



The Curriculum at Isaac Newton Academy

“It is the supreme art of the teacher to awaken joy in creative expression and knowledge.” Albert Einstein

Aims

At Isaac Newton Academy our aim is to equip every student with the knowledge, learning power and character necessary for success at university and beyond. Our stated target is for 90% of each cohort to achieve 5 or more 9-5 grades at GCSE level, including in English and Maths. However we believe in the potential of **all** students to reach and exceed this qualifications level and we know that 9, 8 and 7 grades, rather than 5 and 4 grades, are required for success at advanced level and for access to top universities.

In designing the curriculum at Isaac Newton Academy we have asked two key questions:

How can we impart knowledge whilst instilling a love of learning and developing learning power?

How can we develop in our students the character necessary to translate that knowledge and learning power to success in life?

Delivering a challenging, academic, creative, interesting and inspiring curriculum is central to achieving our ambitious goals.

At Isaac Newton Academy it is important that the curriculum provides:

Depth

so that students become proficient in Literacy and Maths skills and core academic subjects quickly

so that students develop the depth of learning required for success at the highest grades and to progress to more advanced levels

Breadth

so that, building upon that foundation, students gain knowledge, skills, understanding and qualifications that demonstrate academic, aesthetic, creative, human, social, political, physical, manipulate, linguistic, literary, mathematical, moral, ethical, scientific, spiritual and technological qualities and awareness

Skills & Character development

so that students leave the academy with the learning dispositions and character traits necessary for success in life (see section on BLP and the INA BRIDGES below)

Academic rigour & knowledge acquisition

preparing students to compete successfully against their highest performing peers nationally for places at top universities (see section on knowledge acquisition below).

The challenge is to ensure coherence, with planning as a whole entity across each year and the key stages to ensure progression and the opportunity for all students to maximise their progress and achieve their potential.

Skills & Character Development**a. Building Learning Power (BLP)**

At Isaac Newton Academy we explicitly talk about the brain's capacity to grow and we support students in exercising and strengthening their brains through a BLP curriculum and the BRIDGES Framework.

Building Learning Power (BLP) is about building a culture in classrooms (and the academy as a whole) that systematically cultivates habits, learning dispositions, attitudes and characteristics that enable young people to face difficulty and uncertainty calmly, confidently and creatively. Students who are confident of their own learning ability learn faster and learn better. They concentrate more, think harder and find learning more enjoyable. They do better in their tests and external exams. And they are easier and more satisfying to teach.

Spending time on BLP does not conflict with teaching subject content, it complements it. Research suggests that achievement levels are highest when students have first had their sense of themselves as learners strengthened, then been helped in learning how to learn and then assisted in mastering useful and important bodies of knowledge. BLP is about helping students to build up the mental, emotional and social resources to enjoy challenge and cope well with uncertainty and complexity. To thrive in the 21st century, at university, in a career and in adult life, it is not enough to leave school with outstanding

examination results. Students need to have learnt how to be tenacious and resourceful, imaginative and logical, self-disciplined and self-aware, collaborative and inquisitive.

There is good evidence that high achievers, especially girls, often develop an anxious attitude towards their own performance that makes them go to pieces in the face of unexpected difficulty and avoid new kinds of challenges in case they 'look stupid'. They know how to get good marks in school terms but lack resilience and adventurousness in a wider sense; they know how to succeed but they have not learned how to fail or how to struggle. In 2009-10 1,500 students used the services of the Cambridge University counselling service. The Head of Service blames spoon-feeding at school. At Oxford University the clinical director of the university counselling service blames modularised and packaged courses and teaching to exams for increasing levels of debilitating stress and anxiety amongst students. At Isaac Newton Academy we do not just want students to gain places at top universities, but to thrive and succeed in this academic environment.

BLP and the development of the BRIDGES dispositions and characteristics is vital to not just gaining top qualifications but to succeeding in life beyond school. BLP supports Carol Dweck's Growth Mindset.

To be truly effective, BLP needs to be embraced by the whole school community: teaching and operational staff, governors and parents.

People who embrace BLP tend to share a number of traits. They are:

- reflective and honest about their own practice
- enthusiastic but discerning consumers of new ideas
- open-minded and willing to give things a go
- patient
- resilient
- inclined to be open with students about what they are trying to do and to involve them in feeding back on and co-constructing the way that teaching and learning happen
- collaborative and generous with each other about their thoughts and ideas.

