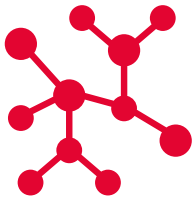
Russell Street School

Teaching, Learning and Curriculum Overview (TLC)

Using a cognitive science-based approach, our curriculum is designed to be knowledge led, vocabulary rich and reading centric.



Knowledge Led

Vocabulary Rich

Reading Centric

Our curriculum places significant importance on children learning specifically chosen knowledge. This includes substantive and disciplinary related knowledge with cultural capital value.

We place significant importance on the development of vocabulary, woven throughout our curriculum. Equally, we recognise the central importance of children becoming fluent, independent readers in order to make sense of the world around them, achieve academic success and take control of their future learning.

This document lays out the rationale behind our curriculum, our approach to implementing it and its intended impact.

Education is the most powerful weapon which you can use to change the world. -Nelson Mandela

Curriculum Design

Our curriculum has been designed based on the key principles below.

At our school the Foundation Stage Framework and National Curriculum are statutory. They lay out the range of subjects we must teach and sets the standards pupils are expected to reach at the end of each stage of learning.

Our School Curriculum incorporates these documents and goes beyond them.

We have adapted and extended the curriculum to meet the particular needs of our pupils and families.

It is a curriculum designed to work for all in our community.

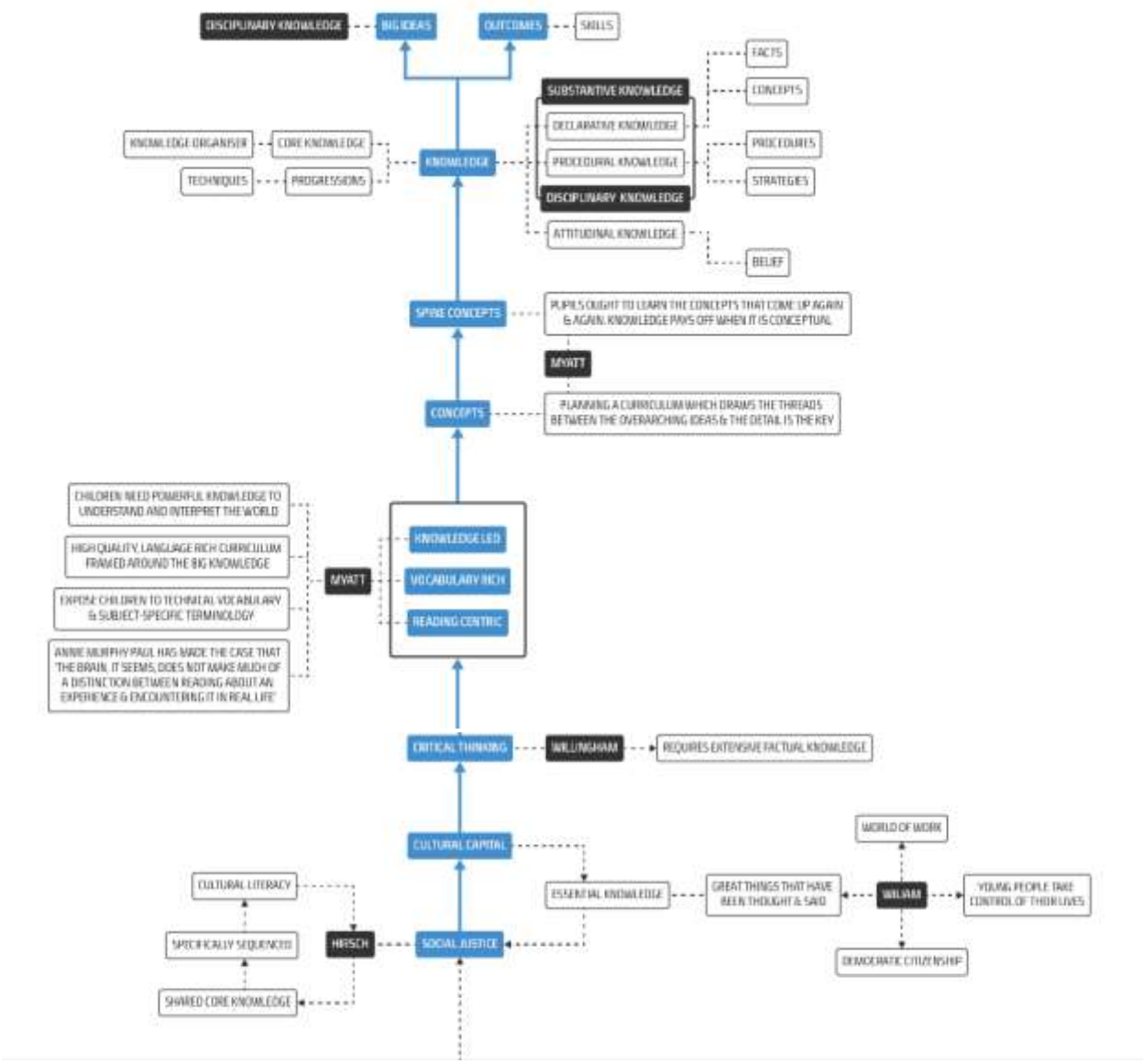
Knowledge is empowering, unlocking doors, providing a foundation for achieving success, reaching a deep understanding and being creative. (Teaching WALKTHRUs – Tom Sherrington & Oliver Caviglioli)

