What A Great Lesson Looks Like
Science

WALKTHRUs

Striving for excellence; ensuring standards of behaviour and engagement are high and create a positive climate of learning.	• Teachers nurture students in a safe environment following our school values: love, respect, hope, kindness and resilience. **Entry Routines:** • Teacher is at the entrance to the classroom – meet, greet and seat. • Pupils enter the classroom in silence and get their equipment, folders and knowledge organisers out on the desk and complete the Do Now Retrieval Activity on entry. Pupils who fail to complete the Do Now sanctioned. KS3 – starters completed in booklets; KS4 – starters based on previous knowledge **Behaviour and Expectations:** • High expectations are set with regards to behaviour for learning; teachers expect students to be equipped and organised, engaging in all activities appropriately to the work that is set. • High expectations are set regarding health and safety, use of specialist equipment, being aware of surroundings at all times before and during practical's. • Teachers foster positive working relationships with students, awarding praise points and golden tickets. • The school sanction system is consistently used in the department. A warning is given for any failure to follow the Sutton Way and noted down on the white board and Class Charts, any further behaviour is escalated with removal to a Behaviour Hub using a radio.
Understanding, adapting and meeting the needs of all learners in order to build confidence, provide challenge and ensure success. Every student is known.	• Students are seated for success and taught in mixed ability classes designed to encourage aspiration and achievement. • Teaching assistants are utilised to support all learners. • Homework is designed to support knowledge retrieval, skills development and extend pupils learning in lessons. **Adaptive Teaching** • Teachers use adaptive teaching strategies to support and challenge all students including the highest attainers through explicit teaching of specialist terminology, choice of texts in Reading to Succeed, planned extension tasks, scaffolded tasks, questioning, and encouraging metacognition. • Tasks purple penned and misconceptions rectified through reteaching when required. Narration of common errors seen during deliberate practice. Verbal Q&A (cold calling; pause punce bounce; modelling; say it again but better; process questions; probing questions). Applied knowledge questions at KS4 are used to challenge learners – used for those who have shown understanding of core components. • Personal Learning Checklists are used to ensure pupils understand and reflect on the desired learning outcomes and supported in achieving them through effective teaching and learning. • Practical demonstrations are used to highlight disciplinary knowledge • Scaffolding effective used to ensure that all learners can access core components of knowledge (Sticky knowledge)
Tracking pupils progress - Hunting not Fishing. All students know how to improve; feedback supports improvement.	**Hunting not Fishing** • Hunting not Fishing Pads are used by all staff to track pupil progress each lesson, identifying misconceptions and adapting teaching to the needs of all. • Teachers use assessments both formative or summative to provide meaningful feedback and model how to improve and to contextualise students' next steps using cold calling, self-assessment white boards, diagnostic checks using RAG cards, live marking and at least one deep mark per half term. • Data is used to track gaps in knowledge which are planned for with explicit reteaching; homework activities or starter activities • Narration in lesson is used to highlight links across the science curriculum but also wider curriculum
Transforming theory into practice. Using the latest pedagogy and subject specialist knowledge to inform teaching inside the classroom.	• All staff have access to local, trust-wide and national CPD – ASE; RSC; CLEAPPS; STEM learning • Subject Specialist knowledge is used to inform teaching and learning • **Teacher Instruction** • Explicit instruction using visualiser/PPT. Build knowledge together through questioning strategies. • Explicit teaching of core components of knowledge followed by independent review tasks. • Opportunities for misconceptions to be rectified and retaught – narration is used to highlight and discuss with students • Vocab narrated – both subject specific and examination terminology. • Practical demonstration to support substantive / disciplinary knowledge. • Reading opportunities/comprehensive questions are used to embed / link and show detailed understanding of substantive knowledge • Whole Class Practical are used to embed disciplinary knowledge and make links to substantive knowledge **Deliberate Practice** • Pupils complete a wide-range of activities including: workbook activities, drawing tables and graphs, Verbal Q&A, live marking, narrating subject specific terminology, examination question, scaffolding question sheets, calculations, longer written pieces (6 mark questions & practical write ups). • KS3 challenge is increased using language - Know/Apply/Extend. • KS4 challenge is using AQA exam terminology. Questions appropriate to grow components of knowledge and ultimately apply knowledge, discussion of higher/foundation (all students have opportunity to attempt higher content) • TAs help scaffold, scribe and support in all of tasks.
Organising and sequencing the Curriculum so that all students understand the context and their expected learning outcomes.	**Retrieval Practice** • Do Now activities are visible on students' entry to the classroom - they either connect the lesson's learning and focus with prior knowledge, introduce small chunks of new knowledge, or provide a low stakes short task to engage pupils in the learning for the lesson. • Narration of any misconceptions detected and highlighted in reteach. **Curriculum Sequencing** • Teachers share learning objectives to contextualise the learning • Knowledge is taught in a sequential manner this is planned across the KS3 and 4 curriculum to revisit and build on prior learning with effective spacing. • Success criteria is shared and used / referred to during the lesson and as AFL • PLCs and Knowledge Organisers indicate the key concepts, core knowledge, and key vocabulary that students will learn in that unit of work
Nurturing our student's language fluency, knowledge and skills so they are equipped to be successful in later life.	• Teachers communicate, where relevant, the links between the learning and life beyond school. • Revision strategies are explicitly taught to support acquisition of knowledge. • Teachers frequently model learning strategies. • Key vocabulary is referenced within schemes of learning and teachers explicitly teach the meaning of the vocabulary, encouraging pupils to use it confidently in the context of their own work, both oral and written **Reading to Succeed** • Reading to Succeed is an expectation of all students and a culture of reading developed in each classroom. 5 minutes of each lesson is dedicated to reading. **Homework** • Homework tasks are varied • KS3: 20 – 30 minutes per week (Century; revision questions; worksheets; practical write up) • KS4: 40 – 60 minutes per week per teacher (Century; past paper questions; whole past paper; worksheets; Practical write up; retrieval quizzes)