

| <p>STUDENTS' ACHIEVEMENT (PS1) (1.1 and 1.2 Attainment & Progress)</p> <p>Raise Outstanding Attainment in Secondary and Maintain Outstanding in Post 16.</p> | | | | | <p>Leader: Head of Mathematics Secondary – Mita Singh</p> <p>Line Manager: Heads of Secondary – Harpreet Kaur</p> | |
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| Prioritised Objectives | Actions | Time Frame | Resources | Success Criteria | Monitoring & Evaluation | Comments |
| <ul style="list-style-type: none"> To raise attainment to outstanding in Phase 3. Raise Mathematics Attainment in NAP assessments across the school -PTM, PISA, TIMSS. To further embed innovation and critical thinking in daily lessons. Develop the deeper learning elements of the curriculum for all groups of students | <ul style="list-style-type: none"> Embed high levels of personalised challenge, enrichment, extension and acceleration opportunities for G and T students. Further, embed opportunities to develop critical thinking and extend students' interpretation and applications skills of mathematical concepts in integrated and diverse real life. Inculcate innovative teaching strategies in lessons. Ensure the use of time and resources creatively to consolidate in depth knowledge and learning. Ensure appropriate and effective use of AFL to consolidate learning in lessons | <p>Informal lesson observations/learning walks with specified focus – every fortnight</p> <p>Evaluation of attainment and progress (from baseline) every 6 weeks</p> <p>Book Look – every 3 weeks</p> | <ul style="list-style-type: none"> Time for PD/Modelling by outstanding practitioners as needed by department /year group. Reviewed SOW, Rubrics, Student IEP, ILP sheet, Data Analysis Time for lesson observations and feedback Team teaching CAT4 and PTM data. Personalised planning. Moderation time and networking across phases in school and other schools | <p>KS3:</p> <p>Year 7:</p> <p>Attainment- <u>PTM</u>:</p> <ul style="list-style-type: none"> Large Majority (72%) of the students have attained stanine 6 and above in progress test in 2018-19. <p>Year 8:</p> <p>Attainment- <u>PTM</u>:</p> <ul style="list-style-type: none"> Large Majority (75%) of the students have attained stanine 6 and above in | <p>HODs, HOs monitor and review provision (lesson observation, Book look, SOW, lesson plans, data) termly with prompt action</p> | <p>PD on Use of effective data to personalise the lesson in order to provide challenge to all group of student. Evaluation of data is done by all and implemented in planning of the lesson.</p> <p>Department workshop was done to three part lessons, AFL and Marking.</p> <p>Use design thinking projects to give open ended question to students to find the solutions.</p> |

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| <p>PTM Gaps identified</p> <p><u>Year 7</u></p> <ul style="list-style-type: none"> To analyse internal and PTM data to identify the gaps in attainment | <p>and to show progress by all groups of students from their individual starting points.</p> <ul style="list-style-type: none"> Ensure individual starting points are set based on the previous day's progress. Strategic monitoring, feedback and effective follow up through lessons observations and learning walk. Weekly book scrutiny of each year group on a rotation basis and complete monitoring log. Identify target groups and share targets and strategies with concerned students and respective parents. <p>Gap Analysis based lessons on PTM</p> <ul style="list-style-type: none"> Measurements Interpretation of time and distance graph Review of the mentioned topics at the beginning of the term to assess the starting points.- Done | <p>Termly evaluation of attainment and progress.</p> <p>June 2019</p> | <p>Project based Learning:-</p> <p>https://www.ct4me.net/math_projects.htm</p> | <p>progress test in 2018-19.</p> <p>Year 9:</p> <p>Attainment: PTM</p> <ul style="list-style-type: none"> Most (88%) of the students have attained stanine 6 and above in progress test in 2018-19. <p>KS4:</p> <p>Attainment & Progress</p> <ul style="list-style-type: none"> The majority (year 10) and most (year 11) of students achieve above curriculum standards in Maths and make better than expected progress from their baseline. <p>KS5</p> <p>Attainment & Progress</p> <ul style="list-style-type: none"> The majority (year 12) and large | <p>HOD, HOS monitor and review provision (lesson observation, Book look, SOW, lesson plans, data).</p> | <p>revisited the topics as per the gaps identifies in PTM e.g in Year 7 students interpret time graph and travel graph.</p> |