Using a cognitive science-based approach, our curriculum is designed to be knowledge led, vocabulary rich and reading centric.

We have built a knowledge-rich curriculum that is planned and sequenced so that new & ambitious knowledge and skills build over time. When building the curriculum, we have considered a range of knowledge forms:

a) **Declarative/Substantive:** The key facts all children should know.
b) **Procedural:** The things children should be able to do (skills).
c) **Experimental:** Knowledge that can only be gained first-hand by experiencing or doing certain activities.
d) **Disciplinary:** The action taken within a particular subject to gain knowledge i.e. how we gain substantive knowledge. For example, in history this might mean using evidence to construct a claim. Meanwhile, in science it might mean testing hypotheses. In music, it might mean reading and writing notation.
e) **Attitudinal:** Expressions of personal beliefs or feelings.

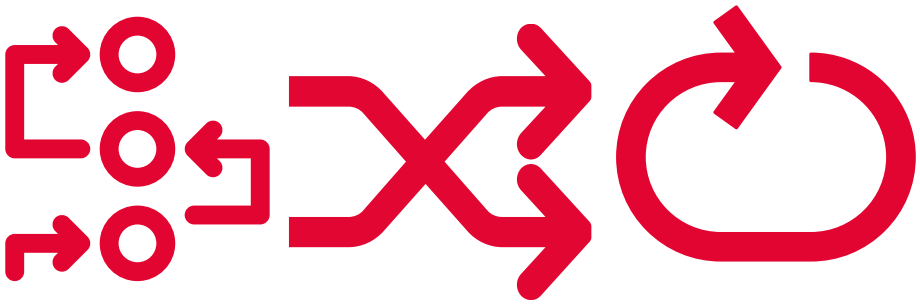
Our Curiculum



Our curriculum provides **exciting experience-based integrated** educational opportunities for **pupils of all backgrounds** that allow each child to develop the **long-term** knowledge and skills needed to reach their **full potential**, in order to take **full advantage of opportunities, responsibilities and experiences of later life.**

Pupils will:

- **develop the appropriate subject specific knowledge, skills and understanding that goes beyond the National Curriculum,** so that children can flourish, reach and exceed their potential academically, physically and artistically.
- **develop the behaviours learners need to succeed in the world,** such as concentration, perseverance, imagination, co-operation, the enjoyment of learning, self-improvement and curiosity.
- **lead happy, healthy, constructive lives in which they can aspire and experience success.** Well-being, in terms of both physical and mental health, is essential for effective engagement with school and wider life.
- **have a holistic set of values** that prepares them for life in the modern world in a diverse and ever-changing community.
- **understand spirituality in themselves and others, develop social skills and understand society**, build a firm set of personal morals, and to engage in the community they live in and understand the cultures of others.



