

2. What is the term used to explain human increasing the amounts of toxic gases in the atmosphere?

🌱 Enhanced greenhouse effect

3. Who is the Serbian physicist who came up with orbital changes that cause climate change?

🌱 Milutin Milankovitch

4. What natural cause of climate change causes the earth to cool?

🌱 Volcanic activity

5. What type of agriculture releases methane into the atmosphere?

🌱 Cattle farming (cows)

6. What is the correct term for planting trees?

🌱 Afforestation

HISTORY

AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. What plant does sugar come from?

- ☒ Sugar cane

2. Which religion helped sugar to spread west?

- ☒ Islam

3. Where did Europeans start to grow sugar at the end of the fifteenth century?

- ☒ Madeira
- ☒ The Canary Islands
- ☒ Cape Verde
- ☒ Sao Tome

4. Which European countries first used West African slaves on sugar plantations?

- ☒ Spain and Portugal

5. In the triangular trade, what was the journey from Africa to the West Indies and America known as?

- ☒ The Middle Passage

6. Which group of people in Britain started to buy sugar because of the triangular trade?

- ☒ The middle classes

7. What is an abolitionist?

- ☒ Someone who wanted to ban slavery

8. Who was Olaudah Equiano?

- ☒ He was an anti-slavery campaigner

9. When did Britain ban taking part in the transatlantic slave trade?

- ☒ 1807

10. When was slavery completely abolished throughout the British Empire?

- ☒ 1833

1. Key word definitions:

- 🔸 **Ascending:** Ordering from smallest to largest.
- 🔸 **Descending:** Ordering from largest to smallest.
- 🔸 **Spread:** How close together items are.
- 🔸 **Class:** A group of data e.g. $15 < x \leq 20$

2. What are the three types of average?

Median: The middle of an ordered list of items.

Mode: The most common item in a list.

Mean: Add the numbers, then divide by how many there are.

3. What is the range?

The range shows how spread out the data is. Calculate the range by subtracting the smallest number from the biggest.

4. How do you find the mean from a table of data?

- 🔸 If the data is grouped, find a midpoint.
- 🔸 Multiply each midpoint by the frequency.
- 🔸 Add these values together.
- 🔸 Divide this answer by the sum of the frequency

5. How do you find the median from a table of data?

Add one to the total frequency then divide by two.

Count through the frequencies to find this value.

This group contains the median.

6. What is the hypotenuse?

The longest side in a right angled triangle.

7. How can you find where the hypotenuse is?

The hypotenuse is opposite the right angle.

8. What is Pythagoras' Theorem?

The sum of the squares of the two smaller sides is equal to the square of the hypotenuse.

PERFORMING ARTS

AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. Facts about a singer songwriter

Singer-songwriters are popular musicians who **write** and **perform** their own works.

They often accompany themselves on acoustic guitar or piano.

Singer-songwriters compose the music, write the lyrics, sing, play the musical instruments, and often manage themselves.

For them, the song is more important than their performance of it.

The term became popular in the **1960s**. It referred to a specific type of performers who wrote certain kinds of music and lyrics.

2. Name some famous singer-songwriters:

- | | |
|---------------------------------|-------------------|
| ❖ Damon Albarn | ❖ Sarah Brightman |
| ❖ Marc Almond | ❖ Mick Jagger |
| ❖ Badly Drawn Boy (Damon Gough) | ❖ Elton John |
| ❖ Gary Barlow | ❖ Zayn Malik |
| ❖ Natasha Bedingfield | ❖ Steve Marriott |
| ❖ James Blunt | ❖ Brian May |
| ❖ David Bowie | ❖ Freddie Mercury |
| | ❖ George Michael |

3. What is the role of a composer?

A composer writes **musical compositions**.

Composers use creativity and knowledge of music theory to write and transcribe musical scores.

Scores can be for television, films, computer games or stage productions.

A composer will reflect moods within the music which have been specified by directors or producers.