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| <ul style="list-style-type: none"> To modify the curriculum based on PTM results and in depth analysis <p>Year 8:</p> <ul style="list-style-type: none"> To modify the curriculum based on TIMSS report and PTM results in depth analysis. To integrate the TIMSS 2019 Mathematics framework into the SOW | <ul style="list-style-type: none"> Remapping of the SOW to ensure all lessons have learning that deepens the understanding of the topics mentioned. – Done Revisit and reinforcement of these concepts every term and more real life based tasks Lesson planning ensures that students are given opportunities to work on word problems especially in Financial literacy. <p>Gap Analysis based lessons on PTM Facts and Fluency of 3D shapes.</p> <ul style="list-style-type: none"> Similar shapes <p>Mathematical reasoning</p> <ul style="list-style-type: none"> Interpretation of data. Review of the mentioned topics at the beginning of the term to assess the starting points. - Done Remapping of the SOW to ensure all lessons have learning that deepens the understanding of the topics mentioned. - Done Provision in lesson plan through starter/mid plenaries/plenaries to enhance students to use | <p>Ongoing</p> <p>June 2019</p> | <p>Problem Solving:</p> <p>https://www.educationquizzes.com/ks3/maths/</p> | <p>majority(year 13) of students achieve above curriculum standards in Maths and make better than expected progress from their baseline in lessons</p> <p>Most students in Phase 3 make better than expected progress from their starting point in Maths lessons and overtime.</p> <p>Large Majority of students demonstrate strong independent learning skills with sustained responsibility to apply their learning to real life and make connections between areas of learning for deeper meaningful learning</p> <p>Most teachers in all phases confidently and consistently deliver Very good with outstanding features or better</p> | <p>HOD, HOS monitor and review provision (lesson observation, Book look, SOW, lesson plans, data).</p> | <p>In Year 8 students worked on straight line graph</p> <p>In Year 9 Ratio and proportion is done in Term 3</p> <p>Applying their problem solving skills to solve money based problems involving decimals. Gaps were identified and topics were revisited</p> <p>SOW are remapped</p> <p>For example straight line graphs was identified as a gap which has been revisited in lesson for in depth learning.</p> |
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| <p>Year 9</p> <ul style="list-style-type: none"> To analyse internal and PTM data to identify the gaps in attainment To modify the curriculum based on PTM results and in depth analysis. | <p>correct maths vocab.-</p> <ul style="list-style-type: none"> Game based activities- Challenge in lessons- Enhancing students' mental ability to solve problems. <p>Embed mastery skills to enable students to securely attain curriculum standards:-</p> <ul style="list-style-type: none"> Critical thinking Reasoning skills of the students Problem solving skills <p>Gap Analysis based lessons on PTM analysis for end of term 3.</p> <p>Question wise gaps identified in these following topics</p> <ul style="list-style-type: none"> Interpretation of scatter Graph. Ratio proportion in profit and loss along with speed, distance and time question. Probability of an event <p>For the above mentioned topics the SOW is remapped to ensure the effective AFL strategies are used by teachers to skilfully elicit, consolidate and maximise learning for all groups of learners.-</p> <p>In lessons:</p> <ul style="list-style-type: none"> Provision in lesson plan through | <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> | <p>Financial Literacy: https://www.financialeducatorsCouncil.org/financial-literacy-for-kids/</p> <p>https://www.mybnk.org/our-work/financial-education/money-twist-ks3/</p> | <p>lessons with enhanced personalisation and challenge based on effective use of all data enabling progress for all groups of students from their starting point.