Skills and Knowledge Sequencing and Interleaving

Our **Skills and Knowledge overviews** detail the exact **core concepts** that our children should know in as much detail as possible. They ambitiously promote good progress and high-level skills and knowledge in all subject areas

Our **Unit Plans** then **sequence** this knowledge content into a coherent flow using small steps (to not overload **working memory**) in order to form **schema**. Children assimilate new learning connecting it to what they already know - new knowledge building upon prior knowledge, building towards challenging goals. Elements are regularly returned to, supporting children to accumulate knowledge over time, supported by **practice and retrieval strategies**. Authentic connections (that allow knowledge areas to be mutually reinforcing and enriching) have been highlighted between subjects and concepts.

All units **blend knowledge and experience**. First, we identified where **experiential learning** has intrinsic value (eg aspects of oracy and performance, visits to specific places, practical activities in science or technology) where the experience of performing the task is the learning goal in itself. Then we also considered where **concrete experience** is a pre-requisite for deeper conceptual understanding for example using rekenreks in maths, handling artefacts, materials or living things in order to appreciate their physical properties, experiencing certain environments before analysing their features. Finally we considered times where it might be better for children to acquire a level of foundational knowledge prior to engaging in experiential learning, example studying the key narrative of a historical event before a visit to a museum.

Staff ensure that all **dependent knowledge** (when acquiring one piece of knowledge depends on another being in place - the building blocks) is fully in place before teaching a unit of work. **Common Misconceptions** (things that are 'generally misunderstood' – particular to subject areas are addressed through **pre-teaching** and **unpicking faulty schema** to **rewire** this by explicitly addressing the misconception.

Pedagogical Content Knowledge

For each subject area as well as **Content Knowledge** – the 'what' (knowing what to teach - knowing the subject matter thoroughly) we have also considered **Pedagogical Content Knowledge**.

Pedagogical Content Knowledge (PCK)– knowing how to teach what you need to teach to the specific people who need to learn it. **PCK** is based on the manner in which teachers relate their **pedagogical knowledge** (what they know about teaching) to their **subject knowledge** (what they know about **what** they teach). **Quality Professional development** around PCK has been essential. Knowing everything about a subject has no value if we do not understand how children learn it or the value of being the very best at instructional strategies if those strategies cannot deliver high quality subject matter knowledge.

When teaching each unit of work we aim for **depth before speed.** Getting to the end quickly can lead to shallow learning. Depth can be – children having a wider range of problems to explore, deeper levels of analysis, providing explanations, applying knowledge to unfamiliar scenarios. We also **'Pitch it Up'** always choosing the more challenging option, expecting accuracy and precision, thinking that if we don't expect children to reach a certain standard they probably won't. **Mediocare tasks** that do not require children to think hard about concepts, consciously make connections with prior knowledge are not undertaken. We fully understand that children progress at different rates, we therefore **tier** or **scaffold learning** to ensure that a ceiling is not placed on any child's achievement.

To help children learn we **set out the big picture** to them. This is achieved through turning our classrooms and corridors into knowledge organisers/ learning zones. Children can 'see' the knowledge and are guided to relate this knowledge to other knowledge.

We use a variety of assessment tools to assess learning and to help children embed and use knowledge fluently and to check and improve understanding and inform teaching such as:

- cold calling,
- think/pair/share,
- show-me,
- say it again better,
- asking probing questions (eg What are the main reasons? Is there another example/ Is there another way you can explain it?),
- asking process questions (how do you know? How can we work it out? What method did you use? That's interesting, why did you put them in that order?),
- giving feedback to move forward (not describing past performance, but describing future actions),
- whole class feedback a rapid, short, effective feedback and improvement cycle that notes the strengths and areas for improvement of children's work showcasing work as models in the feedback),
- quizzing (with self or per checking),
- elaborate interrogations (where children explore the links and connections within their schema for a set of knowledge),
- peer supported retrieval,
- weekly and monthly reviews.

Reading and Vocabulary

Our teaching focuses on the two dimensions to reading – **'word recognition' and 'language comprehension'**.

We have a **sharp focus on high-quality phonics teaching**, ensuring that children rapidly gain the crucial skill of word recognition that once mastered, enables them to read fluently, freeing them to concentrate on the meaning of the text, building their language comprehension skills. They progress from **'learning to read' to 'reading to learn'** for purpose and pleasure.

