Curriculum, Teaching & Learning Policy

Approved and signed by the Learning and Standards Committee

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Curriculum, Teaching & Assessment Policy
Discovery Multi-Academy Trust

CONTENTS

1 CURRICULUM PURPOSE

The Curriculum, Teaching and Learning Policy is central to Discovery MAT's vision of providing quality learning experiences in order to ensure that children are ready for their next stage in learning and for their adult lives.

Discovery Multi Academy Trust Vision

We will ensure that all children are able to thrive through quality learning experiences, ensuring their readiness for the next stage in their learning.

To achieve our vision, we will:

- Encourage all our children and staff to excel and collaborate with one another, to ensure the best outcomes and progress for all.
- Develop joyful learning communities that work together to improve standards and outcomes for our children, as part of a wider community.
- Ensure that we remain committed to the following values that underpin the way we work: **DEMOCRATIC, INCLUSIVE, EXCELLING COLLABORATIVE**

2 WHAT DO WE MEAN BY CURRICULUM?

Curriculum is a word which describes the formal and informal learning which takes place in school. "In a democratic society which prizes equality of opportunity, the curriculum should be based first and foremost on the knowledge we consider all young people should have the access to and begin to acquire during their school years" (Myatt 2018).

As a Trust, we are committed to providing a knowledge-rich curriculum to all of our learners where school leaders design a curriculum based upon the National Curriculum entitlement as a minimum, with further taught and un-taught elements that extend and enrich provision. "The curriculum – taught and untaught – represents the totality of the experience of the child within schooling" (Myatt 2018).

As a Trust we work collaboratively to design and resource our curriculum, sharing expertise and harnessing talent from within, and beyond the Trust, in order to drive high expectations of curriculum content, resourcing and pedagogy. However, we recognise that there are also differences in the contexts of our schools and the communities which they serve and each school ensures that this is considered and the curriculum adjusted accordingly to meet the needs of our individual learners.

Our curriculum aspires to be:

- Evidence-informed
- Challenging
- Supported by effective assessment processes and procedures
- Sequenced so as to help children build schemas
- Taught to be remembered
- Designed to develop children's metacognitive knowledge and behaviours
- Broad – allowing for a wide-range of experiences and contexts

- STEM-based to encourage children to become resilient, reflective and creative thinkers, in order for them to be able to fulfil their wider role in their community
- Oracy focused to ensure pupils have access to a wide-ranging vocabulary
- Supported by evidence-informed professional development

Our un-taught curriculum reflects our Trust values in:

- Developing our children's spiritual, moral, social and cultural (SMSC) knowledge and understanding, supporting children's social awareness and ensuring that they know how to make a positive contribution to society.

- Supporting children's mental and physical health.

- Putting children's emotional development at the heart of our work through our Trauma Informed Schools (TIS) approach.

- Opportunities for creative and sporting pursuits enhance our taught curriculum to develop individual talent.

- Ensuring that there are equal opportunities for all pupils.

3 CURRICULUM AIMS

High quality teaching and rigorous assessment enables all children to access the breadth of the curriculum. The curriculum is inspiring, challenging, deep and broad.
So that all children:

- Develop transformational knowledge and skills that take them beyond their experience.
- Strengthen their academic knowledge and cultural capital through the acquisition of a broad and rich vocabulary.
- Shape their knowledge and character to prepare them for their future adult life, so that they can make a positive impact upon society.
- Achieve outcomes that show progress, whatever their starting points.

3.1 INTENT

At Discovery Multi Academy Trust the curriculum is designed to provide wide-ranging experiences and contexts which allow our children to develop the skills and knowledge to allow them to become resilient, reflective and creative thinkers. The curriculum is underpinned by our trust values; Democratic, Inclusive, Excelling and Collaborative. Through an engaging STEM-based approach to learning, our children will collaborate and be able to fulfil their wider role in their community. They will have the skills to make connections in what they have learnt, self-evaluate and develop a desire to learn as they go to their next stage of learning.

3.2 IMPLEMENTATION

Our curriculum has been designed to create a balance between the National Curriculum statutory requirements and a range of rich experiences which allow our pupils the opportunities to broaden

their life and cultural experiences. We are a Science, Technology, Engineering and Maths (STEM) Trust and our rich experiences and learning behaviours are embedded into our STEM skills as a blueprint for learning skills and opportunities. These skills are also referenced in other subjects, in order for our pupils apply them readily into different contexts.

Our curriculum provides our pupils with experiences and opportunities which best meet their learning and developmental needs. Through clear strategic planning, our curriculum provides not only memorable experiences but is rich in opportunities from which the children can learn and develop transferrable skills. The acquisition of knowledge and the development of skills is carefully planned to create a purposeful and exciting learning journey for every child, ensuring that milestones are met at key stages throughout their primary education. Our vibrant and rich STEM based curriculum is designed so that the subject specific skills are scaffolded within a cross-curricular theme or context each term. We use clearly sequenced, balanced and informed planning to deliver learning opportunities that develop a context and culturally rich learning environment, clearly developing links to other subjects. Teachers plan and tailor units of work and lessons to address the specific individual needs of pupils, with support from experienced staff members and external agencies so that all pupils are able to reach their full potential regardless of their starting point.

