THE HARMONY TRUST

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Westwood Academy

Year 5 Long term plan

Subject/Term	Autumn Term		Spring Term		Summer Term	
Mathematics	In Maths, we follow the White Rose Curriculum, which is a small step, mastery-based scheme of learning. For spring and summer terms, the small steps are taken from the previous year's scheme of work and will be updated to the present year when made available by White Rose.					
	Place value Step 1 Roman numerals to 1,000 Step 2 Numbers to 10,000 Step 3 Numbers to 100,000 Step 4 Numbers to 1,000,000 Step 5 Read and write numbers to 1,000,000 Step 6 Powers of 10 Step 7 10/100/1,000/10,000/100,000 more or less Step 8 Partition numbers to 1,000,000 Step 9 Number line to 1,000,000 Step 10 Compare and order numbers to 100,000 Step 11 Compare and order numbers to 1,000,000 Step 12 Round to the nearest 10, 100 or 1,000 Step 13 Round within 100,000 Step 14 Round within 1,000,000 **Addition and Subtraction** Step 1 Mental strategies Step 2 Add whole numbers with more than four digits Step 3 Subtract whole numbers with more than four digits Step 4 Round to check answers Step 5 Inverse operations (addition and subtraction) Step 6 Multi-step addition and subtraction problems Step 7 Compare calculations Step 8 Find missing numbers	**Multiplication and Division** Step 1 Multiples Step 2 Common multiples Step 3 Factors Step 4 Common factors Step 5 Prime numbers Step 6 Square numbers Step 7 Cube numbers Step 8 Multiply by 10, 100, and 1,000 Step 9 Divide by 10, 100 and 1,000 Step 10 Multiples of 10, 100 and 1,000 **Fractions** Step 1 Find fractions equivalent to a unit fraction Step 2 Find fractions equivalent to a non-unit fraction Step 3 Recognise equivalent fractions Step 4 Convert improper fractions to mixed numbers Step 5 Convert mixed numbers to improper fractions Step 6 Compare fractions less than 1 Step 7 Order fractions less than 1 Step 8 Compare and order fractions greater than 1 Step 9 Add and subtract fractions with the same denominator Step 10 Add fractions within 1 Step 11 Add fractions with total greater than 1 Step 12 Add to a mixed number Step 13 Add two mixed numbers Step 14 Subtract fractions Step 15 Subtract from a mixed number Step 16 Subtract from a mixed number – Breaking the whole Step 17 Subtract two mixed numbers	**Multiplication and division** Step 1 Multiply up to a 4-digit number by a 1-digit number Step 2 Multiply a 2-digit number by a 2-digit number (area model) Step 3 Multiply a 2-digit number by a 2-digit number Step 4 Multiply a 3-digit number by a 2-digit number Step 5 Multiply a 4-digit number by a 2-digit number Step 6 Solve problems with multiplication Step 7 Short division Step 8 Divide a 4-digit number by a 1-digit number Step 9 Divide with remainders Step 10 Efficient division Step 11 Solve problems with multiplication and division **Fractions** Step 1 Multiply a unit fraction by an integer Step 2 Multiply a non-unit fraction by an integer Step 3 Multiply a mixed number by an integer Step 4 Calculate a fraction of a quantity Step 5 Fraction of an amount Step 6 Find the whole Step 7 Use fractions as operators **Decimals and percentages** Step 1 Decimals up to 2 decimal places Step 2 Equivalent fractions and decimals (tenths) Step 3 Equivalent fractions and decimals (hundredths) Step 4 Equivalent fractions and decimals Step 5 Thousandths as fractions Step 6 Thousandths as decimals Step 7 Thousandths on a place value chart Step 8 Order and compare decimals (same number of decimal places)	**Decimals and percentages** Step 9 Order and compare any decimals with up to 3 decimal places Step 10 Round to the nearest whole number Step 11 Round to 1 decimal place Step 12 Understand percentages Step 13 Percentages as fractions Step 14 Percentages as decimals Step 15 Equivalent fractions, decimals and percentages **Perimeter and area** Step 1 Perimeter of rectangles Step 2 Perimeter of rectilinear shapes Step 3 Perimeter of polygons Step 4 Area of rectangles Step 5 Area of compound shapes Step 6 Estimate area **Statistics** Step 1 Draw line graphs Step 2 Read and interpret line graphs Step 3 Read and interpret tables Step 4 Two-way tables Step 5 Read and interpret timetables	**Shape** Step 1 Understand and use degrees Step 2 Classify angles Step 3 Estimate angles Step 4 Measure angles up to 180° Step 5 Draw lines and angles accurately Step 6 Calculate angles around a point Step 7 Calculate angles on a straight line Step 8 Lengths and angles in shapes Position and direction Step 9 Regular and irregular polygons Step 10 3-D shapes **Position and direction** Step 1 