A **robust and continuous assessment of children's phonic progress** is used to identify those who may be falling behind, allowing support to be given to ensure they **keep up, not catch up**.

Word Poverty Matters! We view words as a commodity.

- *Evidence shows that vocabulary is one of the most significant factors to children achieving higher grades at GCSE in most subjects.*
- *The vocabulary gap starts early (by the age of 2) and is hugely significant.*
- *Children can have a 30-million-word gap before children even enter school.*
- *The link between vocabulary at 5-7 years old as a significant predictor of reading comprehension and academic understanding at GCSE.*
- *Less than 1/3 of children are read to at home daily. Children who are read to at home will hear 1.4 million 'rare words' yearly that improve language development and understanding.*
- *Children's books have 50% rarer words than the language of television, or even the conversation of graduates.*

We close the vocabulary gap through planned and explicit vocabulary teaching. All the words and phrases needed to understand texts are taught as explicitly as possible. Key vocabulary lists for each subject have been generated and are deliberately taught in context. Grandma Fantastic is one method used in Early Years to teach deliberate vocabulary.

We have a 'Ten Minutes Reading Aloud a Day Pledge' which is over and above any other reading that occurs. Just 10 minutes a day exposes a child to around extra 700,000 words a year.

Children's fluency, confidence and enjoyment in reading is central to our curriculum as a whole. Reading has been integrated into our curriculum from the very beginning. For example, in science we develop children's capacity to read scientific texts alongside learning the scientific concepts themselves. Every possible opportunity is made for children to learn about the topics we cover in each unit through reading about them.

Learning & Teaching

All staff to use the **'5-a-day' approach** in their **teaching**. This 5-a-day approach uses evidence based best practice that research evidence suggests have a positive impact for all pupil groups. The 5 elements of this approach are summarised below.

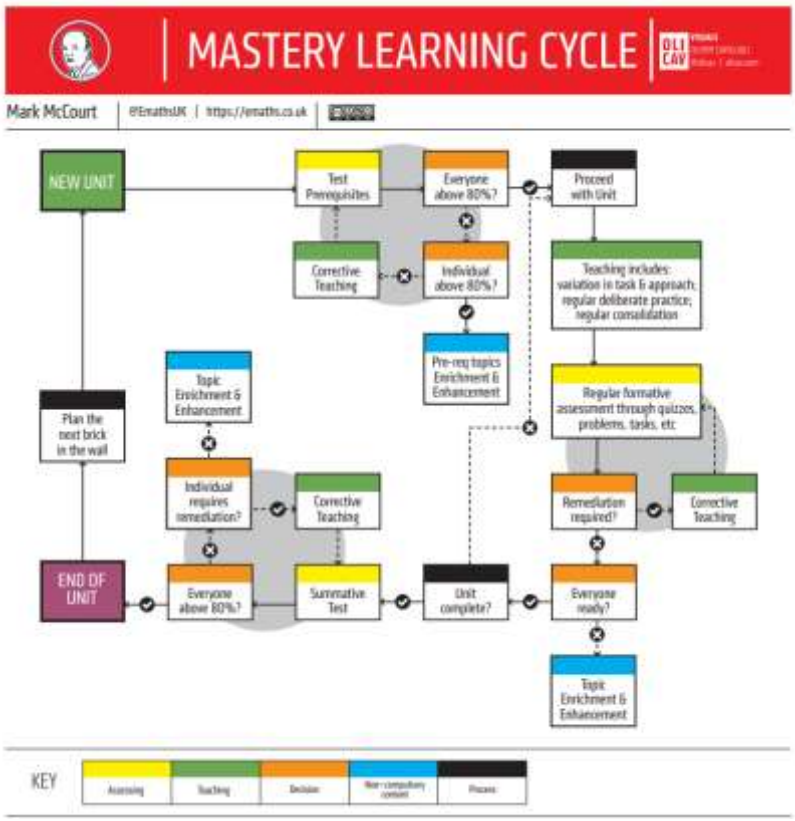
Explicit instruction is delivered through **Rosenshein's Principles**:

Mastery

Our goal for **mastery learning** is for children to be competent at prerequisite objectives before moving on to new content. Therefore, we set a threshold of 80% as a guide for mastery to have been achieved. Where it does not, we endeavour to provide additional support to those children through pre/post-teaching sessions and where gaps in learning are wider, TAS is implemented (see later section). See Mastery Learning Cycle below.