They use learning language to support students' development and exemplify the traits of an effective learner in their dealings with students. BLP teachers design learning activities that deliberately stretch and exercise the full range of learning-oriented habits of mind and develop key character traits. They provide opportunities for students to design and direct their own learning. They use the physical environment to reinforce positive messages about exploration and experimentation.

b. The INA BRIDGES Framework

The following framework has been designed to summarise the main character traits and learning dispositions that we support members of the Isaac Newton Academy community to develop and role model. We believe that these are fundamental to being an effective learner and to success and fulfilment in life. They underpin the curriculum at the academy and the policies and ethos of the organisation.

CHARACTERISTIC	SHOWN THROUGH
BRAVERY	courage, leadership, experimentation, risk-taking, optimism
RESOURCEFULNESS	remembering, making connections, transferring recycling, scavenging, questioning, reasoning, imitating, flexibility, adaptability
INTEGRITY	fairness, humanity, justice, citizenship, honesty, humility
DISCOVERY	curiosity, open-mindedness, enthusiasm, energy, noticing, creativity, imagining
GRIT	patience, resilience, determination, managing distractions, perseverance, concentration
EMOTIONAL INTELLIGENCE	listening, empathy, collaboration, sociability, reflectiveness, understanding, openness
SELF-DISCIPLINE	organisation, hard-work, absorption, practising, prioritising, planning, prudence, revising, self-regulation, independence, motivation.

B: Knowledge Acquisition

It is clearly essential that through the taught curriculum students gain a broad foundation of factual knowledge in order for them to perform to their potential in examinations and gain top qualifications. Furthermore, research suggests that students leaving school with a solid knowledge bank are more confident, informed and articulate individuals, performing well at interview and getting more from life. In 'The Schools We Need And Why We Don't Have Them', E. D. Hirsch argues convincingly that there is a certain core knowledge required of all individuals in order for them to participate fully in society and experience success in life. He refers to Horace Mann who argued that democracy required school to provide all children equally with the knowledge and skills that would keep them economically independent and free. He suggests that just as it takes money to make money, it takes knowledge to make knowledge, referring to the Biblical paradox set out by Matthew (13:12): "For whosoever hath, to him shall be given, and he shall have more abundance: but whosoever hath not, from him shall be taken away even that he hath." It is vitally important that the curriculum imparts a core bank of knowledge to students at the academy, so that they add to and build on this intellectual capital as they progress into higher education and life beyond schooling. There is a moral imperative to ensure that socio-economic disadvantage does not result in a deficit of intellectual capital. Hirsch argues that "an early inequality in the distribution of intellectual capital may be the single most important source of avoidable injustice in a free society."

As stated earlier, the relationship between skills development and knowledge acquisition is one of co-dependence. A child's intellectual interest is fuelled by enabling knowledge. Wide knowledge nourishes an active curiosity to learn still more and more.

"Equity requires that schools give all children the knowledge and skills they need to become politically functional, economically successful, and autonomous citizens." E. D. Hirsch.

The Isaac Newton Academy Primary Curriculum

"Tell me and I forget, teach me and I may remember, involve me and I learn." Benjamin Franklin

The objectives/principles of the Primary curriculum are:

- To assist all pupils to develop to their full potential by striving to cater for their different strengths and interests.
- To provide cross curricular links to ensure that pupils' learning has even greater coherence and helping pupils to transfer skills between different areas of the curriculum in order to encourage

flexibility and resourcefulness and to enable them to use their strengths in one area to overcome challenges in another

- To ensure pupils are active, motivated and enthusiastic learners
- To ensure pupils know what they are learning and why
- To embed the application of ICT across the curriculum in order to maximise pupils' learning and progress
- To support pupils in mastering the skills, knowledge and understanding required to be fully prepared for secondary education
- To provide pupils with real life experiences at least once every half term, by either taking the pupils out of school for a visit linked to the half termly topic, or by inviting guest speakers or interactive workshops into school for pupils to participate and engage in
- To allow for pupils to demonstrate their learning in different ways – not always in exercise books but through photographs, posters, products, presentations, performances.

All aspects of our curricular provision have been devised with the 2014 National Curriculum in mind. We have ensured that all the statutory requirements are fully adhered to and that all pupils are fully prepared to meet the requirements of the National Curriculum tests in English and mathematics at years 2 and 6.

A strong command of English and mathematics is a vital foundation for the whole curriculum. We prioritise depth before breadth so that all pupils secure firm foundations in these core subjects as early as possible, allowing them to flourish across the breadth of the full curriculum. We use a topic based approach, focussing on a new topic each half term which helps pupils to immerse themselves in an area for a period of time, but equally enables pupils to make links between different subject areas. Every curriculum subject is covered through the Early Years Goals and explored through various topics, some subjects are taught in a discrete way in Reception e.g. English, maths, music, art and PE.