</p> <p>Improved student outcomes across all phases.</p> <p>EOY and CIE results- Outstanding attainment in Phase 3 and very good attainment in Phase 4.</p> <p>Most students are able to solve word problems higher ability and talented students are able to create a word problem.</p> <p>Most students confidently & consistently justify their findings using mathematical reasoning to solve problems, analyse and interpret the graphs Large majority of the students work on design thinking to enhance</p> | <p>HOD, HOS monitor and review provision (lesson observation, Book look, SOW, lesson plans, data).</p> | <p>More time is given to algebra, geometry and ratio & proportion.</p> |
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| | <p>starter/mid-plenaries/plenaries s to enhance students to :</p> <ul style="list-style-type: none"> Application of financial literacy to further enhance reading. Enhancing students' mental ability to solve problems Practicing more mental maths in classes Effective questioning to enhance: Critical thinking Reasoning skills of the students Problem solving skills Word problems - reading <ul style="list-style-type: none"> Game base learning and design thinking process is used to improve efficacy in Maths reasoning. This is further enhanced through specific tasks in home learning. Annotation and remapping of SOWs to accommodate interpreting, applying and evaluating mathematical outcomes related to scatter graph and word problems. | <p>Ongoing</p> | <p>Project based learning:</p> <p>https://www.ct4me.net/math_projects.htm</p> <p>Problem Solving:</p> <p>https://nzmaths.co.nz/problem-solving</p> | <p>their reasoning and critical thinking skills.</p> <p>Students will be able to</p> <ul style="list-style-type: none"> Challenge through real life word problems. Analytical and evaluation skills improved <p>Draw appropriate conclusions that go beyond the data and provide justifications for their choices</p> | <p>HOD, HOS monitor and review provision (lesson observation, Book look, SOW, lesson plans, data).</p> | |
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| STUDENTS' ACHIEVEMENT (PS1) (1.3 Learning Skills) | | | | | | Leader: Head of Mathematics Secondary | |
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| Developing in depth learning skills and use of learning technology in Secondary Maths | | | | | | SLT In-charge: Heads of Secondary | |
| Prioritised Objectives | Actions | Time Frame | Resources | Success Criteria | Monitoring & Evaluation | Comments | |
| <p>❖ To sustain students learning skills through efficient use of learning technology in daily lessons.</p> <p>❖ Enhance opportunities for productive communication of their learning amongst each other.</p> | <p>Create enquiry based resources and best practices sharing opportunities for teachers across phases.</p> <p>Provide training and feedback on higher level questioning for teachers and monitor implementation during classroom observations.</p> <p>Consistent use of Blooms taxonomy for effective questioning and differentiation.</p> <p>Improve technology and innovative practices like robotics, coding, tubrics etc. across all lessons.</p> <p>Ensure that lessons contain regular opportunities for student inquiry through observation and feedback</p> | <p>Feb 2019 and ongoing</p> | <p>Time for PD/Modelling by outstanding practitioners as needed by the department (innovation)</p> <p>Reviewed SOW, rubrics, student IEPs, ILPs,</p> <p>Lesson observations and feedback</p> <p>Team teaching</p> | <p>Most students have ability to communicate their learning more effectively.</p> <p>Most students are innovative and can use learning technologies independently effectively.</p> | <p>HODs, HOKS, HOS, LAB members monitor and review provision (lesson observation, Book look, SOW, lesson plans, data) termly with prompt action</p> | <p>Investigation on derivation of formula I a polygon for helping the students to construct a deep understanding.</p> | |

Mathematics Secondary Action Plan 2019-2020



| TEACHING AND ASSESSMENT (PS3) | | | | | Leader: Head of Maths | |
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| To accurately assess the depth of students learning with effective AFL adjusting pace of the lesson. | | | | | SLT In charge : Head of Secondary | |