We deliver our curriculum through Quality First Teaching, where:

- Staff have high expectations of themselves and all of the children.
- Teachers are expected to impart knowledge accurately and with enthusiasm.
- Teachers are expected to take into account prior knowledge and experiences and to build upon this in a systematic way;
- Highly focused lesson design with sharp objectives;
- High demands of child engagement with their learning;
- High levels of interaction for all children;
- Appropriate use of teacher questioning, modelling and explaining;
- Emphasis on learning through dialogue;
- An expectation that children will develop resilience and accept responsibility for their own learning and work independently;
- Regular use of encouragement and praise to motivate children.

Each of the schools individually enhance the curriculum to suit the needs of their pupils and school communities.

3.3 IMPACT

Pupil voice is used to inform curriculum planning and teaching and learning progress, and for all subjects is tracked through continuous AfL assessment on our online assessment system. This includes key knowledge, skills and concepts. There are also summative data points throughout the year to prepare children for the formal SATs tests at Y2 and Y6. Termly Gap analysis and regular data reviews are held with each of the school's leadership team, Local Advisory Board and external visitors to evaluate the school improvement plans. Parents are invited to termly updates about their children's progress and attainment and SATs data and phonics outcomes are shared at the end of the year.

3.4 READING

Across the Trust, all pupils are encouraged to read widely including both fiction and non-fiction in order to develop their knowledge of themselves and the world in which they live, to establish an appreciation and love of reading**,** and to gain knowledge across the curriculum. Reading is taught through the English curriculum and reading within class will also be seen across all subject areas and include a wide variety of materials. Reading skills are also taught explicitly through reading

comprehension lessons. Each class also enjoys a daily story time session with their teacher. It is important for children to be read to daily and for our staff to model and share a story with a real focus on children being immersed in a range of different genres and authors.

Each of the schools uses the Renaissance Star Reading Scheme which is a complete online assessment of students' reading growth, allowing teachers to see which skills pupils have mastered aligned to the National Curriculum. Pupils read books from the scheme and then complete an online assessment tool (in school) to establish comprehension of the book. Children are encouraged to read at home daily, as part of their homework tasks, and take one book home for enjoyment and one from the REN scheme. Each pupil has an individual reading record which is completed by parents and school staff. We also encourage our children to make recommendations to each other and be able to articulate their choices and preferences.

The Read Write Inc. (RWInc) phonics programme is followed from Nursery, and throughout KS1. It is an inclusive literacy programme for all children learning to read. Children learn the 44 common sounds in the English language and how to blend them to read and spell. The scheme helps all children learn to read fluently, and at a speed, so they can focus on developing their skills in comprehension, vocabulary and spellings. The RWInc programme is also then used to support pupils in KS2, where needed. The RWInc sessions are expected to occur each day with no exceptions, as the continuity and pace of the programme is key to accelerating the progress of children's reading development. Children are assessed during each session and a formal assessment is completed once per half term by the RWInc Coordinator. This checks individual children's ability to recognise and say each sound, to blend and to say real and nonsense (alien) words. RWInc groups can then be adjusted to ensure that children are at a similar stage.

3.5 MATHS

Each school within the Trust follows the National Curriculum for Mathematics. The National Curriculum for Maths aims to ensure that all pupils:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically; follow a line of enquiry, conjecture relationships and generalisations.
- Develop an argument, justification and proof by using mathematical language.
- Problem solve by applying knowledge to a variety of routine and non-routine problems breaking down problems into simpler steps and persevering in answering

Teachers follow the National Curriculum to ensure that Maths objectives are covered during their timetabled lessons. A wide range of resources are also used to support the teaching of Maths, including White Rose. Multiplication tables are a focus (within school and at home) for KS2 pupils and in KS1 number facts are taught and practised to support with this.

3.6 EYFS

Our early years settings, across the Trust, follow the curriculum as outlined in the 2021 EYFS statutory framework. The EYFS framework includes seven areas of learning and development that are equally important and inter-connected. However, three areas known as the prime areas are seen as particularly important for igniting curiosity and enthusiasm for learning, and for building children's capacity to learn, form relationships and thrive.

The prime areas are:

- Communication and language
- Physical development
- Personal, social and emotional development

The prime areas are strengthened and applied through 4 specific areas:

- Literacy
- Mathematics
- Understanding the world
- Expressive arts and design

Staff plan activities and experiences for children that enable them to develop and learn effectively. In order to do this, staff working with the youngest children are expected to focus strongly on the three prime areas. Staff also consider the individual needs, interests, and stage of development of each child in their care, and use this information to plan a challenging and enjoyable experience. Where a child may have a special educational need or disability, staff consider whether specialist support is required, linking with relevant services from other agencies, where appropriate. In planning and guiding children's activities, staff reflect on the different ways that children learn and include these in their practice.

