



GENIUS

Mathematics @ Ibstock

Name: Sir Isaac Newton
Class: 7DW
Subject: Mathematics



Mathematics, the world's most useful subject

- ▶ Mathematics makes our life orderly and prevents chaos.
- ▶ Qualities that are nurtured by mathematics are the power of reasoning, creativity, abstract and spatial thinking, critical thinking, problem-solving abilities and even effective communication skills.
- ▶ Mathematics is the birthplace of all invention, without which the world cannot move a millimetre.
- ▶ Be it a chef or a farmer, a carpenter or a mechanic, a shopkeeper or a doctor, an engineer or a scientist, a musician or a magician, everyone needs mathematics in their day-to-day life.

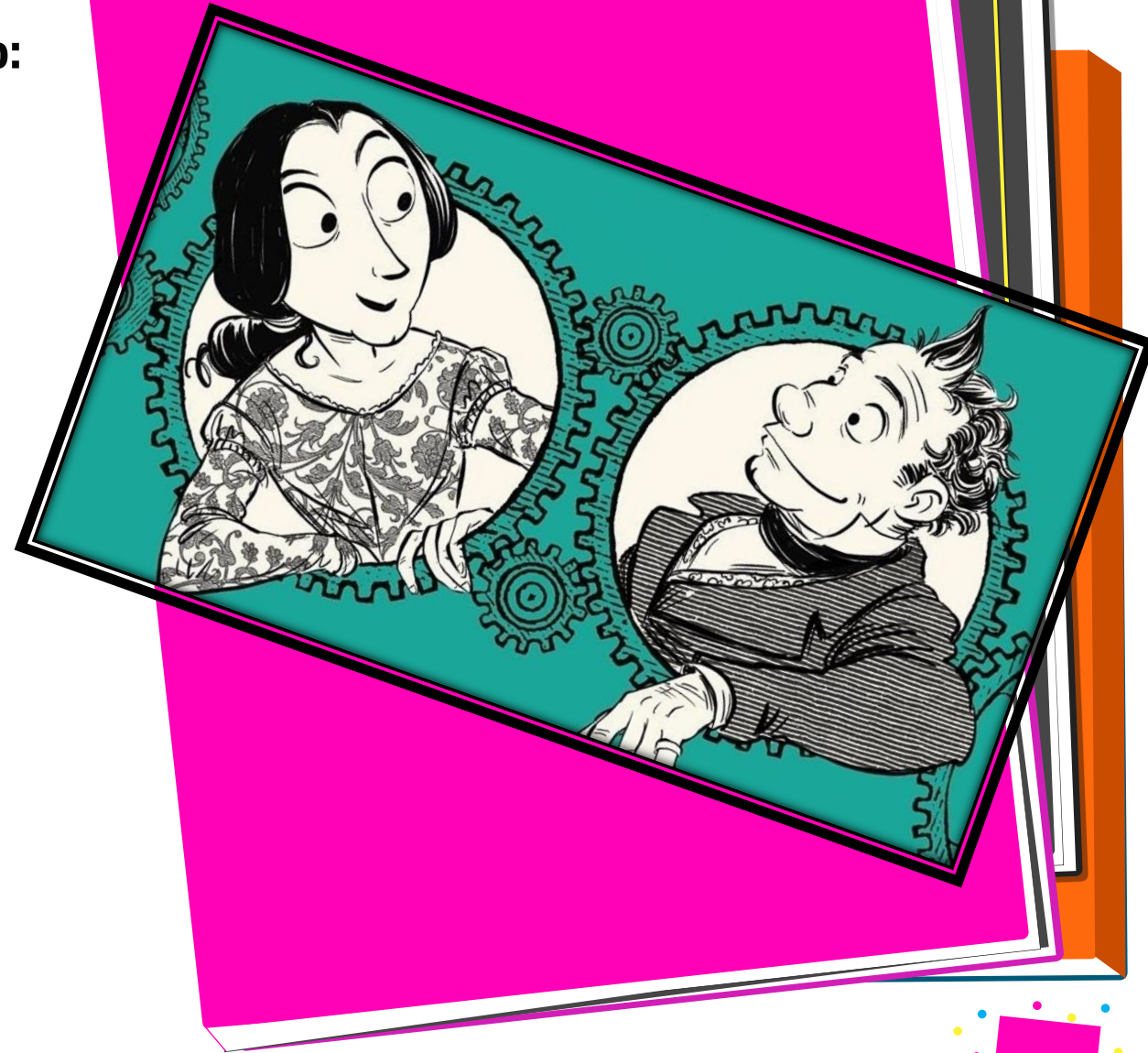


Key Stage 3 - Working mathematically

Through the mathematics content, pupils will be taught to:

Develop fluency

- ▶ Consolidate their numerical and mathematical capability from key stage 2 and extend their understanding of the number system and place value to include decimals, fractions, powers and roots.
- ▶ Select and use appropriate calculation strategies to solve increasingly complex problems
- ▶ Use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships.
- ▶ Substitute values in expressions, rearrange and simplify expressions, and solve equations.



Key Stage 3 - Working mathematically

Through the mathematics content, pupils will be taught to:

Reason mathematically

- ▶ Extend their understanding of the number system; make connections between number relationships, and their algebraic and graphical representations.
- ▶ Extend and formalise their knowledge of ratio and proportion in working with measures and geometry, and in formulating proportional relations algebraically.
- ▶ Identify variables and express relations between variables algebraically and graphically.
- ▶ Make and test conjectures about patterns and relationships; look for proofs or counter-examples.