Read and plot coordinates Step 2 Problem solving with coordinates Step 3 Translation Step 4 Translation with coordinates Step 5 Lines of symmetry Step 6 Reflection in horizontal and vertical lines **Decimals** Step 1 Use known facts to add and subtract decimals within 1 Step 2 Complements to 1 Step 3 Add and subtract decimals across 1 Step 4 Add decimals with the same number of decimal places Step 5 Subtract decimals with the same number of decimal places Step 6 Add decimals with different numbers of decimal places Step 7 Subtract decimals with different numbers of decimal places Step 8 Efficient strategies for adding and subtracting decimals Step 9 Decimal sequences Step 10 Multiply by 10, 100 and 1,000 Step 11 Divide by 10, 100 and 1,000 Step 12 Multiply and divide decimals – missing values	**Negative numbers** Step 1 Understand negative numbers Step 2 Count through zero in 1s Step 3 Count through zero in multiples Step 4 Compare and order negative numbers Step 5 Find the difference **Converting units** Step 1 Kilograms and kilometres Step 2 Millimetres and millilitres Step 3 Convert units of length Step 4 Convert between metric and imperial units Step 5 Convert units of time Step 6 Calculate with timetables **Volume** Step 1 Cubic centimetres Step 2 Compare volume Step 3 Estimate volume Step 4 Estimate capacity
English	In English, we teach over a two-week cycle, using quality texts to inspire our writing.					
	Book Focus: Romeo and Juliet **Week 1** – Creative writing **1st Cycle** Setting description (cold write) **Diary** (extended write) **2nd Cycle** Informal letter (cold write) **Newspaper** (extended write) **3rd Cycle**	**Book Focus: The Pirate Queen (Terry Deary)** **1st Cycle** Character description (cold write) **Narrative retell** (extended write) **2nd Cycle** Poetry (cold write) **Play script** of unknown scene (extended write) **3rd Cycle** Persuasive leaflet/poster (cold write)	**Book Focus: By the river** **1st Cycle -** Performance poetry (cold write) **Setting description** of Riverbank 1 (extended write) **Book Focus: The Wind in the Willows** **2nd Cycle** Character description (cold write) **Letter** (extended write) **3rd Cycle** Formal letter (cold write)	**Book Focus: Ferdinand the bull** **1st cycle** Advertising poster (cold write) **Narrative retell** (extended write) **2nd cycle** Speech (cold write) **Balanced argument** (extended write) **Book Focus: Spain: Unpacked** **3rd cycle** Persuasive leaflet (cold write)	**Book Focus: Oliver Twist** **1st Cycle** Instructions (cold write) **Comparative setting description** of London (extended write) **2nd Cycle** Leaflet (cold write) **Persuasive letter** to Queen Victoria demanding changes to law about children working (extended write).	**Book Focus: Frankenstein** **1st Cycle** Poster (cold write) **Narrative** based on Frankenstein but own characters and setting (extended write) **2nd Cycle** Explanation text (cold write) **Instructions** (Extended write) **3rd Cycle** Fact file (cold write)

	Poetry (cold write) **Narrative** (extended write)	**Non-Chronological report** (extended write)	**Newspaper** (extended write)	**Non- chronological report** (extended write)	**3rd Cycle** Diary (cold write) **Poetry** (extended write)	**Biography** of self in third person (extended write)
Science	**Forces (Physics)** Having previously studied forces and magnets in Year 3, we return to the topic of forces by now looking at them in more detail. This involves looking at concepts such as friction, air resistance and water resistance. We also look at the force of gravity within this topic which we return to look at in greater detail during our Earth & space topic next term.	**Earth & Space (Physics)** In this topic, Year 5 look at Earth, space and the planets. We study the concept of gravity, why the planets orbit the sun and how this affects daytime, shadows and seasons.	**Properties and changes of materials (Chemistry)** Following on from learning about changes to and properties of materials in year 4 (states of matter and reversible and irreversible changes), children learn more about properties of materials and about how we can separate mixtures of materials, using the scientific processes of heating and cooling.		**Plant and animal life cycles (Biology)** Studying biology in previous years, the children have looked at animals including humans in every year since Year 2. We continue to study living things and their habitats which the children have looked at in Year 4 with a focus on how they reproduce and will continue to look at in further detail in Year 6 with regards evolution.	