Each area of learning and development is implemented through planned, purposeful play, and through a mix of adult-led and child-initiated activities. Staff respond to each child's emerging needs and interests, guiding their development through warm, positive interaction. As children grow older, and as their development allows, the balance gradually shifts towards more adult-led activities to help children prepare for more formal learning, ready for Year 1 and beyond.

3.7 TRAUMA INFORMED SCHOOLS PRACTICE

Within the Trust we follow a Ready, Respectful and Safe approach based on Trauma Informed Schools (TIS) practice. Trust wide, and whole school training, ensures that each school is a nurturing and supportive environment which supports children emotionally and socially so that they are emotionally ready to learn. See the Trust Inclusion Policy and SEND and Inclusion Policy.

3.8 BRITISH VALUES

The Trust curriculum promotes British Values which include experiences to fulfil pupils' wider role in their community through support for local community events in the library, church, Food Bank and charity initiatives. Each school also participates in city events such as Christmas events, musical festivals, PE Festivals, Holocaust memorial and MKC Heroes activities and national events such as World Book Day, National Science Week, Anti-bully Week, Safer Internet Day and other charity events.

3.9 PARENT PLEDGE

The Government White Paper entitled, '*Opportunity for all: strong schools with great teachers for your child'* includes 'The Parent Pledge' which is a promise from government, via schools, to families. The Parent Pledge states that any child who falls behind in English or Maths should receive timely and evidence-based support to enable them to reach their potential.

Our Trust regards each of our pupils as a unique learner with strengths and needs in all subjects. Each teacher is committed to planning a responsive learning experience in their class which

meets every child's needs, and that is both challenging and inspiring. Our teaching aims to always be of high quality, in all subjects.

Children's attainment and progress is recorded and monitored regularly throughout the year. Therefore, we identify any children who have gaps in their English and/or Maths learning through summative (year group assessments and national statutory assessments), formative (marking) and through daily assessment for learning.

We will support these pupils through:

- Adaptive teaching
- Scaffolding (adapting tasks)
- Pre-teaching (teaching key vocabulary or skills prior to the lesson)
- Resources (number squares, dictionary, key word charts)
- Learning walls, prompts and displays
- Vocabulary/word banks
- Small group teaching
- Retrieval
- Adult support
- National Tutoring Programme support
- Specific intervention programmes e.g. NELI (Nuffield Early Language Intervention)
- Pupil Premium Action Plans
- Renaissance Star Reading Scheme (REN Reading)

This support will be communicated with parents through reports and parent's evenings. These times would also be an opportunity for parents to raise any concerns with class teachers, although this can be done throughout the year at any point. If necessary support for pupils may become more formal and this will follow our Inclusion Policy.

3.10 Key Curriculum Themes

Theme	Key Strands	Core Texts
How Pupils Learn	• Understanding the cognitive process • Pedagogy for teaching & learning	Rosenshine (2012) Ten Principles of Instruction Sherrington (2019) Rosenshine's Principles in Action Sherrington & Caviglioli (2020) Teaching WalkThrus Five-step guides to instructional coaching
Learning Environment	• Classroom culture • High expectations • Positive Behaviour & Relationships • Stimuli for learning	Sherrington & Caviglioli (2020) Teaching WalkThrus Five-step guides to instructional coaching Coe et al ((2020) Great Teaching Toolkit
Assessment	• Effective questioning • Responsive feedback • Live marking • Encourage and support further effort	EEF Teacher Feedback to Improve Pupil Learning Guidance Report (2021)

	• Provide specific guidance on how to improve • Observation (particularly EYFS)	
Curriculum Knowledge & Design	• Knowledge rich • Coherent maps • Sequenced concepts in small steps • Subject progression • Secure subject knowledge	Myatt & Tomsett (2022) Primary Huh Turner (2022) Simplicitus - The Interconnected Primary Curriculum & Effective Subject Leadership Sherrington & Caviglioli (2020) Teaching WalkThrus Five-step guides to instructional coaching
Adaptative Teaching	• Understanding different needs e.g. SEND/EAL/G&T • Effective differentiation • Promoting mental-health and wellbeing • Trauma Informed Schools (TIS)	Dix (2017) When the Adults Change, Everything Changes: Seismic shifts in school behaviour Dix (2021) After the Adults Change: Achievable Behaviour

4 TEACHING & LEARNING

The main aim of teaching and learning within the Trust is:

- To teach the content of the curriculum in a way that inspires and challenges students to know more, know how to do more and remember more.

Students learn most effectively when they connect new knowledge and skills to what they already know, and successfully retain that knowledge. To achieve this, expert teaching involves:

- Challenge and inspiration
- Explanation
- Modelling
- Questioning
- Feedback
- Review - to develop long term memory
- Deliberate practice
- Positive and effective classroom relationships

Teaching & Learning across the Trust focuses on key pedagogical strategies to maximise learning potential (Appendix B). Through regular MAT, and internal school evidence-informed CPD, teachers have a good knowledge of Teaching & learning strategies and the curriculum. Teachers are able to reflect on their learners understanding regularly, identifying misconceptions accurately and providing clear, direct feedback through conversations with the children. Central Trust Leads, Subject Coordinators and Trust Subject Coordinators support pedagogical thinking and ensure that teachers have secure skills so they can adapt their teaching to suit all learners from SEN to Gifted children.