Our approach to teaching for mastery is integrated across our curriculum. It includes the following active ingredients:

- **Children move on together.** We believe every child can achieve and therefore all children are given the same content to learn. Teachers move on to new content when they decide the majority of children have reached mastery.
- **Whole class instruction.** Because children move on together, teacher-led whole class teaching is our primary instructional model.
- **Scaffolding.** To support our model for mastery, children often require scaffolding. Scaffolding should be gradually removed to move towards independence.
- **Thinking requires resilience and being resilient is hard.** We recognise our approach requires sustained periods of concentration and thinking. This can be challenging, particularly for younger children. Teachers help minimise intrinsic **cognitive load** (see following section) which in turn supports sustained concentration and thinking. Our classroom culture encourages a growth mindset where it is not only okay to sometimes struggle but inevitable.



Cognitive Load

The more **efficient whole class instruction is**, the lower the extraneous load for each child. This enables learning to potentially be increased as each child has a greater capacity for intrinsic load. There are several effects of **cognitive load theory** that support a reduction in extraneous load.

SPREAD INTRINSIC LOAD

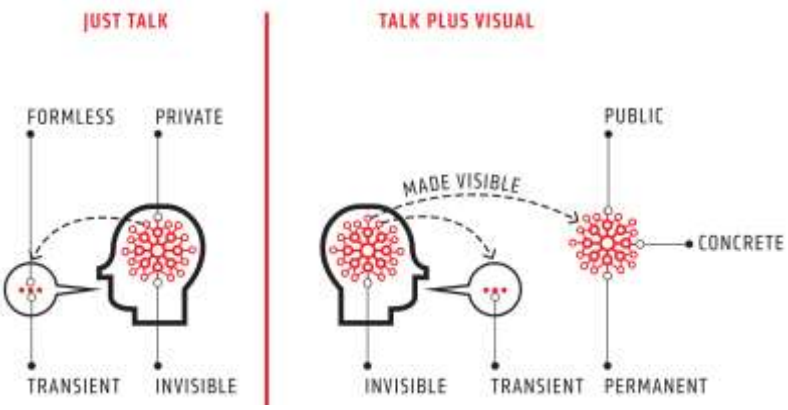
- **Isolated Elements Effect.** Teaching in small steps minimises the **Element Interactivity Effect** (individual or chunked knowledge from children's schemas interacting with new material being processed in working memory).
- **Pre-teaching** key concepts or prerequisites to spread cognitive load.

INCREASE WORKING MEMORY

- **Modality Effect.** Teachers use visual and verbal/written channels simultaneously or in combination, effectively 'doubling' working memory. This overlaps significantly with Dual Coding (see next section). Consequently, teachers avoid reading out text on screen, where children are able to read it themselves as fluent readers.
- **Collective Working Memory Effect.** Children working together increases their available cognitive resources.

Teachers are aware of cognitive load effects so they can manage children's cognitive load with the purpose of avoiding overload. In addition, some effects are impactful on learning in their own right but they themselves require cognitive load management.

