



Ignite

Science

Science






Overall Judgement

Judgement




inadequate	Requires Improvement	good	outstanding
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Headlines

5 Key Strengths

-  Classroom secrets is being trialled throughout the school as it offers high-quality, teacher-designed science resources aligned with the National Curriculum and Ofsted guidance, saving planning time and boosting engagement through interactive, differentiated materials
-  Whole school scheme (Collins Hub) is well embedded throughout the school ensuring staff share a strong vision. This also ensures a strong knowledge base.
-  Organisation and implementation of medium-term plans for each year group for each unit of study, which includes prior knowledge for each unit and key vocabulary
-  Annual British Science week, World Science day and cross curricular links promote science throughout the school.
-  Varied and good overview of school expectations and practices from EYFS to KS2 through termly book looks and science walks

3 Areas for Development

-  To continue to promote first hand experiences of science through speakers and planned visits – guide to use of STEM with the staff so they can take ownership
-  To embed monitor assessment through a whole school tracking document
-  To collect evidence of working scientifically skills for an expected child from each year group by the end of the academic year

 Knowledge Maps for Science ensure progression and prior learning is understood.	
What is needed to move to outstanding Or The key reasons behind an outstanding judgement	<ul style="list-style-type: none"> - More observations, book looks and learning walks to ensure continued consistency - Encouraging continued cross curricular opportunities at the start of each unit of study such as debate or persuasive letters regarding amount of plastic wastage in schools/oceans through English lessons, applying scientific knowledge. - Relate new learning to relevant, real-world contexts- Engage with science concepts supported by virtual models. Use books as Hooks to launch a topic.