	Working scientifically – Taught throughout all topics in science Asking questions, setting up enquiries, making observations gathering information, recording and reporting findings, drawing conclusions pattern identification, using evidence to answer questions					
History	**Tremendous Tudors** In year 5, our pupils study The Tudor period developing the concept of chronology by placing this period on a timeline of history but also looking at key leading figures of that time and how they affected the civilisation. This period links to our English work based around William Shakespeare. Another key concept our children consider during this unit is that of religion and how the rules of religion became the rules of society.				**What the Victorians did for us?** During this term our pupils study The life of a Victorian child using historical enquiry skills looking at primary and secondary sources of information, which follows on from their work on the Tudors. We then move onto how key historical figures from that period of history have affected/changed our lives today. Using novels that were written at this time such as Oliver Twist and Frankenstein. These form a basis for our English work.	
Geography		**Voyages of Discovery** In Year 5, we look at how different cultures and civilisations have historically impacted their natural surroundings by looking at Tudor exploration. This involves looking at how factors such as trade, religion and war have affected global travel. This also involves looking at maps and people's knowledge of the world, how this has changed through time and the reasons that have affected this. This links to our English worked based around The Pirate Queen, a true based story of a real-life thorn in the English Tudor side.	**Raging Rivers** We build on the previous knowledge the children have obtained in earlier years on topics such as the River Nile and the rainforest. This builds on our physical geography skills by looking at topics including how rivers are formed, the water cycle and pollution. This forms part of our English work on Wind In the Willows. We gain first-hand experience of using the geographical skills by visiting a river and taking water samples on a trip to Castle Shaw.	**Viva Espania** In this unit, Year 5 look at more geography at a more human perspective, studying the country of Spain. Having previously looked at the continent of Europe, Year 5 now do a more detailed study of a European country before moving on to another Spanish speaking country in another continent in Year 6. This unit involves looking at features such as the culture (and links to English novel of Ferdinand), economy, cuisine and climate of the country, comparing this to other countries we have previously studied.		
Art	**Painting Miniatures** Having studied artistic skills such as sketching in Year 3 and colours in Year 4, the children are now able to apply these skills by creating self-portraits in the style of the period we are studying in history, that being the Tudors. This involves analysing Tudor portraits and replicating the style to create our own portraits.		**Printing River** In Year 4 the children researched Monet and recreated his famous work featuring a river and some waterlilies. In Year 5, the children now recreate another image of a river but using another technique and a different medium, this being poly printing. The children are given a chance to practice their skills creating poly carvings on designs created from rivers and create a multi-media artistic piece.			**Lowry** L S Lowry is an artist, whose work relates to both the Victorian topic we study in year 5 and the topic of World War II studied in Year 6. We look at how local landscapes and environments can impact artistic visions and symbolise an area or feeling.
DT		**Textiles Tudor rose**		**Spanish Omelettes**	**Textiles Rag Rugs**	

		During this term, to develop the children's DT skills gained in year two, where they sewed a beach bag, they research and produce a diagram and a detailed plan of a Tudor rose. They practise the stitches required which they then use on appropriate material to produce their final work.		Pupils study a range of methods to make Spanish omelettes and produce a detailed plan for their own version. They compare their plans with those of others and evaluate them. Selecting and using a range of cooking utensils, they follow their recipes to produce their meal, building on the hygiene and safety procedures that they learned in Year They present their food for sharing and evaluate each other's work.	During this term, children plan a design for a rag rug, developing their design skills from earlier this year. Examining the fabrics available, they choose materials according to aesthetic properties. They sort, cut and shape fabrics and experiment with ways of joining them, choosing from and using a range of tools and equipment competently.	