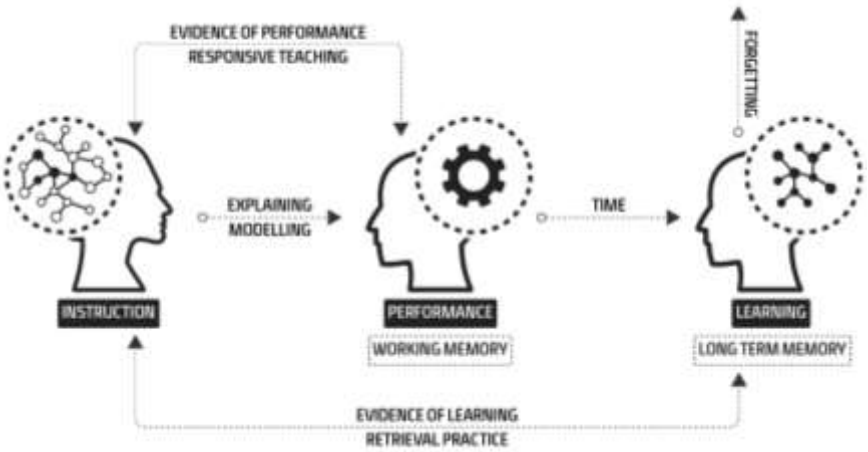
- **Worked Examples Effect.** Teachers working through a completely modelled example, including thought process, builds children's problem-solving schemas. Can alternate worked examples, partially worked examples & child solved problems.
- **Goal Free Effect.** We avoid giving children specific end points such as the question of a maths problem until absolutely necessary. This avoids children over focusing on the end point at the detriment to them being able to develop their understanding.
- **Split Attention Effect.** When children's eyes focus on two physically distinct areas, cognitive load increases. This could be where a teacher positions themselves when delivering instruction, resources used for instruction or children switching between two resources on their desks. We are therefore aware of our teaching positions in the room, the focus on instruction and activities given to the children.
- **Variability Effect.** Replace a series of similar problems with ones that differ from each other slightly. Children then identify similarities and differences (the variation in the problems). Can be used in conjunction worked examples.
- **Transient Information Effect.** Spoken word and video are gone when no longer said or shown. They are *transient*. Attempting to remember what is no longer there increases cognitive load. We are therefore aware of how long we speak for and aim to teach in small steps. When using video, we regularly paused for discussion/notes in contrast to stopping at the end of the video only.
- **Self-Explanation Effect.** Children self-explaining worked examples positively impact on their learning. We give children prompts to explain the approach or thinking through the solution.
- **Imagination Effect.** Asking children to mentally practice a concept or procedure being learnt can be extremely impactful. However, it is only beneficial for children who are no longer complete novices as it significantly increases working memory.

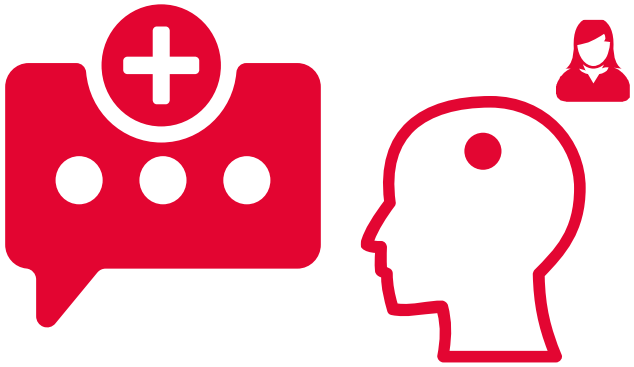


Dual Coding

People learn better from graphics and words than from words alone. There are two information channels that feed our working memory – the visual and verbal. Whilst the two channels are separate and independent of each other, there is a mechanism that ensures they can work in tandem. One channel triggers a connection with the other. When visual and verbal information are strongly connected we have dual coding. This double memory trace greatly aids its later retrieval from long-term memory back into working memory. We use dual coding intrinsically in our teaching.

Stages of Learning





Targeted Academic Support

Most pupils will benefit solely from a focus on whole-class teaching. However, some children may require targeted support that is tailored to their specific needs to get their learning on track. We use the target model below to provide this support.

Timing	Intervention sessions are often brief (e.g. 15–60 mins) and regular (e.g. 2–5 per week).
Assessment	Assessments are used to identify pupils, guide areas of focus, and to track pupil progress.
Resourcing	The intervention has structured supporting resources and lesson plans, with clear objectives and possibly a delivery script.
Give it time	Careful timetabling is in place to enable consistent delivery. Sessions are typically maintained over a sustained period (e.g. 8–20 weeks).
Expert delivery	Interventions are delivered by a qualified teacher or, if they are unavailable, a trained teaching assistant. The intervention programme is followed precisely and suggested delivery protocols are followed.
Teacher links	If not delivered by the classroom teacher, the intervention deliverer and the teacher/s communicate regularly and make appropriate connections between out-of-class learning and classroom teaching.

Beyond the Curriculum

French is taught in school through the online learning platform Linguafun. This is a highly proven and effective language learning tool. It enables pupils to learn French in personalised ways and develop their skills beyond the classroom.