English

English has a pre-eminent place in education and in society. A high-quality education in English will teach pupils to write and speak fluently so that they can communicate their ideas and emotions to others and, through their reading and listening, others can communicate with them. Through reading in particular, pupils have a chance to develop culturally, emotionally, intellectually, socially and spiritually. Literature, especially, plays a key role in such development. Reading also enables pupils both to acquire knowledge and to build on what they already know. All the skills of language are essential to participating fully as a member of society; pupils, therefore, who do not learn to speak, read and write fluently and confidently are effectively disenfranchised.

The overarching aim for the English curriculum is to promote high standards of literacy by equipping pupils with a strong command of the written and spoken word, and to develop their love of literature through widespread reading for enjoyment. In our academy we aim to ensure that all pupils:

- read easily, fluently and with good understanding
- develop the habit of reading widely and often, for both pleasure and information
- acquire a wide vocabulary, an understanding of grammar and knowledge of linguistic conventions for reading, writing and spoken language
- appreciate our rich and varied literary heritage
- write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences
- use discussion in order to learn; they should be able to elaborate and explain clearly their understanding and ideas
- are competent in the arts of speaking and listening, making formal presentations, demonstrating to others and participating in debate.

Mathematics

At Isaac Newton Primary we use the Maths Mastery approach whereby pupils are able to meet both our high expectations of them and the challenges of the new primary curriculum. Maths Mastery works on the guiding principles of regular use of concrete materials and pictorial representations before pupils work on abstract problems. It also ensures depth before breadth. This approach explicitly focuses on using mathematical language and a mindset that says every child can succeed. These principles sit alongside the three central aims of the primary maths curriculum of developing fluency, reasoning mathematically and solving problems. Success will ensure that pupils fulfil their potential and are fully prepared for secondary school mathematics.

Science

Science stimulates and excites pupils' curiosity about phenomena and events in the world around them. Science links direct practical experience with ideas so it can engage learners at many levels. During the teaching of science an emphasis is placed on the teaching of scientific skills such as predicting, estimating, measuring, fair testing, hypothesising, and drawing conclusions. These skills are taught through a two year cycle of topics: life processes and humans, sound, electricity, light, the earth and beyond, separating materials, grouping materials, forces and motion and green plants and the environment. Science is taught using a topic based approach allowing pupils gain a real depth of learning over the course of a half term and fully immerse themselves in a topic.

Computing

Computing prepares children to take part in a rapidly changing world in which work and other activities are increasingly transformed by access to varied and developing technology. Through Computing, we teach children learn how to store, manipulate, retrieve and present information which may consist of text, numbers, images, sound or other signals. These skills are taught through topics consisting of communicating information; handling information, modelling and control based on the 'Switched On' schemes of learning. (See INA Primary Computing Policy)

Religious Education

RE is taught in accordance with the Redbridge Agreed Syllabus for RE and scheme of learning. Alongside Christianity, children study other major religions. Parents/carers are able to withdraw their child from RE or collective worship but should discuss this with the Headteacher.

Art and Design

Art and Design provides visual, tactile and sensory experiences and is a unique way of understanding and responding to the world. Children use colour, form, texture, pattern, different materials and processes to communicate what they see, feel and think. They explore ideas and meaning in the work of artists as well as learning how to understand, appreciate and enjoy art. Visits are made to provide first-hand experience of the work of artists.

Design Technology

DT also prepares children to participate in a world of rapidly changing technology. Finding out about how objects are designed and made helps children to make sense of the world around them. By designing and making their own products, children learn: practical skills, like finding out how things work and making products that are useful and look good and ways of thinking and working, like coming up with ideas, solving problems and working as a team.

Geography

Geography provokes and answers questions about the natural and human worlds. It develops knowledge of places and environments throughout the world, an understanding of maps, and a range of investigative and problem solving skills both inside and outside the classroom. Geography is taught

through a series of themes such as settlement, environmental issues, localities and water. Visits are made to the area surrounding the academy to support work in geography.

History

In History, children explore the past in Britain and the wider world. The key areas developed through the teaching of history are: chronological understanding, knowledge and understanding of events, people and changes in the past, historical interpretation and enquiry and being able to organise and communicate their findings. At both key stages children study local history which is often supported by visits in the local vicinity.

