# YEAR 7 REVISION TOPICS

#### **BIOLOGY**

CELLS		
•	Basic unit of life. Animal and Plant cells, structure, similarities and differences and functioning of	
	all parts.	
•	Light microscope - Parts and Use	
•	Life Processes	
•	Cell specialisation	
•	Cell organisation -Tissue-Organ- Organ System	
FLOWERING PLANT REPRODUCTION		
•	Flower structure and functions of parts	
•	Pollination -Insect/Wind comparison	
•	Fertilisation	
•	Seeds - Structure and Dispersal	
•	Fruits - Dispersal agents - adaptations	
VARIA	TION & CLASSIFICATION	
•	Genetic and Environmental Variation	
•	Reasons for Classification	
•	Binomial system	
•	Kingdoms - classification features	
•	Phylum Arthropod classification features and those of its classes, including:-	
•	Class Insect	
•	Phylum Vertebrate - classification features	
•	Classification features of the main plant groups	
FITNES	S & HEALTH (part 1) Lungs, Breathing and Smoking	
•	Lung structure and function	
•	Gas Exchange - Alveoli - structure, function and adaptations	

### **CHEMISTRY**

The following topics are to be assessed and additional information on each can be found in the RGS Chemistry specification as shared with you via TEAMS/Onenote and on Sharepoint:

- Introduction and Safety
- Particle Theory
- Elements, Mixtures and Compounds
- Solubility and Separation Techniques

#### **ENGLISH**

#### **Romantic Poetry**

Y7 students will cover four Romantic poems in preparation for their End of Year exam. They will cover the key historical context of the time period and relevant information about the poets. They will critically analyse each poem and will need to feel confident in exploring the language, form and structure. Just ONE poem will appear in the end of year exam and students will need to explore the given theme in the question presenting a strong literary argument with a critical academic register and a range of ideas.

The key poems studied are:

- 'The Tyger' by William Blake
- 'Ozymandias' by Percy Bysshe Shelley
- 'London' by William Blake
- 'Composed Upon Westminster Bridge' by William Wordsworth

#### FRENCH

- Greetings
- Personal details (name, age, etc.)
- Classroom objects
- Town and where you live (places and directions)
- Family
- House (rooms and furniture)
- Numbers 1-100
- Animals
- Colours
- Festivals
- Presents
- Clothes
- Descriptions
- Weather
- Activities
- Months / Days/ Seasons
- Time
- Likes and dislikes
- Etre, Avoir, Aller, ER verbs

### **GEOGRAPHY**

- What is Geography and UK places
- Mapwork
- Settlement
- Coasts

These are the general topics that will be examined, but please note that more detailed guidance will be given closer to the exams.

### **HISTORY**

Please revise the big enquiry questions you have been studying since September 2021:

- Why is 1066 one of the most famous dates in English history?
- Who had power: the Crown or the Church?
- Does King John deserve his terrible reputation?
- Was it all mud, muck and misery for medieval peasants?
- What happened when two worlds clashed? European and Native American encounters.

### <u>MATHS</u>

Content – Half term 1	Topics
Number Properties	Recognise and produce factors and multiples of numbers
	Deduce the HCF and LCM of numbers
	Evaluate any power or any root of a number
Directed Numbers	Understand the properties of positive and negative numbers
	Calculate all four operations using a mixture of positive and negative numbers
Order of Operations	Correctly apply the rules of BIDMAS in multi-term arithmetic problems
Written Arithmetic	Be fluent in written methods for all four operations
	Use strategies to simplify use of operations
	Apply these methods in contextual problems
Rounding and	Round to a place value, decimal places and significant figures
Estimation	Estimate arithmetic by rounding terms to 1 significant figure

Content – Half term 2	Topics
Sequences	Continue a sequence based on a term-to-term rule
	Work out missing terms using existing terms in a sequence
	Express a position to term rule algebraically (finding linear nth term)
	Recognise and understand other types of sequences such as Fibonacci
Perimeter, Area and	Calculate perimeters of number of regular and compound shapes
Volume	Calculate areas of rectangles, triangles, parallelograms, trapezia and
	compound shapes containing them.
	Calculate the surface area of a cuboid
	Calculate the volume of a cuboid
Shape Properties	Know geometric terms such as parallel, equal, isosceles
	Recognise and sort 2D shapes based on these geometric terms
	Know 3D shape terms including edge, vertex, and face
	Name and sort 3D shapes based on these terms
	Visualise and draw nets of 3D shapes
Statistics	Differentiate between Qualitative and Quantitative data and Discrete and
	Continuous
	Calculate and use averages including mode, median, mean and range

Content – Half term 3	Topics
Algebra 1	Simplify algebraic expressions based on the principle of like terms
	Substitute values in algebraic equations and formulae
	Interpret contextual problems in algebraic terms
Fractions	Recognise and produce equivalent fractions
	Compare the sizes of different fractions
	Convert between improper fractions and mixed numbers
	Apply the four operations on fractions
Decimals	Convert between common fractions and decimals
	Order decimals and fractions
	Apply the four operations on fractions

Content – Half term 4	Topics
Probability	Quantify a probability
	Calculate the probability of a combined event
	Calculate an experimental probability
Algebra 2	Solve single step equations
	Solve multi-step equations
	Solve equations where the variable is initially on both sides of an equation
	Set up and solve and equations from context
Angles	Measure and draw angles
	Use angle facts to explain and calculate other angles
	Understand the properties of angles in triangles and quadrilaterals

Content – Half term 5	Topics
Graphs	Read and plot coordinates in 4 Quadrants
	Plot and draw lines on graphs from an algebraic relationship
	Recognise properties of graphs such as y = ax and x +/- y = a
	Use graphs in context
Transformations	Recognise different symmetries in shapes
	Reflect shapes in different mirror lines
	Rotate shapes around a point
	Tessellate shapes on a plane
Ratio	Understand how a ratio represents parts of a whole
	Simplify ratios
	Use ratios in context

## **PHYSICS**

ΤΟΡΙϹ	CONTENT
STATIC AND CURRENT ELECTRICITY	Static electricity
	Conductors and insulators
	Current in series and parallel circuits
FORCES AND MOTION	Types of forces
	Mass and weight
	Force diagrams
	Speed distance time equations
	Distance time graphs
	Balanced and unbalanced forces
SPACE	The solar system
	Phases of the Moon, eclipses
	Night, day and seasons