Computing	**Coding (Unit 5.1)** In this unit we begin by reviewing past learning of coding through use of 2 code on Purple mash. After reviewing this we move on to coding our own playable games creating, timers, point scores and the movable objects for the game.	**Databases (Unit 5.4) & Online safety (Unit 5.2)** This unit starts of by looking at online safety as we think critically about the information that I share online both about myself and others and what we would do if we were unhappy with something we saw .Furthermore we focus on safe searching online and use this to build in to our work on database. We work on how to navigate databases and then use this knowledge as a class to try and create our own class database	**Game creator (Unit 5.5)** Building upon our coding skills from autumn term we are looking at creating and designing a game. We focus upon the game level itself designing the environment (using our safe searching skills) and the obstacles for us to overcome. Once the games have been completed as a class we review each other's games completing game reviews and then publishing to purple mash.	**3D Modelling (Unit 5.6)** This unit links majorly to shape as we are focusing on 3d modelling. We create our own 3d shapes, designing each face and making a variety of containers before printing them out in net form. From there we are able to create the 3d shape from the net, really helping to consolidate our shape knowledge	**Stop motion & animation and Sphere-O** Using the Sphere-Os we are able to take our coding work and demonstrate it in a physical form as we program through various algorithms our Sphere-Os. This is done on an iPad through the Sphere-O app and the children are independently create a program using loop control blocks.	
RE	**What it means to be a Muslim** This unit focuses on the 5 pillars of Islam. Through this unit, children learn about what Muslims believe and why the pillars are practised by so many people. Also, they describe how people show devotion in Islam.	**Festivals** This unit focuses on the different festivals that are celebrated in Christianity, Islam, Judaism and Hinduism. Children make connections and compare the similarities and differences between the festivals celebrated.	**Rites of Passage** In this unit, children learn about the rites of passage for the religions studied. They explore questions such as 'what happens when we die?' and 'Do we need to get married?'.	**Inspirational people** Through this unit, children learn about people who are inspirational from the different religions and what makes them inspirational. They study people such as: Jesus, Moses, Mother Teresa and Dalai Lama.	**Christian Aid, Islamic relief and non-religious charities – can charity change the world? Why does faith make a difference? *(Christianity and Islam)*** In this unit, children learn about the importance of charities and how they make a difference in the world. They link religious beliefs and teachings to charities and think about why people try to make the world a better place.	**What are the different ways to worship? What are the similarities and differences between religions? *(Christianity, Hinduism and Islam)*** In this unit, children begin to identify and explain beliefs about worship and prayer and describe examples of ways in which people use sacred texts in worship and prayer. They reflect on and express what can be learnt from the practices of prayer and worship in different religions.
PSHE	**Rules and Responsibilities** In this unit, we revisit the rules and expectations of our academy. This involves reflecting upon who we are and our strengths, weaknesses and goals, reflecting upon ideas of fairness and the difference between want and need.	**Nutrition and Food** This unit is focused on understanding that a poor diet has risks associated such as obesity and tooth decay. This unit teaches children to plan and prepare a range of healthy meals. Also, it teaches them the importance of handwashing.	**Friendship (Apple Module 3)** This unit is focused on the importance of friendships. We look at strategies for building positive friendships and how friendships can change overtime. This unit teaches children how to recognize if a friendship is making them feel uncomfortable and unsafe (online and offline).	**Drugs, Alcohol and Tobacco** This units begins by discussing what a drug actually is, defining them and addressing the impact they can have on the body before progressing towards closer studies over the risks posed by items such as cigarettes, alcohol. This unit looks at ideas of peer pressure and how that affects consumption of certain drugs.	**Solving problems (Apple module 4)** This unit is focused around personal safety and well-being with reference to social media. This unit teaches children the importance of keeping personal information private and how they can stay safe online. It also teaches children what to do if they feel frightened or worried about something they have seen or read online.	**Health – Physical, Emotional and Mental** This unit focuses on children's physical, emotional and mental health. It teaches children about how we can look after ourselves so that we feel positive, both physically and mentally. Also, this unit teaches children about the physical and emotional changes that happen when approaching and during puberty.