PHYSICS

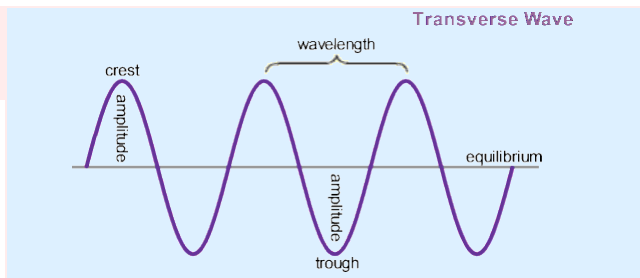
AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. What are waves?

- Waves **transfer energy** from one place to another, caused by **vibrations**. Waves **do not** transfer matter.
- Waves travel *through* a material, such as **air**, or a vacuum, such as **space**.

2. How do you draw transverse waves?

- The **vibrations** in transverse waves are at **right angles** to the **direction that the energy travels**.



3. How do you draw ray diagrams?

- Always use a **ruler** because light travels in straight lines.
- The light travels *from* the **source** to the **object** and then to the **receiver** (eye).



4. What is reflection?

- When light reaches a mirror, it **reflects** off the surface of the mirror.
- The **incidence** ray shows the light going **towards** the mirror.
- The **reflected** ray shows the light going **away** from the mirror.
- The **angle of incidence = the angle of reflection**

5. What is refraction?

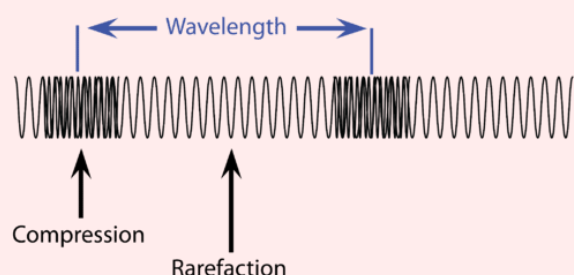
- Refraction is caused because **light changes speed** as it crosses the boundary between two materials- the interface.
- Air to water: Light **slows** and bends **towards** the normal.
- Water to air: Light **speeds up** & bends **away** from the normal.

6. What is the visible spectrum of light?

Red	Orange	Yellow	Green	Blue	Indigo	Violet
Richard	Of	York	Gave	Battle	In	Vain

7. What are longitudinal waves?

- The **vibrations** in longitudinal waves are **parallel** to the **direction that the energy travels**.





AUTUMN TERM 1 (CONTENT FROM LAST YEAR - SUMMER TERM 2)

1. What is an **aspiration**?

- What an individual would like to achieve in their life.

2. What makes a **good life**?

- | | |
|--|---|
| <ul style="list-style-type: none">ChallengesEducating yourselfBeing comfortable to share a variety of emotionsTo have aspirations | <ul style="list-style-type: none">Supportive relationshipsHelping peopleBe financially stableHobbies and Interests |
|--|---|

3. When looking at possible **career paths** what information should you research about?

- | | |
|---|--|
| <ul style="list-style-type: none">Duties of the job roleQualifications neededSalary | <ul style="list-style-type: none">Working hoursDay to day tasksSkills and knowledge needed |
|---|--|

4. What is **self-esteem**?

- An individual's overall emotional view of their worth.

5. How can you **boost** your self-esteem?

- Take care of basic physical needs
- Spend time with the people you care about
- Accept peoples compliments and kind words
- Treat yourself to something nice and help others when you can
- Spend more time doing things you enjoy
- Don't be too hard on yourself – Forgive your mistakes!
- Positive self-talk in the mirror
- Be true to yourself and your values
- Reward your success always be proud of them no matter how small
- Ignore those that put you down and surround yourself with positive influences.

6. What is **Labour Market Information**?

- Labour Market Information (LMI) is information about what is happening in a labour market. LMI tends to focus on the industries that are growing and declining. It provides information about the types and levels of jobs and the skills required and whether they are increasing or decreasing.