Music

The teaching of music develops children's ability to listen and appreciate a wide variety of music and to make judgements about musical quality. They are encouraged to take an active role in composing and performing music. As an academy, we greatly value the contribution music makes to everyday life and involve all children in musical activities.

Modern Foreign Languages

Weekly MFL lessons are taught from Year 3 by subject specialists from the secondary school. Learning a foreign language provides an opening to other cultures. A high-quality language provision fosters pupils' curiosity and deepens their understanding of the world. The teaching of languages enables pupils to express their ideas and thoughts in another language and to understand and respond to its speakers, both in speech and writing. It provides opportunities for pupils to communicate for practical purposes.

Personal Social Health Education

PSHE helps to give pupils the knowledge, skills and understanding they need to lead confident, healthy, independent lives and to become informed, active and responsible citizens. Our BRIDGES framework is an integral part of our PSHE lessons. Pupils work on developing at least one of the BRIDGES characteristics each half term and, from Reception onwards, complete their BRIDGES Journal to track and assess their understanding and day-to-day development of the habits. Developing Social and Emotional Aspects of Learning (SEAL) is an integral part of our PSHE teaching, allowing children to express their views and opinions on concerns they may have. Drugs Education and Sex and Relationship Education are part of PSHE teaching, as are British Values. Year 3 pupils are introduced to the Philosophy for Children (P4C) model, involving pupil led discussion based on a philosophical question. This approach helps pupils build their higher order thinking, questioning and speaking and listening skills.

Whilst P4C is a pedagogical tool used across subjects, it plays a large part in the half termly planning around PSHE discussion topics. P4C discussions are preparation for Harkness learning at the Secondary school.

Building Learning Power (BLP) is reinforced by every member of staff through the BRIDGES framework. Each week pupils are introduced to the new BRIDGES focus during the Monday assembly. This BRIDGES characteristic of the week becomes the focus around the school and will be visible in every classroom, around the whole school building and discretely taught and reinforced across the curriculum. Each week students focus on one of the 7 characteristics of the BRIDGES framework (covering all 7 each half term). At all times the pupils will be given opportunities to explore the features and develop the skills related to the particular characteristic. The skills needed to be an effective learner and characteristics required for success in life should be developed and practised explicitly and the language of learning used by all in the school community. The awards assembly every Friday will congratulate pupils who have demonstrated the use of the focus BRIDGES disposition.

Physical Education

In PE children develop their physical competence and confidence as well as their ability to perform in a range of activities such as gymnastics, games, dance, athletics and swimming. PE provides opportunities for children to be creative, competitive and to tackle challenges as individuals, groups and in teams. It also promotes positive attitudes towards active and healthy lifestyles. Children also have swimming lessons for a term in selected years. Isaac Newton Academy is committed to ensuring all pupils have access to a fantastic PE education, and also to ensuring impact on pupil outcomes and experiences through judicious use of the PE premium funding.

Enrichment

As a whole Academy expectation, every child participates in one enrichment club each week starting from Reception. Each club runs for a half term, so every half term the children have the option to choose a different club. On most occasions the enrichment clubs are mixed across year groups, allowing pupils to learn with different pupils from across the school.

Cultural Passport

Every child at Isaac Newton Primary is issued with a Cultural Passport from Reception onwards in which they are expected to track and record their cultural experiences and activities against the following categories: Outdoor and Nature, Community, Creative and Global. We ensure that every child receives a rich and diverse curriculum experience by giving a vast number of opportunities through enrichment

clubs, school visits and a range of learning experiences through the day-to-day curriculum. All of these can be included as evidence in the passport.

Curriculum Model

Isaac Newton Primary Academy comprises of three forms in each year group, from Year Reception to Year 6. The 90-pupil intake is divided into the three class groups and mixed in terms of gender, ethnicity, month of birth and any information obtained from pre-school or home visits regarding attainment.

Reception Year Curriculum Model

The Early Years Foundation Stage (EYFS) provides the foundation for all future learning. We aim to give children the broad range of knowledge and skills that provide the right foundation for excellent future progress through school and life. To ensure this, learning and development opportunities are planned around the needs and interests of each child and are assessed and reviewed regularly. Adults respond to each child's needs and interests, guiding development through warm, positive interactions in stimulating, well-resourced indoor and outdoor environments.

It is the adult's role to teach, support, stimulate and extend children's learning through initiating and extending experiences and interacting skilfully and sensitively with children to scaffold, support and enhance learning.

We have developed a specific Early Years curriculum taking full account of the requirement of the statutory EYFS Framework(2012), which combines the development of personal, social and emotional skills, opportunities for child initiated learning and a broad curriculum with daily mathematics and literacy sessions.