Teaching and learning is monitored through school (and Trust) quality assurance process involving a combination of lesson drop-ins, work sampling, pupil voice and assessment procedures. Peer coaching is being developed to support teachers in ensuring that they are using teaching strategies effectively in order to maximise learning potential. External Trust reviews are also used to support this process.

5 LEGISLATION AND GUIDANCE

This policy reflects the requirements for academies to provide a broad and balanced curriculum as per the Academies Act 2010, and the National Curriculum programmes of study which we have chosen to follow.

It also reflects requirements for inclusion and equality as set out in the Special Educational Needs and Disability Code of Practice 2014 and Equality Act 2010, and refers to curriculum-related expectations of governing boards set out in the Department for Education's Governance Handbook.

This policy complies with our funding agreement and articles of association.
In addition, this policy acknowledges the requirements for promoting the learning and development of children set out in the Early Years Foundation Stage (EYFS) statutory framework.

6 ROLES AND RESPONSIBILITIES

All Teachers & Teaching Staff

The curriculum is the responsibility of all teaching staff. Teachers are responsible for understanding, adapting and enacting the curriculum for their learners and are supported by the HoS, Curriculum Lead (Assistant Head of School). Subject Coordinators (within school and the Trust) and Trust Central Leads.

The Trustees

The Trustees will monitor the effectiveness of this policy, with the support of the Local Advisory Board (LAB) and hold the Head of School to account for its implementation.

The LAB will also ensure that:

- A robust framework is in place for setting curriculum priorities and aspirational targets
- The school is complying with its funding agreement and teaching a "broad and balanced curriculum" which includes English, maths, science and (subject to providing the right to withdraw) religious education, and enough teaching time is provided for pupils to cover the requirements of the funding agreement
- Proper provision is made for pupils with different abilities and needs, including children with special educational needs (SEN)
- The school implements the relevant statutory assessment arrangements
- It participates actively in decision-making about the breadth and balance of the curriculum

The Head of School

The Head of School is responsible for ensuring that this policy is adhered to, and that:

- All required elements of the curriculum, and those subjects which the school chooses to offer, have aims and objectives which reflect the aims of the school and indicate how the needs of individual pupils will be met
- The amount of time provided for teaching the required elements of the curriculum is adequate and is reviewed by the Trustees

- They manage requests to withdraw children from curriculum subjects, where appropriate
- The school's procedures for assessment meet all legal requirements
- The Trustees are fully involved in decision-making processes that relate to the breadth and balance of the curriculum
- The Trustees are advised on whole-school targets in order to make informed decisions
- Proper provision is in place for pupils with different abilities and needs, including children with SEN

7 ORGANISATION AND PLANNING

Within the Discovery Multi Academy Trust, we follow a thematic, STEM based approach to the curriculum. The curriculum was designed by a working party, made up of all three schools, to ensure all areas of the National Curriculum are covered and children are able to build upon their prior learning and are prepared for their next step as they move throughout the school.
Each subject has a school-based Subject Coordinator, who takes responsibility for ensuring a clear progression of knowledge and skills across each year group and across the school. The roles of Trust-wide Subject Coordinators are also being developed, these coordinators oversee a number of subjects across the Trust to ensure consistency and drive for excellence.

Each termly theme begins with a 'Big Question' which introduces the learning journey for pupils and includes a destination which is a final outcome. The long-term plans work alongside subject progression maps, which give an overview of the curriculum for each subject. To ensure clear sequences of learning, staff know the sequence of teaching in subjects throughout the school. This means that they know the prior learning their class will have had and how this moves forward and develops into subsequent years. Vocabulary is a key focus and is identified for each topic.

Detailed weekly plans map learning objectives, and subject links are made with outcome expectations made explicit to provide teachers with a secure understanding of how the teaching and learning is going to work. Learning journeys are displayed in all classrooms and are used to encourage children to be reflective about their learning and to make connections in what they have learnt. Learning conversations allow children to ask questions, self-evaluate and to be able to articulate how they can reach learning targets to accelerate their progress from their starting points.

Planning for each theme is overseen by the Subject Coordinators within school, along with Trust Subject Coordinators, to ensure coverage, high expectations and progression of key learning skills across a key stage and across the whole school. The curriculum plans and maps are reviewed and impact evaluated by the Curriculum Lead and Head of School termly; to ensure children will have the skills to make connections in what they have learnt, self-evaluate and develop a zest for learning as they move to the next stage. Each curriculum subject area has a Subject Curriculum Statement (Appendix A) which explains the importance of the subject, key concepts and curriculum design.

Enquiry-based approaches enable pupils to enhance their scientific knowledge, understanding, skills and attitudes and further develop their curiosity about the world around them. Pupils have regular access to appropriate hands-on practical activities that: support the development of motor, manipulative and age appropriate technical skills underpin their understanding of key scientific concepts, encourage them to ask productive questions, explore and investigate possible answers and communicate their findings to others and provide opportunities for developing both independent learning and team working skills.