Indoor PE	**Gymnastics** In Gymnastics, children will be learning how to travel and link action, roll, balance and make shapes with their bodies. They will also be using apparatus to learn how to perform different jumps. Through this unit, children will learn how to do handstands and cartwheels.	**Dance** Through this unit, children will compose individual, partner and group dances that reflect the chosen dance style. They will develop an awareness of their use of space and use their imagination and creativity in creating different movements. They will perform their dance sequences with accuracy and control.	**Dodgeball** This unit is focused on throwing, catching and travelling with a ball. Children will learn a variety of ways to dribble and pass a ball with speed and accuracy. They will learn to work in a team to develop fielding strategies to prevent the opposing team from scoring.	**Handball** Through this unit, children will develop their throwing, catching and travelling skills with a ball. They will learn how to pass a ball with speed and accuracy using techniques in a game situation. They will apply their knowledge of skills for attacking and defending.	**Orienteering** Through this unit, children will start to orientate themselves with increasing confidence and accuracy around an orienteering course. They will design an orienteering course that can be followed and offers challenge to others. They will learn how to manage an orienteering event for others to compete in using their communication skills.	**Athletics** Through this unit, children will be focusing on their running, jumping and throwing skills. They will learn how to run over hurdles with fluency, improve on techniques for jumping long distances and perform a fling throw.
Outdoor PE	**Basketball** Through this unit, children will learn how to throw, catch, pass and travel with a ball in basketball. This involves demonstrating a good awareness of space and learning how to keep and win back the possession of a ball. Children will learn different strategies to attack and defend, and then use these skills to work as a team to think ahead and create a plan to successfully play basketball.		**Football** Through this unit, children will learn how to pass, travel and shoot with a ball in football. They will develop their skills to successfully pass a ball with speed and accuracy. Through playing football, children will develop their skills for attacking and defending. They will learn how to work as a team to develop fielding strategies to prevent the opposition team from scoring.		**Tennis** Through this unit, children will learn different techniques for hitting a tennis ball. This involves developing backhand technique to use in a game and learning how to do an overhead serve. Through playing tennis, children will develop their skills for attacking and defending. They will learn the rules of tennis and follow them successfully in a game.	**Rounders** Through this unit, children will learn different techniques for hitting a ball. This involves developing bowling skills. Through playing rounders, children will develop their hitting and catching skills. They will learn the rules of rounders and follow them successfully in a game.
MFL (Spanish)	**La Casa Tudor (The Tudors)** This unit focuses on the children forming phrases orally and writing simple sentences about the Tudors. Through this topic, they broaden their vocabulary and develop their ability to understand new words.	**Los Planetas (Planets)** This unit teaches children how to say the plants in our solar system in Spanish. Through this topic, children begin to understand basic grammar that is appropriate to Spanish and build sentences around this.	**Que Tiempo Hace? (The Weather)** In this unit, children learn new vocabulary. They work in groups to present a weather show to the class, all in Spanish.	**Desayuno En El Café (At The Café)** In this unit, children take part in conversations and express simple opinions. Through this topic, they learn how to ask questions and respond to the questions.	**Las Olimpiadas (The Olympics)** Through this unit, children learn about the ancient Olympics. They begin to form complex sentences and develop accurate pronunciation.	**En El Collegio (At School)** Through this unit, children learn new vocabulary about the subjects they learn in school. They begin to learn how to conjugate some high frequency verbs and express simple opinions.
Music	Music is delivered by the Oldham Music Service.					
	During this half term, children work on making simple rhythms on their mouth pieces. This builds into children improvising a tune on their brass instrument using 1-5 notes.	During this half term, children learn how to play pieces on their brass instrument using a variety of notes from C to G. At the end of this half term, they take part in the Brass concert where they perform songs in front of an audience.	During this half term, children work on developing their vocal range as well as clear dictation. They work on their brass skills and take part in a large ensemble. They develop their ability play their instrument using different techniques.	During this half term, children work on reading rhythmic notation and play crotchet and minims on their brass instrument.	During this half term, children listen to different music and express their own opinions about the pulse, dynamic, texture and scoring. They work on reading melodic notation for notes C to G.	During this half term, children work on playing songs on their instrument and singing songs with actions. They listen to themselves, and their peers perform and give positive feedback to improve their performance.