Pupils are taught in their class groups for most lessons, although the daily Read Write Inc. (RWI) phonics lessons are taught in set groups according to attainment. All three class groups are taught RWI at the same time each day and taught by the class teachers and teaching assistants, allowing for 6 smaller groups to be created, based on attainment levels. This model ensures that every child is working at the correct level and pace according to their need, in smaller teaching group sizes; we also ensure no child is left behind. Every child's progress and attainment is monitored, tracked and discussed on a regular basis to enable flexibility within the set groups as we know that children progress at different rates throughout the year. Regular feedback is shared with parents/carers, along with resources and ways in which they can support their child at home.

Weekly home learning is given to support and reinforce the school learning.

The children's progress and attainment across all 17 Early Learning Goals is assessed and recorded every half term. Tapestry, an online tracking and assessment tool, is used to ensure all areas of learning are covered. This tool also allows for learning to be shared with the parents/carers who are invited to

upload and share key learning with their child's teacher. A Pupil Report and a Parent Progress Meeting takes place at the end of every term.

Weekly Subject Time Allocations:

5 x 45 minutes Maths Mastery, 5 x 45 minutes Literacy, 5 x 15 minutes Maths Meetings, 5 x 45 minutes Phonics (RWI), 4 x 20 minutes Handwriting, 5x 20 minutes of Guided Reading (January onwards), 5 x 15 minutes of Story Time, 1x 30 minutes Circle Time, 5 x 15 minutes Fruit & Talk Time.

Secondary subject specialists teach discrete Music and PE lessons each week and a discrete Art lesson is taught each week by a Teaching Assistant.

All EYFS areas of learning are developed through planned, facilitated independent tasks during the afternoon sessions. There is a good balance between indoor and outdoor learning. A different topic theme is explored each half term to engage and stimulate the children's learning experiences.

Key Stage 1 Curriculum Model

Pupils are taught in their class groups for most lessons, although the daily Read Write Inc. phonics lessons (Year 1 and some Year 2) are taught in set groups according to attainment. In Year 1 all three class groups are taught RWI at the same time each day and taught by the class teachers and teaching assistants, allowing for 6 smaller groups to be created, based on attainment levels. This model ensures that every child is working at the correct level and pace according to their need, in smaller teaching group sizes; we also ensure no child is left behind. Every child's progress and attainment is monitored, tracked and discussed on a regular basis to enable flexibility within the set groups, as we know that children progress at different rates throughout the year. Regular feedback is shared with parents/carers, along with resources and ways in which they can support their child at home. Weekly home learning is given to support the home/school learning.

We use a topic based approach across Key Stage 1, with the topic changing every half term. The English texts used each half term are linked to the learning topics, ensuring exposure to a wide range of different genres, reading and writing experiences.

The children's progress and attainment across all areas of the National Curriculum is assessed and recorded every half term. A Pupil Report is sent home and a Parent Progress Meeting takes place at the end of every term.

At the end of Year 1 the children have a phonics screening check assessment to ensure all pupils have learned phonic decoding to an appropriate standard by the age of 6. Any pupil who has not made the required level of progress will retake the test again in Year 2.

At the end of Year 2 the children sit the end of Key Stage 1 SATs papers, which include a Spelling, Punctuation, and Grammar Paper, Reading Comprehension papers, Arithmetic and Reasoning papers in Maths.

Weekly Subject Time Allocations:

Core Subjects

5 x 60 minutes Maths Mastery, 5 x 45 minutes English, 5 x 15 minutes Maths Meetings, 5 x 45 minutes Phonics or SPaG/Comprehension, 5 x 15 minutes Handwriting, 5x 20 minutes of Guided Reading, 5 x 15 minutes of Story Time, 5 x 15 minutes Response to Marking.

Foundation Subjects

1 x 30 minutes Music lesson taught by secondary specialists, 1 x 30 minutes PE lesson taught by secondary specialists and 1 x 30 minutes lesson of Art taught by a Teaching Assistant.

1x 60 minutes Science, 1 x 60 minutes Humanities, 1 x 60 minutes Computing, 1x 30 minutes Art/DT, 1x 30 minutes PSHCE, 1 x 30 minutes RE and 1 x 60 minutes PE.