Highlighted judgements taken from the document entitled The School Inspection Handbook 2024 by OfSTED	<p>Outstanding (1)</p> <ul style="list-style-type: none"> ■ The school meets all the criteria for a good quality of education securely and consistently. ■ The quality of education provided is exceptional. <p>In addition, the following apply.</p> <ul style="list-style-type: none"> ■ The school's curriculum intent and implementation are embedded securely and consistently across the school. It is evident from what teachers do that they have a firm and common understanding of the school's curriculum intent and what it means for their practice. Across all parts of the school, series of lessons contribute well to delivering the curriculum intent. ■ The work given to pupils, over time and across the school, consistently matches the aims of the curriculum. It is coherently planned and sequenced towards cumulatively sufficient knowledge and skills for future learning. ■ Pupils' work across the curriculum is consistently of a high quality. ■ Pupils consistently achieve highly, particularly the most disadvantaged. Pupils with SEND achieve exceptionally well. <p>Good (2)</p> <p>Intent</p> <ul style="list-style-type: none"> ■ Leaders adopt or construct a curriculum that is ambitious and designed to give all pupils, particularly disadvantaged pupils and including pupils with SEND, the knowledge and cultural capital they need to succeed in life. ■ The school's curriculum is coherently planned and sequenced towards cumulatively sufficient knowledge and skills for future learning and employment. ■ The curriculum is successfully adapted, designed or developed to be ambitious and meet the needs of pupils with SEND, developing their knowledge, skills and abilities to apply what they know and can do with increasing fluency and independence ■ Pupils study the full curriculum; it is not narrowed. In primary schools, a broad range of subjects (exemplified by the national curriculum) is taught in key stage 2 throughout each and all of Years 3 to 6. <p>Implementation</p> <ul style="list-style-type: none"> ■ Teachers have good knowledge of the subject(s) and courses they teach. Leaders provide effective support for those teaching outside their main areas of expertise. ■ Teachers present subject matter clearly, promoting appropriate discussion about the subject matter being taught. They check pupils' understanding systematically, identify misconceptions accurately and provide clear, direct feedback. In so doing, they respond and adapt their teaching as necessary without unnecessarily elaborate or individualised approaches. ■ Over the course of study, teaching is designed to help pupils to remember long term the content they have been taught and to integrate new knowledge into larger ideas. ■ Teachers and leaders use assessment well, for example to help pupils embed and use knowledge fluently, or to check understanding and inform teaching. Leaders understand the limitations of assessment and do not use it in a way that creates unnecessary burdens on staff or pupils. ■ Teachers create an environment that focuses on pupils. The textbooks and other teaching materials that teachers select – in a way that does not create unnecessary workload for staff – reflect the school's ambitious intentions for the course of study. These materials clearly support the intent of a coherently planned curriculum, sequenced towards cumulatively sufficient knowledge and skills for future learning and employment. ■ The work given to pupils is demanding and matches the aims of the curriculum in being coherently planned and sequenced towards cumulatively sufficient knowledge. <ul style="list-style-type: none"> ■ Teachers ensure that their own speaking, listening, writing and reading of English support pupils in developing their language and vocabulary well. <p>Impact</p> <ul style="list-style-type: none"> ■ Pupils develop detailed knowledge and skills across the curriculum and, as a result, achieve well.
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	<ul style="list-style-type: none"> ■ Pupils are ready for the next stage of education. They have the knowledge and skills they need and. Pupils with SEND achieve the best possible outcomes. ■ Pupils' work across the curriculum is of good quality.
	<p>Requires improvement (3)</p> <ul style="list-style-type: none"> ■ The quality of education provided by the school is not good.
	<p>Inadequate (4)</p> <p>The quality of education is likely to be inadequate if any one of the following applies.</p> <ul style="list-style-type: none"> ■ The school's curriculum has little or no structure or coherence, and leaders have not appropriately considered sequencing. Pupils experience a jumbled, disconnected series of lessons that do not build their knowledge, skills or understanding. ■ The pupils' experiences in lessons contribute weakly to their learning of the intended curriculum. ■ The range of subjects is narrow and does not prepare pupils for the opportunities, responsibilities and experiences of life in modern Britain. <p>Pupils cannot communicate, read, write or apply mathematics sufficiently well for their age and are therefore unable to succeed in the next year or stage of education, or in training or employment. (This does not apply for some pupils with SEND.)</p> <ul style="list-style-type: none"> ■ The progress that disadvantaged pupils make is consistently well below that of other pupils nationally and shows little or no improvement. ■ Pupils with SEND do not benefit from a good-quality education. Expectations of them are low, and their needs are not accurately identified, assessed or met. ■ Pupils have not attained the qualifications appropriate for them to progress to their next stages of education, training or employment.

Delivery	
What resources do teachers use to aid their planning?	<p>Medium term plans are developed using relevant and resourceful websites:</p> <ul style="list-style-type: none"> - Classroom secrets https://classroomsecrets.co.uk - Collins Hub https://www.collinshub.co.uk/login/ - BBC Teach – Science - www.stem.org.uk - ASE - BBC bitesize - Explorify - Hamilton trust - Twinkl - Operation Ouch <p>Teachers plan using MTP which have prior learning, key prior and new vocabulary and NC expectations to inform planning and next steps.</p>
How do teachers inform themselves about children's prior learning?	<p>The medium-term plans have prior knowledge clearly boxed, for each unit, so all staff can plan next steps. Learning ladders.</p> <p>Pre unit assessments inform teachers of missed learning from the previous unit</p> <p>Each lesson offers a 'look back' section to the previous lesson, enhancing retrieval skills</p> <p>IGNITE and use of Knowledge of Kings.</p> <p>Use of concept cartoons.</p> <p>View previous assessments to inform.</p>
Do teachers know why they are teaching their topics?	<p>-Learning ladders inform us of this.</p> <p>-LTP shows progression and what needs</p> <p>-Good knowledge of pupils (cultural capital)</p> <p>-MTP notes how each unit prepares children for later learning</p>
What process has been used to put together the planning of this subject?	<p>-We have worked well as a team to oversee this subject, collected information from other teachers and network training to help us gain a broader understanding of the Science curriculum and how it should be taught.</p> <p>-This then supports our strengths, areas of development and next steps. CPD has helped us greatly to focus on the 5 strands, initially.</p> <p>- The use of knowledge maps is used to inform.</p>
How has Kings Road's 'Cultural Capital' been considered?	<p>-Encourage independent learners through asking open ended questions, child led, children are the facilitators of science learning</p> <p>-Aids EAL – Scientific vocab is displayed and being used on displays.</p> <p>-Respect for resources</p> <p>-'British Science Week' , 'World Science day' celebrations</p> <p>-Links encouraged with local community: visits to the allotments behind the school</p> <p>KR children families values curiosity and inquisitiveness – this is considered in the planning and process of the curriculum</p> <p>Cultural sensitivities are carefully considered</p> <p>Science project homework to develop a greater interest in our community – use Dojo as a tool to ignite this</p>
What is learnt at the beginning of the children's journey? (Foundation Stage) and why?	<p>-KUW "Knowledge and Understanding of the World" – This key area of learning involves guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology, and the environment. E.g. about me, life cycles, floating and sinking, 'Learning through play' play based activities indoor</p>