The curriculum includes regular retrieval and spaced-practice techniques to form durable, long-term memories of knowledge, expertise and understanding. This frequent and systematic revisiting is also designed to develop vocabulary, literacy and numeracy skills which are fundamental to all learning. "If we are going to be sure all students have formed secure understanding, teachers should not assume that knowledge aired and shared in the public space of the classroom has been absorbed and learned by any individual" (Sherrington 2019). Explicit strategies are also used to support children in self-regulating their learning and developing metacognitive skills.

We are committed to providing opportunities for children to learn, develop and practise oracy skills in all areas of the curriculum. This will enable our pupils to be articulate and fluent speakers so that they confident to share their thoughts with others around them. 'The ability to speak eloquently, articulate ideas...and have confidence to express your views are vital skills that support success in learning and life in general. (Gaunt & Stott, 2019).

In line with the Discovery MAT vision we aim to embrace outdoor learning as a method of offering a greater range of quality learning experiences and opportunities. These opportunities will improve and promote knowledge of the environment and sustainability; provide a rich curriculum; help children to develop life skills and promote mental health and wellbeing across the schools in the Trust.

Every year group also maps links to the 'Discovery Lists' of activities to widen opportunities for creative un-taught contexts for learning. We aim for every child to have the opportunity to experience these, from the time they join us in Nursery to the time they leave us in Year 6. In varying the opportunities and approaches, we hope to enhance the skills and knowledge that the children have, making those crucial connections within their learning.

8 INCLUSION

Teachers set high expectations for all pupils. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEN
- Pupils with English as an additional language (EAL)

Teachers will plan lessons so that pupils with SEN and/or disabilities can study every National Curriculum subject, wherever possible, and ensure that there are no barriers to every pupil achieving.

Teachers will also take account of the needs of pupils whose first language is not English. Lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part in all subjects.

Further information can be found in our Inclusion policy.

9 MONITORING ARRANGEMENTS

The Trustees, through the LAB, monitor whether the school is complying with its funding agreement and teaching a "broad and balanced curriculum" which includes the required subjects, through:

- Pupil voice feedback
- Meetings with the HoS, Curriculum Lead (AHoS), Subject Coordinators
- Pupil progress meetings
- Assembly visits

Subject Coordinators monitor the way their subject is taught within each school, through:

- Pupil voice feedback
- Planning and book moderation
- Monitoring and assessment at school and MAT level including data outcomes
- Parent survey and engagement
- Learning walks
- Lesson drop-ins

Subject coordinators also have responsibility for monitoring the way in which resources are stored and managed.

This policy will be reviewed annually by Head of School and Trustees

10 LINKS WITH OTHER POLICIES

This policy links to the following policies and procedures:

- Assessment, Feedback, Reporting and Recording policy
- inclusion Policy
- SEND and Inclusion Policy
- SMSC Policy
- Relationships and Sex Education Policy
- Mental Health and Wellbeing Policy
- Equality and Diversity Policy
- Outdoor Learning Policy
- Educational Visits Policy

APPENDIX A

SUBJECT CURRICULUM STATEMENTS

Art & Design Curriculum Statement

Quotes that guide us:
'Children are naturally creative. It is our job to give them freedom, materials and space to let their creativity blossom to its full potential.' Jean Vant Hul
'Every child is an artist. The problem is how to remain an artist once we grow up'. Pablo Picasso

Why is it important to teach Art & Design? (Intent)
All children are artists. We teach Art & Design to harness children's creativity and allow a freedom of expression through mindfulness and experimentation. Art teaches children that there is no right or wrong and gives children the confidence to make mistakes and explore their imagination through a variety of media. Art embodies some of the highest forms of human creativity. A high-quality art & design education should engage, inspire and challenge pupils, equipping them with the knowledge and skills to experiment, invent and create their own works of art. We will enable pupils to think critically and develop a more rigorous understanding of art and how art has shaped our history, and contributes to the culture, creativity and wealth of our nation.

Key Concepts:

- Everyone is an artist and that we can explore ideas, communicate and record experiences and emotions through art.
- That Art & Design has many aspects including drawing, painting, collage, 3D, sculpture, textiles and craft using a wide range of media.
- That Art & Design means different things to different people and that we too can express an opinion, evaluate and analyse creative works using the language of art, craft and design.

Curriculum Design (Implementation)
Our Art & Design curriculum provides a clear and comprehensive document that will show progression of skills across all key stages within the strands of art. Art & Design lends itself to being a cross curricular subject in every way. We link art with theme work, this deepens the children understanding of a topic and gives art a purpose and context. The children learn about and are inspired by a number of artists. We make good use of visits and visitors and think carefully about the timing of this to ensure links to current learning. We use the local area in order to create real art and exhibit the children's art around our schools, share it on our websites and Facebook pages.