Key Stage 2 Curriculum Model

Key Stage 2 is taught through half termly topics, ensuring a full coverage of the National Curriculum requirements. Each enquiry based topic involves cross curricular links which encourage pupils to make connections in their learning. Every child's progress and attainment is monitored, tracked on a regular basis to ensure the support and challenge is planned for and given when needed for individuals, as we know that children progress at different rates throughout the year. Regular feedback is shared with parents/carers, along with resources and ways in which they can support their child at home. Weekly home learning is given to support the home/school learning, the time expected to be spent on home learning increases steadily as pupils move through each year of the school ensuring Secondary readiness.

A Pupil Report is sent home and a Parent Progress Meeting takes place at the end of every term.

At the end of Year 6 the children sit the end of Key Stage 2 SATs papers, which include a Spelling, Punctuation, and Grammar Paper, Reading Comprehension papers, Arithmetic and Reasoning papers in Maths.

Weekly Subject Time Allocations:

Core Subjects

5 x 60 minutes Maths Mastery, 5 x 55 minutes Literacy, 5 x 20 minutes Maths Meetings, 5 x 15 Spelling, 5 x 15 minutes Handwriting, 5x 30 minutes of Guided Reading, 5 x 15 minutes of Story Time, 5 x 15 minutes Responding to Marking.

Foundation Subjects

1 x 30 minutes Music lesson taught by secondary specialists, 1 x 30 minutes PE lesson taught by secondary specialists and 1 x 30 minutes MFL lesson taught by a secondary specialist.

2x 60 minutes Science, 1 x 60 minutes Humanities, 1 x 60 minutes Computing, 1x 60 minutes Art/DT, 1x 30 minutes PSHCE, 1 x 30 minutes RE and 1 x 60 minutes PE

The Secondary Curriculum

The Harkness Philosophy

At Isaac Newton Academy Secondary all teachers are teachers of the Harkness Method. Harkness learning is built into every Scheme of Learning. Two fundamental expectations of all Harkness teachers underpin our expectations at Isaac Newton Academy:

1. that all students play an active part in all learning activities
2. that all students carry out the independent learning activities in preparation for the next lesson.

The Harkness Method

Philanthropist Edward S. Harkness established the Harkness method of teaching. Learners sit around an oval table and engage in a seminar style dialogue. Harkness places students at the centre of the learning process and encourages them to learn from one another. Under the guidance of an expert teacher, the instruction focuses on the ideas brought to the table by the students themselves –what happens in the class depends on what the students have done before the class begins. Thus Harkness comes with an obligation: the student has to be prepared and being prepared means having done the pre-reading/preparation and having thought about it too.

The Harkness Method insists on active, intelligent participation. It makes learning a group endeavour. It gives shy students a secure stage on which to express their ideas. It teaches more talkative students to listen as well as to contribute. From the table grows a culture of learning dialogue. The Harkness Method helps learners to analyse, critique, express and imagine.

Highly skilled Harkness learners:

- prepare thoroughly for class
- annotate, highlight or underline the text

- generate questions and passages for discussion
- create links with and between texts
- speak articulately and concisely
- listen respectfully to their peers
- refer back to comments made earlier in the discussion or course
- share information from other disciplines when relevant
- look up confusing words, concepts or references
- notice when their peers have points to make
- do not jump in to respond to every question posed
- accept and adapt divergent opinions without feeling undermined
- make perceptive comments which often move on or change the course of the conversation
- root their ideas in the text
- consistently demonstrate respect in speech and manner
- show enthusiasm for and skill in the process
- show agility of mind, clarity of leadership and sophistication of **insight**.

The Isaac Newton Academy KS3 Curriculum

The academy follows a two-week timetable comprising of 58 lessons. Lessons are of either 55 or 60 minute duration.

Subject	Number of lessons per two-week cycle
English	10
Maths	10
Science	8
Humanities (Geography, History, RS)	8
Languages	4
Music	4
PE	4
Art	2
BRIDGES	2
Drama	2

Reading	2
Technology	2

In Year 9 there is no Reading lesson: the period is allocated to Humanities to allow them to have 4 periods of History, 4 of Geography and 2 of RS each fortnight (taught by subject specialists). In addition, Computing is taught as part of an ADT carousel.

The 180 students are divided into 7 tutor groups in year 7. These are mixed in terms of prior attainment, feeder primary, gender, ethnicity, SEN, FSM etc. Students study the following subjects in their tutor groups: MFL (year 7), Art, Technology, (Computing in year 9), Drama, Music, BRIDGES, Big Band, Reading. PE is taught in different groups at different times of the year depending on the sport being studied and the number of tutor groups being taught PE at the same time. In Years 8 & 9 students are in MFL groups according to the language they study. Tutor groups are arranged into sets for Maths (according to prior attainment in Maths), Science (according to prior attainment in Science) English (according to prior attainment in English) and Humanities.

