



# Mathematics Department

September 2019 sees the continuation of Mathematics Mastery teaching at Lawnswood School following our successful selection as a partner school in 2016.



Our innovative approach to teaching mathematics focuses on empowering students with a deep-rooted understanding of maths. Fundamental to this philosophy is the belief that **every child can succeed**, regardless of prior attainment. The outcome for our students has been outstanding levels of progress across KS3 and (more importantly) the development of a genuine curiosity for and enjoyment of maths.

Please come and speak to any of the team for further information.



Students who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through new content in preparation for Key Stage 4.

Those who are not sufficiently fluent will consolidate their understanding, including through additional practice, before moving on.

Essential to the success of our model is to empower parents/ carers to support and encourage learning effectively and for us to celebrate all of the students' hard work - which we do every half term!



# Home learning

We have re-designed our home learning offering this year and have approved an online platform proven to improve the chances and outcomes of students whilst being more able to support parents/carers too. What we ask of you is:

Action	✓ or ✗
<b>1 Each week ask about your child's homework</b> Ask your child what day the homework was set, when it must be handed in, what clip number and topic it is and when your child plans to complete the homework. Try to encourage your child to complete the homework well before the due date.	
<b>2 Provide your child a good place to work</b> Provide your child a quiet but supervised place to work. As the homework is online, it's good to be in the room to ensure your child is not getting distracted by other online activities. Furthermore, as it's a written homework, your child will need a desk, table or flat surface to copy their notes. If you don't have a suitable place at home to work or weak wifi, please encourage your child to attend their school's homework club.	
<b>3 Get your child the correct equipment</b> Your child will need a black/blue pen for all working, a pink highlighter for marking all wrong questions, a green highlighter for marking all correct questions, a red pen for writing corrections, a pencil and ruler for drawing all diagrams. Many lessons also require a scientific calculator and geometry set.	
<b>4 Encourage your child to work in the right way</b> Please always check your child has carried out their homework following the three requirements below which will have been modelled and encouraged by their teacher: i) Always watch the video and take notes of all modelled examples provided; ii) Always write each Q down and show all their workings always; iii) Always mark each question, make corrections and write their score at the end.	
<b>5 Sign-off their homework each week</b> Each week ensure you sign-off your child's maths homework to say you have viewed it and believe they spent <b>30 mins to 1 hour</b> on it and they have completed the 3 key expectations above.	
<b>6 Encourage your child not to give up if they are making mistakes</b> If your child is making mistakes, tell them that is ok and normal. As long as your child is working in the correct way (watching the video, taking notes, writing their workings and self-correcting) then praise them for their hard work and application. Try not to focus on their score as this can demotivate them. If you praise their effort and tell them they will eventually improve if they keep working in this way they will be happy and want to do their weekly homework.	
<b>7 Reassure your child if they are not understanding</b> If your child completely does not understand the video, watch it with them and try to help them understand. Also look below the video to their building blocks. Redoing these lessons will help your child plug any gaps in their prior learning needed for the current homework.	
<b>8 Help them do extra work or get ahead</b> Before learning new topics, always encourage your child to do two things: i) Fix lessons marked in their donut as <b>red (under 70%)</b> or <b>amber (between 70 and 100%)</b> and try to make them <b>green (100%)</b> by redoing them. ii) Complete a <b>Fix-Up-5</b> . HegartyMaths will remember every mistake your child has ever made and gives them 5 practice questions on their weaknesses with the help video. This will allow your child to improve quickly. Once the two above are done, then you can consider completing extra new lessons. Ask your child's teacher for the best extra clips to do.	

# Lessons

Through the continuous improvement of teaching, we provide students with varied learning experiences that cater for all learning styles. High expectations with no compromise ensures that our students become young mathematicians rather than kids than can do some maths! A not-so-typical maths question could be:

What is eleven thirds as a mixed number?

Make one cube = one third



$$= \frac{1}{3}$$



- Show me two thirds.
- What would one whole look like?
- Show me eleven thirds. How many wholes do you have?
- Write eleven thirds as an improper fraction and as a mixed number
- Use cubes to help convert these improper fractions to mixed numbers. Remember to make one cube equal your 'unit fraction'

$\frac{5}{2}$	$\frac{5}{3}$	$\frac{9}{4}$	$\frac{11}{5}$	$\frac{21}{12}$	$\frac{36}{8}$
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Can you convert these mixed numbers?

$$2\frac{5}{7} \quad 4\frac{2}{3} \quad 3\frac{4}{5}$$

Encouraging students to represent mathematical problems in a variety of ways is evidenced to deepen understanding and improve the development of problem solving skills. As we witness here at Lawnswood School.