| Prioritised Objectives | Actions | Time Frame | Resources | Success Criteria | Monitoring & Evaluation | Comments |
| <p>TEACHING</p> <p>➤ Ensure that lesson flow at a pace that allows all activities to be concluded and students understanding to be fully assessed and consolidated.</p> <p>ASSESSMENT</p> <p>➤ To develop strategies of feedback and the use of assessment information to plan appropriate teaching and learning for all pupils.</p> | <p>➤ All identified acceptable and good teachers have IPP and timetabled support to raise T&L and effective personalisation based on data in their lessons.</p> <p>➤ Share the outstanding practices and rigorously monitor provision in lessons to ensure consistent implementation of social model of disability, securing instructional accommodations support and assistive technologies as needed for SEND students.</p> <p>➤ Planning and book scrutiny demonstrates effective differentiation and challenge all groups of learner and maximise outcomes for all students.</p> | Feb 2019 and ongoing | <p>Monitoring forms, IPPs, modelling, lesson observations, peer observation, team teaching.</p> <p>PD and sharing best practices on effective personalization and appropriate challenge</p> <p>IEPs, TLPs, ILPs, Minutes of meetings</p> <p>PD sessions on effective use of data for impactful personalization. Regular and rigorous data analysis.</p> | <p>➤ Large majority teachers confidently and consistently deliver Very good and better lessons.</p> <p>➤ All groups of students make outstanding progress in lessons.</p> <p>➤ All G/T students identified with rigorous and effective use of data and lesson observations.</p> <p>➤ Almost all G&T students are effectively engaged and challenged in lessons and make progress from their starting points.</p> | <p>HODS and HOKS, HOS, LAB members monitor and review provision (lesson observation, Book look, SOW, lesson plans, data) termly with prompt action.</p> <p>SEND Co, HODs, HOK, and HOS monitor the provision through lesson observations, Book looks, personalized lesson plans, IEPs -termly with prompt action</p> <p>HODs, HOKS, DHOS and VP to accurately identify and monitor the provision for G/T through lesson observations, Book looks, personalized lesson plans, TLPs- termly with prompt action</p> | <p>New teachers buddied with very good and outstanding teachers . PD done on AFL. Personalisation, three part lesson.</p> <p>Modelling and team teaching done for new and good teachers</p> <p>Use of rubrics by students and teachers to assess and set targets.</p> |

| LEADERSHIP AND MANAGEMENT (PS6) Improve the effectiveness of leadership by increasing the effectiveness of monitoring in the self-evaluation process. | | | | | Leader: Heads of Maths SLT In charge : Head of Secondary | |
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| Prioritised Objectives | Actions | Time Frame | Resources | Success Criteria | Monitoring & Evaluation | Comments |
| <ul style="list-style-type: none"> Improve the monitoring of lessons to ensure that evaluations of the quality of teaching is To moderate ongoing internal assessments | <p>Consistently monitor the teachers who are acceptable and good and prepare IPP's for the teachers.</p> <p>Conduct peer observation of the outstanding teachers with acceptable and good teachers to ensure they understand the standards of evaluation.</p> <p>Buddy support for the new teachers to ensure that all teachers understand the features of outstanding teaching.</p> <p>Continue to monitor the use of the assessment tracking sheets in particular how to use these to inform planning and teaching.</p> | | | <ul style="list-style-type: none"> Rigorous Monitoring – paired observations and impact evaluation by leaders at all levels enabling improved student outcomes across all phases. Continued improvement in attainment and progress over time and improving trends of external results. <p>Termly review of SIMS tracker and moderation to ensure consistency across year groups.</p> | SLT and MLs (HOD, HOKS) | <p>Workshop is conducted during department time for personalisation.</p> <p>Support to teachers with team teaching, regular monitoring and 20 mins lesson observation with feedback is done.</p> <p>Modelling and team teaching ongoing for new and good teachers</p> |