The Structure and Principles of the KS3 Curriculum

- Students study Maths and English for a minimum of one hour each per day. *There should be depth before breadth – all students need to master English and Maths in order to excel in other curriculum areas.*
- Students who enter the academy with weak literacy and Maths skills have extra Maths and English support in a 1:1 or small group setting as required, after school or at the weekend. *The curriculum is designed to teach students from their starting point and to achieve rapid catch-up for those who enter behind their peers in levels of attainment.*
- *The specialisms of Maths and Music have a central place in the curriculum at Isaac Newton Academy. Maths and Music are disciplines in which the correlation between hard work and excellence are seen particularly clearly.*

Maths: Fluent numerical skills give students access to a wealth of scientific and creative subjects. Mastery of mathematics develops students' intellectual and logical reasoning capabilities, spatial visualisation, analysis and abstract thought. "Mathematics, rightly viewed, possesses not only truth, but supreme beauty" (Bertrand Russell).

Music: Music plays a central role in supporting young people in developing a range of skills and dispositions as well as enriching their lives. We believe that every child can be a musician and that music has the facility to develop confidence, creativity, leadership, self-discipline and excellence. Our aim is for all students to have access to and participate in a breadth of music-making experiences that reflect the multicultural society in which we live. Through their engagement with high-quality curriculum and enrichment-related activities, we aim for students to become passionate and versatile musicians who will maintain an active relationship with music throughout their lives.

- All students in Years 7 & 8 have a one hour Reading lesson in the Library each week. *A love of reading and the habit of reading is developed from entry into the academy and the Library is seen as the heart of the school.*
- Students all study Science for 8 periods per fortnight, History, Geography and RE (as Humanities) for 8 hours per fortnight (10 in Year 9), and MFL for 4 hours per fortnight. *A significant amount of time is allocated to the study of Science, the Humanities and a Modern Foreign Language (MFL) as these are key academic disciplines and top GCSE grades in these subjects are required by the best universities.*
- Academic subjects are balanced and interspersed with practical and creative ones. *The curriculum should provide a range of learning experiences and environments, academic and practical subjects and learning in and out of the classroom.*
- ICT & Computing skills (Word, Excel, Powerpoint, Outlook etc.) are taught to all students via cross curricular coverage and 'drop down' sessions in Years 7 and 8, as well as discrete lessons in Year 9. *This is to ensure that all students reach a level of expertise in digital technology to support them in professionally presenting their learning in all curriculum areas.*
- Building Learning Power is taught by each tutor to their tutor group in a weekly lesson and reinforced across the curriculum. Each fortnight students focus on one of the characteristics of the BRIDGES framework (covering all 7 sectors each term) and consider one or two particular features of that characteristic (e.g. leadership as part of Bravery). In both their BRIDGES lesson and their subject lessons they explore that/those feature(s) and develop the skills related to that/those characteristic(s). *The skills needed to be an effective learner and characteristics required for success in life should be developed and practised explicitly and the language of learning used by all in the school community. Community service is also undertaken by all students as part of their character development.*
- Year 7 teachers are encouraged to spend some time observing and learning with and from outstanding primary colleagues. *The curriculum should build on the best practice at KS2 and be informed by student learning and attainment at KS2.*
- All staff, teaching and operational, are expected to deliver at least one enrichment session each week. Each student is expected to attend at least 1 enrichment/support session after school each week. Some students will be directed to attend one session each week (literacy or numeracy), but every student will have least one free choice. *An after - school enrichment and extension programme should provide the opportunity for students to experience new disciplines and activities, learn new skills and/or take part in more sport, music and creative activities than can be provided in the structured school day. These activities will also provide a safe and supported environment for socialising, having fun and getting to know staff in a different context.*
- All students are set, and expected to complete, independent learning tasks each weekday in preparation for their subsequent lessons. The school Library is open and supervised each school day until 6pm for students who wish to complete independent learning tasks on site rather than at home. *Learning to complete tasks independently, whether they be consolidation of earlier class learning or research/reading in preparation for future lessons, is an important skill and*

character trait for all students to develop in order to accelerate their rate of academic progression, to prepare them for advanced levels of educational study and to enable them to acquire life skills.