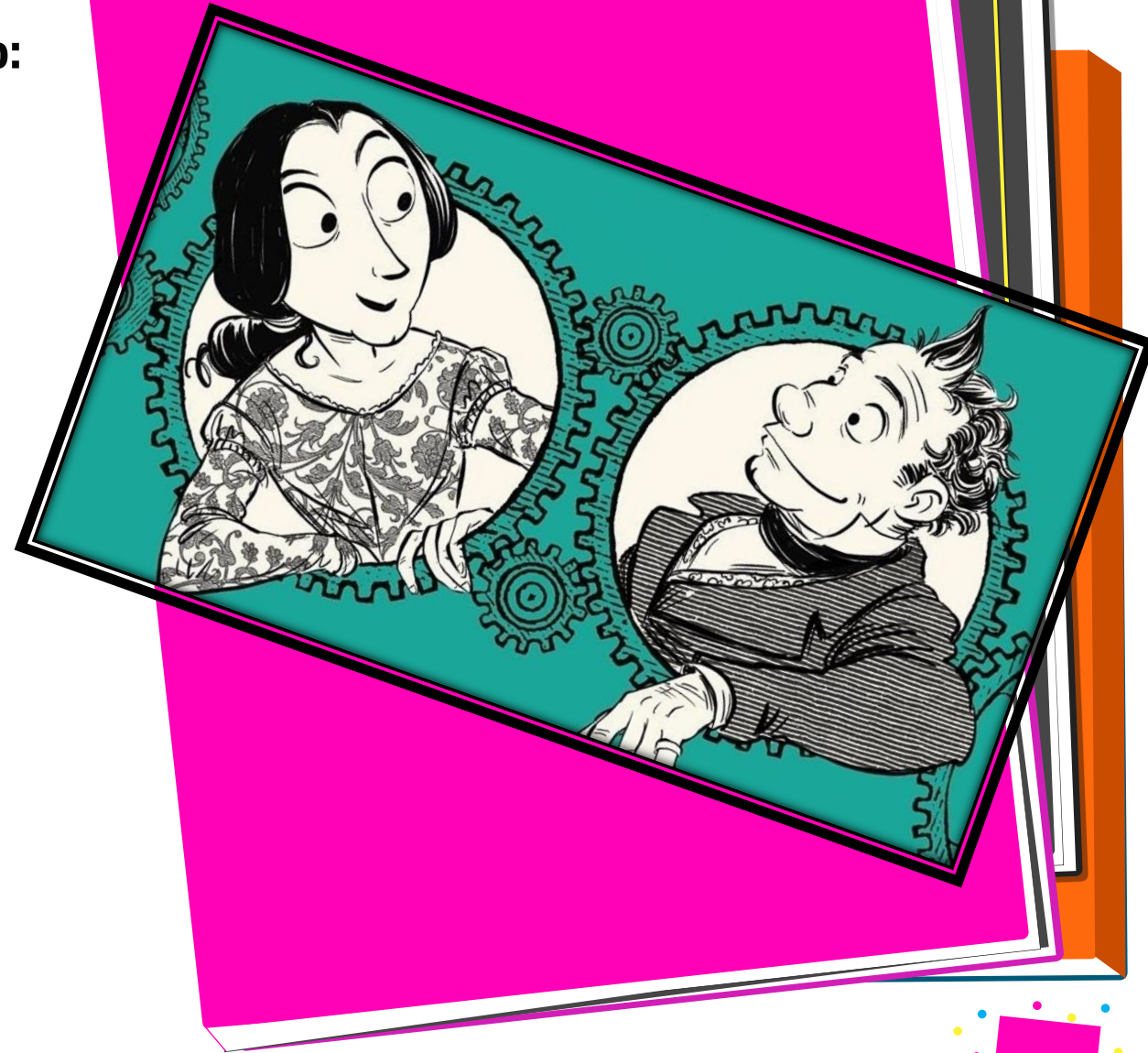


Key Stage 3 - Working mathematically

Through the mathematics content, pupils will be taught to:

Solve problems

- ▶ Develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems.
- ▶ Develop their use of formal mathematical knowledge to interpret and solve problems, including in financial mathematics.
- ▶ Begin to model situations mathematically and express the results using a range of formal mathematical representations.
- ▶ Select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems.



Key Stage 3 - Working mathematically

Through the mathematics content, pupils will be taught to:

Develop Mastery

- ▶ Maths teaching for mastery rejects the idea that a large proportion of people 'just can't do maths'.
- ▶ All pupils are encouraged by the belief that by working hard at maths they can succeed.
- ▶ Pupils are taught through whole-class interactive teaching, where the focus is on all pupils working together on the same lesson content at the same time, as happens in Shanghai and several other regions that teach maths successfully. This ensures that all can master concepts before moving to the next part of the curriculum sequence, allowing no pupil to be left behind.
- ▶ If a pupil fails to grasp a concept or procedure, this is identified quickly and early intervention ensures the pupil is ready to move forward with the whole class in the next lesson.





Mr. Wright ***Head of mathematics***

- ▶ Approaching 20 years of teaching mathematics at Ibstock!
 - ▶ Loves cycling and all bike related things.
 - ▶ Loves reading, cooking, art and travel.
 - ▶ Is a season ticket holder at Leicester Tigers.
 - ▶ Is a Manchester United fan.
 - ▶ Loves Italian food and French cinema.
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- ▶ Favourite 'mathsy' person is Johnny Ball check out the video at the end of this presentation.