	<p>and outdoor. Children are encouraged to explore and use vocabulary modelled by staff. It is an integral part of the children's' learning.</p> <p>-Evidence of this is recorded in learning journey floor books- Floor books to record this and continue on to next year groups.</p> <p>EYFS curriculum is strategically purposeful, investigative and practical.</p>
How is the subject coverage progressive throughout the school?	<p>This is implemented through the medium term plans - this is an area for development e.g. life cycles: not the same cycle to be repeated. We want to ensure that prior knowledge is built on and not repeated. Links to knowledge maps</p> <p>Knowledge maps ensure progression.</p>
What are the strengths of this subject?	<p>That all the children in school really enjoy science, get excited for lessons - a pupil voice</p> <p>5 Enquiry strand posters up in every classroom – uniformed approach</p> <p>WAGOLL displays</p> <p>Knowledge of kings referred to throughout the subject</p> <p>Being taught every week (timetables checked) – core subject status</p> <p>Whole school involvement e.g. British Science Week/Science Assembly in Ks1 and Ks2</p> <p>Take Science learning outside</p>
What are the weaknesses of this subject and what is being done to address these?	<p>Solutions to overcome these weaknesses are:</p> <ul style="list-style-type: none"> - assessments – whole school consistent scheme only just being embedded - replenish science resources - Displays – WAGOLL needs to be endorsed by all teachers - To develop first hand experiences of science through speakers and planned visits - develop on site areas to promote scientific understanding – pond area is not useable
How is the subject used to develop reading?	<p>One of the 5 enquiry strands is – Research</p> <p>This aids comprehension skills, increases the range of books they read and encourages the use of new vocabulary.</p> <ul style="list-style-type: none"> - Guided Reading books used for research (non-fiction books) and teaching concepts (e.g. The Very Hungry Caterpillar story – life cycles, The Gingerbread Man & The Three Little Pigs – Materials.) <p>Books as hooks encouraged to ignite a topic</p>

Progress

How are children that struggle or lack confidence supported?	<p>QFT</p> <p>Differentiated questioning</p> <p>Mixed ability pairings</p> <p>Peer mentors</p> <p>Support from staff</p> <ul style="list-style-type: none"> • Collaborative working • Problem solving – plan, test, review • Growth Mindset
How is this subject assessed and how are next steps identified?	<p>Use of end of unit mini assessments</p> <p>Misconceptions addressed when they arise</p> <p>Knowledge of kings shows progression</p> <p>End of unit assessment document completed for each child in every year group and kept on the T drive for the next year teacher to assess</p>
What transition arrangements are in place to support teacher to teacher communication?	<p>This is generally done through the end of year teacher transitional meetings using summative assessment data.</p>
How are end of term summative assessments used to aid future progress?	<p>Use of the summative assessment to inform future planning - - these are assessable on the T drive for the next year teacher</p>