Our Art & Design curriculum gives children the opportunity to:

- produce creative work, exploring their ideas and recording their experiences
- become proficient in drawing, painting, sculpture and other art, craft and design techniques
- evaluate and analyse creative works using the language of art, craft and design
- know about great artists, craft makers and designers, and understand the historical and cultural development of their art forms.

Knowledge Focused
To ensure clear sequences of learning we use the Discovery MAT wide progression document to plan lessons. This gives small steps that build towards key end points that link to the National Curriculum. These break down the National Curriculum statements into smaller steps. The key skills covered link to colour, painting, drawing, printing, texture, 3D work and pattern. Key vocabulary is also identified for each year group.

What we do well as a Trust (Impact)

At Discovery, our children have an extremely positive attitude towards art, one student stated, 'We can express ourselves more. I think for some people I think if they feel anxious it could calm them down and make them feel more relaxed. Some people use it to express their emotions and themselves.' Children are very proud of their work and love to see it displayed around our schools. We also have a wonderful local area to inspire a wealth of art lessons. e.g., the beach, local woods. As a Trust we have regularly worked on whole school art projects/days. These have been planned and designed carefully by the MAT Art & Design Coordinator and have different activities aimed towards the different primary phases. The activities are on a 2-year rolling programme, so that once the children have reached the next phase, they access the consecutive activities. We also draw on learning and experience through contacting local artists from the wider community. We most recently engaged with local landscape artist, Josh Bygrave, who came into schools to talk to the children about his artistic journey and inspiration, followed by a taught demonstration in which the children were able to complete their own piece of work. During our 'Celebrating Diversity' house days (an opportunity for children across all year groups to come together in four houses) one of the many activities was art based and creating inspired artwork from different ethnicities.

Computing Curriculum Statement

Quotes that guide us:
'Alan Turing gave us a mathematical model of digital computing that has completely withstood the test of time. He gave us a very, very clear description that was truly prophetic.' George Dyson
'We need technology in every classroom and in every student and teacher's hand, because it is the pen and paper of our time, and it is the lens through which we experience much of our world." David Warlick

Why is it important to teach Computing? (Intent)
A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with the STEM subjects Mathematics, Science, and Design and Technology, which as a Trust driven by the STEM skills, is incredibly important. The core of Computing is Computer Science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate which in this growing digital world will equip the children for their future workplace. They will have the skills to make connections in what they have learnt, and will be supported to be resilient, self-evaluate, and develop a desire to learn as they go to their next stage of learning.

Key Concepts:

- That computers can make things more efficient and easier.
- The internet is a powerful tool when used safely and the importance of being a critical thinker when using the internet and 'not believing everything you read' – to be taught through National Online Safety.
- The importance of coding in the modern age.
- We aim for children to become responsible, competent, confident and creative users of information and communication technology.
- Children can develop, embed and extend their Computing knowledge through unplugged strategies which are then applied to programmes and applications allowing them to reflect and build on prior learning knowledge.

Curriculum Design (Implementation)
Our Computing curriculum provides children with the opportunity to engage with computing as a subject through both explicit and discreet computing lessons linked with themes across the curriculum. Children are also encouraged to utilise computing resources across other areas of the curriculum to ensure they become fluent users of a range of resources.

The curriculum is broken down through the use of a progression map, encompassing the skills and knowledge needed to fulfil the needs of the National Curriculum statements using a small steps pedagogy, developed through Teaching and Learning Pedagogy (based on Rosenshine's Principles). Every lesson is individually planned so that it can be effectively taught and so it meets the needs of all our pupils, ensuring that prior knowledge is built on utilising both unplugged and plugged methods of teaching. Staff use units detailed on the Computing and E-Safety progression map linked directly with the National Curriculum to make links with their curriculum topics to develop knowledge and skills associated with Computing.

Each lesson has a learning outcome and this is often part of their STEM destination. Having discreet lessons supports children to develop depth in their knowledge and skills over the duration of primary learning curriculum. Where appropriate, meaningful links will be made between the computing

curriculum at the wider curriculum through the termly thematic planning. During computing lessons, the children will use either the iPads or the Chromebooks/laptops in order to access a range of apps and software. Discreet computing lessons will focus on the curriculum skills of information technology and digital literacy. In addition, children have opportunities to engage with Computing Rich Experiences such as Safer Internet Day and Hour of Code to develop their knowledge of Computing and E-safety outside of their planned curriculums.

Our Computing curriculum gives children the opportunity to:

- To develop knowledge and skills linked with the three aspects of the Computing Curriculum (Computer Science, Information and Technology and Digital Literacy) in line with a progression map that utilises a range of software to build and extend what they have learned.
- Engage with rich experiences outside of the curriculum to enthuse children and develop resilience and the ability to be reflective, creative thinkers.
- To explore and tinker with a range of software to encourage them to take risks with their learning and develop problem solving skills.
- To develop and build on their knowledge of how to use computerised equipment and the internet safely, supported by the National Online Safety Platform which bring the whole school community together (pupils, staff and parents) to support learners.