We offer a wide range of extra-curricular clubs, both before and after the school day and at lunchtimes. Clubs are offered at a range of costs and our aim is to ensure that all pupils have the opportunity to engage in extra-curricular activities as a means of enabling them to discover and develop particular talents and interests.

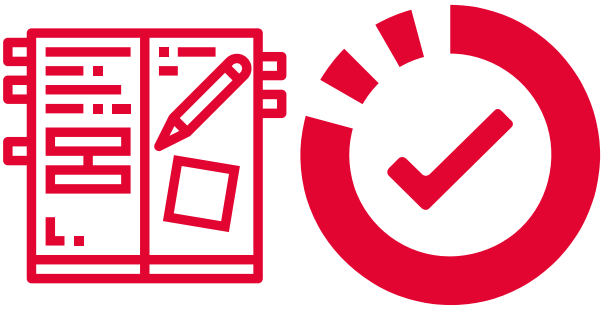
Our school offers pupils the opportunity to learn a range of musical instruments, through private tuition in school, organised by MK Music Hub. The school subsidises the cost of this for families in challenging financial circumstances, to ensure all pupils can participate if they wish. All Year 2 children are taught how to play the recorder. They take their recorders with them to junior school where their lessons continue.

Educational Visits

Educational visits are first and foremost designed to deepen our children's knowledge across our curriculum.

By organising educational visits to help our children experience new things and spend time outside their immediate setting, developing their cultural capital and raising aspirations. These regular opportunities include visit theatres and concerts, historical sites, galleries, museums, religious buildings and famous landmarks.

We play an active part in our local community, creating and sustaining close links.



Assessment

Formative assessment is crucial in making decisions about learning that is demonstratable 'in the moment'. We view regular formative assessment, particularly **responsive teaching**, as fundamental to our approach.

Learning that is demonstratable a period of time after it has been developed, is assessed **summatively**. Phonics and fluency assessments, standardised tests and comparative judgements are used in English and Maths.

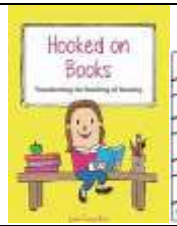
All other subjects are assessed against our skills and knowledge overviews.

Teachers make judgements of **progress** based on how much of the curriculum a child has learned. This is focused on core knowledge and outcomes.

Learning Reviews. These compromise of lesson observations, retrieval observations, book looks and pupil discussions. Taken in isolation, each element can provide unreliable inferences leading to actions that may not prove impactful, however when taken together, can provide a robust tool to review performance and infer learning.

Implementation & Impact Measures

	How are the specific curriculum stages taught?	Further Information	Planned Stages and End Points	Impact Measured
EYFS	EYFS Framework / Unit Plans	(See Early Years Policy for further details)	ELGs (age related stages)	Continual assessment against ELG's.
Phonics	RWI Phonics Scheme	Children are divided into small groups and to receive phonics sessions at least 4 x per week that link phonics, reading and writing. Children assessed to be working behind expected stage receive small group or 1:1 tuition from the R/1/2 senior staff or KS1 Reading Leader so that they keep up and do not have to catch up.	Stages A – J of RWI scheme. (As listed in RWI half termly assessment overview)	Half termly assessments are carried out by our Reading Leaders. Information is used to regroup children and provide immediate support to anyone falling behind so that they keep up rather than have to catch up. Phonics Screening (Year 1 & 2)
Reading Scheme	RWI Bookbag Books	The RWI Bookbag Book Reading Scheme is used so that reading connects closely to the phonics knowledge pupils are taught.	See phonics above	See phonics above
Reading Comprehension (Explicit Teaching)		RWI Comprehension is implemented from the end of Year 1 and across Year 2. This is a 14-week programme that develops children's fluency and comprehension – the ideal next step for children who have completed Read Write Inc. Phonics. Each Module has specially written texts (one fiction and one non-fiction) that develop children's ability to summarise, infer and retrieve information quickly, as well improving their writing through cumulative vocabulary, grammar and spelling activities.	Each module is assessed & progressed tracked.	RWI Comprehension trackers
Reading	Reading has prioritised across the curriculum with 'key books to be read' added to all new curriculum units, ensuring a broad deeper knowledge across the curriculum. Hooked On Books (A Book Talk Approach) is used across the school.	By using Book Talk children will: - Develop Fluency - Have a full understanding of new vocabulary encountered. - Be able to decode words quickly, connecting them to prior knowledge. (STICKY BRAINS!) - Develop a broad and deep vocabulary knowledge. - Draw upon their background knowledge to make sense of the text.	Book Talk Performance of Reading (Assessment Framework). Year group ongoing expectations.	Year 1 & 2 – ongoing reading assessment through Book Talk sessions using the Book Talk Assessment Framework. Year 2 upwards – Reading Comprehension Assessments