Intervention

What is in place for pupil premium children?	<p>EYFS - 50 PP promise</p> <p>Access to Science resources</p> <p>PP chn could be targeted by TA during lesson (if TA available)</p> <p>Desire to include Science as part of PP</p> <p>e.g Zoo to u/ science trip to provide enrichment</p>
What is in place for SEN children?	<p>QFT</p> <p>Adult support</p> <p>Mixed ability groupings – peer mentors</p> <p>EAL visual/ practical and hands on activities.</p> <p>We feel Science is accessible to all abilities as it is child led. They are able to make mistakes and learn from them. The topics taught are open to asking their own questions and learning from them. There isn't always a right or wrong answer to science depending on the statutory requirement.</p> <p>As per the feedback and marking policy – children received verbal feedback to address misconceptions</p>
What interventions are in place across the school?	<p>Qft</p>
Who delivers the intervention?	<p>Class teacher/TA</p>
How are EAL pupils catered for?	<p>-(same as SEN) EAL support/interventions teacher - Develops confidence in the children who have EAL.</p> <p>Specific vocabulary is used and taught explicitly through visual prompts and resources- displays with key - vocabulary</p>

	Having the resources and pictures aid this too Having Key vocab visible at the start of a lesson Language explained by teachers/TAs
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Continuous Professional Development	
What CPD have leaders been given?	TTSA, MOSI, Collins Hub, STEM CPD, SEERIH and Manchester university
What CPD is in place for all staff?	Previous Staff meetings led by science team Future Staff meetings to be planned New staff supported- meet with Science Lead during first term
How are new staff supported?	-New staff can be directed to the science team to know where resources/planning is, Learning Ladders, Knowledge of Kings and MediumTerm Plans sent and planning proforma Leaders meet with new staff within their first two weeks in post
How is teacher and teacher assistant subject knowledge supported?	TA Training Tuesdays Direction to online CPD-STEM

Workload and Well-being	
Do you feel supported by senior leaders?	Yes, 360 Day for a day planned for and supported
Have you been given the tools to complete the role of subject leader?	CPD available
How do you support the teachers?	Knowing the Science team are always willing to help if they can- approachable Implementing Medium Term Planning formats throughout the school- each half term the next MTP is emailed Making sure staff know where all key resources are on the T drive and reminders sent to staff of key documents Directing them to useful websites and training Direct them to online CPD courses

Monitoring	
If a lesson was to be observed what would be seen?	What we would like to see: Hands on and engaged pupils, practical with a range of science resources, learning is built on prior knowledge, open ended questioning being used, peer discussion and questioning. Scientific vocabulary is displayed and used during talk sessions, the children as the facilitators of their own learning, an overall enthusiastic science buzz in the classroom with lots of curiosity. It is key that at least one of the 5 stands and working scientifically being used (<i>pattern seeking, fair testing, research, observations over time and identifying and classifying</i>) Go Outside/field work where possible
If a lesson was to be observed how will that lesson fit in with the overview of the subject?	What has been done before and what is done next to ensure objectives have been met.
What would a teaching assistant be expected to be doing during a lesson?	We feel that a TA should be in the session with the whole class, supporting questioning, being a facilitator or supporting identified children
Will the teacher's questioning encourage learning and enquiry?	You cannot teach Science without questioning and enquiry. Enquiry is the core to science. This engages pupils, sparks curiosity and creates an environment where everything is accepted.
Are the children learning new knowledge/skills? How do you know?	The children are learning and building on prior knowledge. The implementation of the knowledge of Kings. Children learning skills of how to organise and handle/explore equipment. Coverage across whole school Science medium term plans.

Any other factors	
We want to make better use of our outdoor learning environment – e.g the pond area and neighbouring allotments.	

Excellence without compromise