Knowledge Focused

Computing work is recorded in learning journey books. Learning journeys/curriculum newsletters are sent home at the beginning of the term so parents can support learning at home. Thematic planning means that the children are making links across the curriculum, and therefore the learning is more likely to become embedded as it is revisited across the term. This also gives them the opportunity to apply what they have learnt. The school uses the National Online Safety platform to teach online safety, which is taught explicitly every term. Staff training is also provided throughout the year.

What we do well as a Trust (Impact)

Through a thematic approach, our Computing curriculum aims to give pupils the life-skills to enable them to embrace and utilise new technology in a socially responsible and safe. We are passionate about our children becoming autonomous users of computing technologies, gaining confidence and enjoyment from their activities. We want the use of technology to support learning across the entire curriculum. As well as being digitally literate and skilled users of technology, we are committed to developing them to use their STEM skills to be flexible, creative, collaborative, problem solvers and to use their inquiry skills to develop knowledge or solve problems. Microsoft Teams and E-schools had a huge positive impact during lockdown. The school provided technology (where needed) to enable all children to access remote learning. Teachers continue to build on prior knowledge utilising 'unplugged' teaching methods to extend children's knowledge which can then be applied confidently and fluently to technology. Regular monitoring with children shows that children are able to articulate what they have learnt not just from curriculum activities but that they can also related this to the theme that they have been learning about each term. The children have demonstrated their enthusiasm about using technology and how they have been able to use the technology outside of their computing lessons.

Design & Technology Curriculum Statement

Quote that guide us:
'Good buildings come from good people, and all problems are solved by good design.' Stephen Gardiner (British Architect)
'High-quality design and technology education makes an essential contribution to the creativity, culture, wealth, and well-being of the nation.' National Curriculum.

Why is it important to teach Design & Technology? (Intent)
Design and Technology is an inspiring, rigorous and practical subject. D&T should provide children with a real-life and relevant context for learning. As a STEM trust, we encourage children to use their inquiry, observation, creativity, problem-solving, flexibility, and collaboration skills to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants, and values. Through the D&T curriculum, children should be inspired by engineers, designers, chefs, and architects to enable them to create a range of structures, mechanisms, textiles, electrical systems, and food products with a real-life purpose.

Key Concepts:

- Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.
- They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing, and art.
- Pupils learn how to take risks, becoming resourceful, innovative, enterprising, and capable citizens.
- Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world.

Curriculum Design (Implementation)
Our D&T curriculum provides a clear and comprehensive document that will show progression of skills and vocabulary across all key stages within the strands of D&T. All teaching of D&T follows the design, make, and evaluate cycle. Each stage is rooted in technical knowledge. The design process is rooted in real-life, relevant context and linked with our topic to ensure meaning and purpose to the learning. While making, children are provided with choice of a range of tools to choose freely from. To evaluate, children evaluate their finished products against a design criterion. Each of these stages are given equal weight.

In KS1 this looks like:
Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing).
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

In KS2 this looks like:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Knowledge Focused

To ensure clear sequences of learning, key skills and key knowledge for D&T have been mapped across the Discovery MAT wide progression document, which is used to plan sequences of lessons. These give small steps that build towards key end points that link to the National Curriculum. These break down the National Curriculum statements into smaller steps. Key vocabulary is identified for each year group.

What we do well as a Trust (Impact)

As a MAT, we aim to create an inquisitive learning environment within our classrooms and reinforce the understanding that they are a supportive place to plan, implement and adapt ideas and learn. The study of D&T across the MAT allows our pupils to safely experience the wide range of skills and knowledge encompassed by this practical subject. All the D&T sequences have been planned and designed carefully to ensure they correlate with themes of learning and often have many cross-curricular links, particularly with History, Geography and Science. As well as each sequence of lessons being purposeful, we ensure they are relevant and modern in many ways. Our key STEM skills run through every aspect of D&T: inquiry, observation, creativity, problem-solving and collaboration. Therefore, we encourage children to become independent, reflective, creative critical thinkers, both as individuals and part of a team.

Geography Curriculum Statement

Quotes that guide us:
'Geography underpins a lifelong 'conversation' about the earth as the home of humankind.' Geography Association

Why is it important to teach Geography? (Intent)
The purpose of geography is to inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. It is important for children to understand where they live in the world and how this is similar and different to places in the rest of the world. Some children have never left their home city of Plymouth which is what makes Geography so important, it is our way of helping them to open their eyes to the wider world. We believe it is important to put equal emphasis on human and physical geography in order to create well-rounded learners.