	 	- Read for longer, with greater effort and persistence. - Be repeatedly exposed to vocabulary, gaining depth of word knowledge.		
Spelling	The Spelling Book and Spelling Rainbows across Year 2.  	All of the concepts, activities and tasks within the Spelling Book have been designed to increase 'stickability' and retention of vocabulary. The system is built on strong phonic foundations and includes a range of deep exploratory investigations, alongside short-burst 'chunked' revision activities.	Assessed through termly assessments.	Through spelling assessments and implementation in writing lessons. The Spelling Book – Progress checks used to analyse progress.
Writing	The Write Stuff (TWS) approach using the EYFS and KS1 Writing Rainbows. Sentence Stacking is taught. 	A rigorous and sequential approach to the writing curriculum that develops pupils' fluency, confidence and enjoyment of writing.	The Write Stuff (Assessment Framework) – Year group termly expectations.	Moderated assessment writing – marked against TWS assessment framework – once per term.
Maths	Whole school – White Rose Maths	In White Rose Maths there is an emphasis on the CPA (Concrete-Pictorial-Abstract) approach to embed the learning of mathematical skills. Hence, children are exposed to manipulatives/concrete apparatus, as well as visuals (such as diagrams, part whole models and bar models) before they encounter abstract concepts in Maths. This process enables children to deepen their conceptual understanding of the mathematical skills required to complete increasingly more complex problems. Links to real life scenarios are made as often as possible to contextualise learning, so that children can see the relevance of mathematical skills. We recognise the importance of children being fluent in the four main operations (addition, subtraction, multiplication and division) as the foundation for being competent and efficient mathematicians. General mathematical content is delivered through the Maths White Rose Maths schemes of learning in daily lessons and	End of unit and end of term assessments – with key questions to ensure the children are using and applying their learning.	Half termly assessments carried out and measured against the White Rose Maths Framework.

		incorporates fluency, reasoning and problem solving/investigative tasks throughout the week.		
Science Humanities Art/DT	RSS Skills & Knowledge Overviews, plus information from unit plans	WOW starts and ends enhance subject areas such as dinosaur visits to school, Indian dance workshops, African drumming, planetariums, museum visits, Victorian schools day trips (Holdenby House), Waddesdon Manor, theatre experiences.	Termly end of unit assessments based on Unit Plan teaching & Knowledge Organisers.	Measured against key skills knowledge overviews.
IT	Purple Mash	Our iSafe programme also covers eSafety.	Termly end of unit assessments based on Unit Plan teaching & skills & knowledge overviews.	Measured against key skills knowledge overviews.
Music	Active Music Digital Skills overviews, plus information from unit plans.	All children in Year 2 are taught how to play the recorder. This teaching continues in their junior school. String and brass lessons are offered. Children perform in a wide variety of concerts and sing progressively complex songs – such as unison, round, partner and two part.	Termly end of unit assessments based on Unit Plan teaching & skills & knowledge overviews.	Measured against key skills knowledge overviews.
P.E.	RSS PE. Planning Document	Children are given opportunities to take part in competitive sport.	Key Skills specifically listed within P.E. Scheme	Continuous assessment (against key skills)
R.E.	MK Agreed Syllabus	We have close connections with many places of worship across Milton Keynes.	Knowledge listed per R.E. Unit	Continuous assessment (against specific knowledge)
PHSE/RSE	Jigsaw & iSAFE 	Plus - Emotional Wellbeing, Emotional Regulation and Emotional Literacy of taught in every year group using The Colour Monster. 	The Jigsaw Puzzles (Specific Content Overview)	My Jigsaw Learning or My Jigsaw Journey