The Isaac Newton Academy KS4 Curriculum (Years 10 &11)

The 2017-19 offer comprises:

- 9 GCSEs as the basic entitlement for students – 5 GCSEs from Core and 4 GCSEs from Options – to give a firm foundation for future pathways, a range of different subjects to be chosen as options, without overcrowding. A small number of students may follow 8 GCSEs to allow time for extra support and consolidation of their students. A very small number of students with high level of need follow a modified curriculum that includes offsite provision.
- Option blocks built around student choices, allowing all students the opportunity to take the full EBacc and study both a language and either Geography or History. The EBacc is made up of English, maths, geography or history, the sciences, a language. Students are encouraged to take the full EBacc to provide a solid foundation for futher A level and university study. All students are required to take at least one of Geography, History, French or Spanish as an Option subject.
- No entry requirements for subjects as part of our commitment to a comprehensive education.
- Information, advice and guidance providing students and parents with the information they need to make decisions about GCSEs, including individual interviews with each student and their parent/ carer.

The model

Y10																			
En					Ma					Sc				PE	*	Option 1	Option 2	Option 3	Option 4
Y11																			
En					Ma					Sc				PE	*	Option 1	Option 2	Option 3	Option 4

* = Cultural Studies and PSHE

Core – 17 lessons/ week		Options – 4 options, 3 lessons/ week	
• English (2 GCSEs – Lang & Lit)	5 in Y10/ 6 in Y11	• Triple Science	• Art
• Maths (1 GCSE)	5	• French	• Drama
• Science (2 GCSEs)	5 in Y10/ 4 in Y11	• Spanish	• Music
• Sport & Fitness	1	• Geography	• PE
• Cultural Studies & PSHE	1	• History	• RS
		• Computing	• Technology (specialising in either Graphics or Textiles)

The Rationale

- PE is a popular subject and important for healthy lifestyles. We have a significant update for GCSE and anticipate continued high participation rates in PE enrichments. Core PE has been re-named to Sport & Fitness to distinguish it from GCSE PE. Maintaining an active lifestyle is even more important during KS4 with the pressures of exam. To reflect this, KS4 students are encouraged to participate in a PE enrichment.
- PSHE & core RS are taught as a discrete lesson, building on the strong foundations built in KS3 with BRIDGES and PSHE, demonstrating our on-going commitment to developing the whole child and not just academic outcomes. Core RS/PSHE has been re-named Cultural Studies to distinguish it from GCSE RS. PSHE and core RS comprise distinct PSHE modules and distinct core RS modules. Humanities specialists teach the RE modules and pastoral staff deliver the PSHE modules to ensure an engaging and appropriate curriculum.
- English is taught for 10 periods a fortnight in Y10 and 12 periods in Y11 to accommodate the reduced overlap in English Language and English Literature and the demands of the new GCSE.
- Maths is taught for 10 periods per fortnight to accommodate the increase in content and demand of the new GCSE.
- Science is taught for 10 periods per fortnight in Y10 and 4 periods in Y11 to support progression to the highest grades.

The Isaac Newton Academy KS5 Curriculum (Years 12 &13)

The 2017-19 offer comprises:

- A choice of routes: 3 x A level equivalents; 3 x A level equivalents + EPQ; 3 x A level equivalents + AS Maths or 4 x A level equivalents. Each route has its own entry requirements. Individual subjects have their own entry requirements. *We believe that reaching certain levels of prior attainment in particular subjects provides the foundation for success at KS5.*
- A levels in the following subjects: Art & Design, Biology, Chemistry, Computer Science, Economics, English Language, English Literature, French, Further Maths, Geography, Graphics, History, Maths, Music, Performing Arts, Physical Education, Physics, Politics, Psychology, Religious Studies, Spanish. Additional qualifications on offer: AS Maths, Level 3 BTEC Diploma in Business (equivalent to 2 A levels), EPQ (Extended Project Qualification). *This offer facilitates access to top universities, building on the strong foundations at KS4. It includes a range of new subjects and a vocational option, both of which provide breadth in KS5 study and facilitate entry access to university.*
- A tutorial programme delivered by the KS5 pastoral team that encompasses a programme of PSHE, internal and external speakers, and preparation for university.
- Information, advice and guidance providing students and parents with the information they need to make decisions about KS5, including individual interviews with each student and their parent/ carer.

See related policies: Secondary Teaching and Learning Policy, SecondaryIndependent Learning Policy, Secondary Enrichment Policy, Secondary Reading Policy, Primary Teaching and Learning Policy, Primary Home Learning Policy, Primary Enrichment Provision Policy, Primary English Policy,

Primary Maths Policy, Primary Computing Policy, BRIDGES Policy, EYFS Policy, Primary PSHE Policy & Primary RE Policy.

Reviewed May 2017