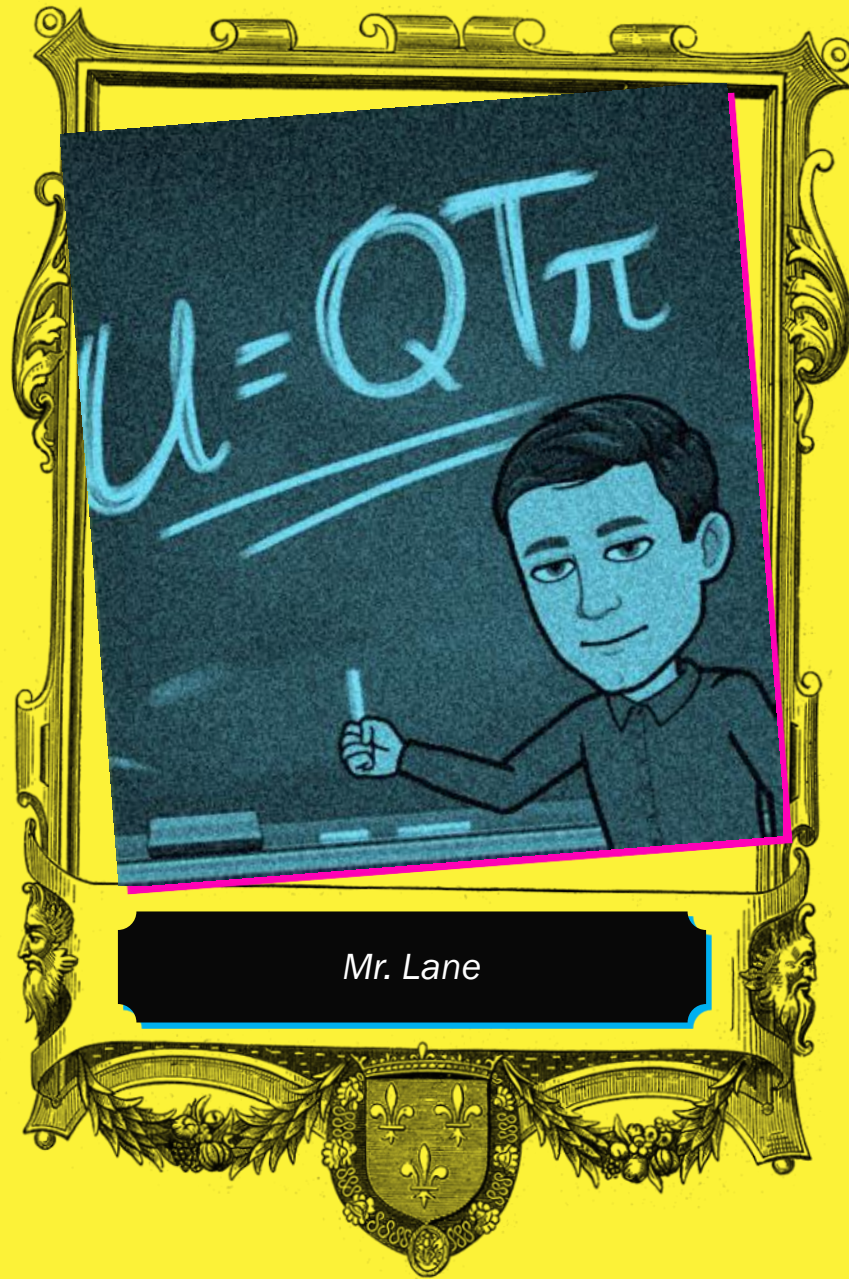


Mrs. Sharma

Teacher of mathematics

- ▶ Has been teaching mathematics at Ibstock for 14 years.
- ▶ Loves listening to music and cooking.
- ▶ Loves dancing and travel, reading and playing the piano.
- ▶ Is a season ticket holder at Leicester Tigers.
- ▶ Is a Liverpool FC fan.
- ▶ Favourite mathematician is Pythagoras - 'The Father of Numbers'





Mr. Lane

Teacher of mathematics

- ▶ Has been teaching mathematics at Ibstock for 12 years.
- ▶ Loves running, gardening and being outdoors.
- ▶ Loves video games, animated films and playing music.
- ▶ Is a Manchester United fan.
- ▶ Is also a fan of....**pizza!**
- ▶ Favourite mathematician is Alan Turing who is famous for cracking the Enigma Code in WWII





Mrs. Roden ***SENDCO & Teacher of mathematics***

- ▶ Has been teaching mathematics at Ibstock for 14 years.
- ▶ Loves music, baking and crochet – if I can, I include them in my lessons to make things even **more** interesting!
- ▶ Loves watching rugby. Nottingham are my favourite team.
- ▶ My favourite mathematician is [Prof. Brian Cox](#). He is amazing; a musician, a scientist, a writer and an overall inspiration. Watch him explain black holes [here](#).