Key Concepts:

- The world is diverse in terms of people, places, resources, natural and human environments.
- There are key physical and human features.
- Places influence people and people influence places.
- Places have changed and will continue to change - some change is good and some not.
- We need to look after the environment and take care of our world.
- We can gather information about the world in a variety of ways.
- Places can be represented through maps.
- Economic and environmental sustainability has an impact on individuals and settlements
- The impact of civilisations over time on the environment

Curriculum Design (Implementation)
Our Geography curriculum provides all our children with the tools to build on skills and knowledge in order to navigate the world and have a better understanding of places outside of Plymouth, as well as studying the local area. For Geography, we follow our MAT curriculum which is STEM based and uses the STEM skills in order to question and analyse key geographical elements. Each term, each year group will follow a theme which links to and builds on previous knowledge. We are careful to ensure that we are constantly building on vocabulary, which is a key focus, and this is evident on our long-term plans.
During the topic we refer back to previous learning and help them to retrieve this knowledge, applying Rosenshine's principles of learning using retrieval practice. Briefly recapping on what we already know is a key feature of lessons. The geography units include learning about the local area, a non-European country, a European country, and the environment. It is linked to other subjects where appropriate, and teachers are able to plan for this where they can.
We make good use of visits and visitors and think carefully about the timing of this to ensure that this links to current learning. For example, Year 6 visit Dartmoor and apply their map reading skills to plan their own route. This makes up part of our work on the local area. Year 4 also attend a residential trip where they are able to build on their knowledge of farming and food from Year 3. We invite visitors into school to further build on our rich experiences; this is organised on a yearly basis dependent on who is available and the current situation.

Our Geography curriculum gives children the opportunity to:

- Explore and understand the local area
- Expand on their contextual of globally significant places
- Interpret a range of sources such as; maps, globes, diagrams and aerial photographs

- Communicate geographical through a variety of ways including maps and extended cross-curricular writing

Knowledge Focused

To ensure clear sequences of learning we use the Discovery MAT progression documents as a starting point to plan lessons. These give small steps that build towards key end points that link to the National Curriculum. These break down the National Curriculum statements into smaller steps.

What we do well as a Trust (Impact)

As well as discrete lessons and learning taught through topics, the local context is vitally important to give our children an idea of Plymouth and the South West's role in local, national and world geography.

Children in KS1 develop an idea of their own local environment and then go on explore the physical and human geography of their locality on a regional, national, and global context. Key concepts are introduced. As they move into KS2, the content and development of concepts expand to look at Human and Physical Geography within Europe and the world.

Our children enjoy their geography lessons and enjoy rich experiences and field trips. One child said "I loved being able to plan and follow my route on Dartmoor. I felt really proud that I could read a map". We successfully link our geography topics across the curriculum in order to deepen the children's understanding and retention of vocabulary. We have developed links with the local community such as Fairtrade Devon and Devon Development Education. Forest school forms and important part of our children's learning experiences.

History Curriculum Statement

Quotes that guide us:
'History is who we are and why we are the way we are.' David McCullough (1933)
'History gives answers only to those who know how to ask questions.' Majo Halborn (1902 – 1969)

Why is it important to teach History? (Intent)
Our History curriculum provides a clear and comprehensive 'chronological' curriculum that supports children's understanding and appreciation of events that are not in living memory. We aim to provide rich experiences from guest speakers to educational visits that enhance learning and bring the historical elements of history to life. We encourage children to freely question and ask openly about historical events. Teaching children historical skills across the curriculum (which allows them to explore History in a range of different contexts, media and experiences) will help open minds and understand that history can influence the actions of generations to come. Children will learn the importance of historical events, people and places and how learning about them can determine future decisions. We aim for children to understand when events took place and that they will not always reflect the ways things happen now, but could have influenced them. By placing events in a chronological order, we aim to give children an understanding of when things happened and how they could have affected events that proceeded.

Key Concepts:
- To question History and its morals and values between then and now.
- Understand historical impacts on the current day.
- Take part in experiences that enable children to understand events that are beyond living memory.
- Appreciate current day events as a 'new history'.
- To be able to place events on a timeline of history.

Curriculum Design (Implementation)

Our History curriculum provides children with the tools to be curious, freely ask questions and use research and experiences to understand the impact History has on modern day. Sharing information and accounts through a range of experiences, and media, allows children to imagine what people of certain times may have experienced and allows them to consider how modern History has changed because of those events and recounts.
- Produce timelines about historical aspects.
- Write recounts considering the views and opinions of people of the 'day' by putting themselves in the shoes of someone else.
- Use diaries, research and experiences to gain a greater understanding of history.
- Visit places that offer a rich experience which enhances understanding of historical aspects.
- Take part in role-play opportunities which support historical life.

Knowledge Focused
The History curriculum is knowledge focused to ensure clear sequences of learning are followed using the progression documents. These documents allow staff to create small steps that build towards key end points that link to the National Curriculum. These break down the National Curriculum statements further into smaller steps to understand the chronology of events.

What we do well as a Trust (Impact)
As a Trust, children are immersed in rich experiences which provide children with opportunities to put into practise the skills and knowledge they have acquired in a meaningful and memorable

experience. Children within Discovery MAT can apply their learning to other curriculum areas, and through pupil voice demonstrate a true love for History with groups of children in KS2 who aspire to be historians once they leave education. As a trust we do not allow children's attainment in English and Maths to become a barrier for their learning – we believe any child within our trust can excel in History.

Languages Curriculum Statement

Quotes that guide us:
'You live a new life for every language you speak. If you only know one language, you only live once.' Czech proverb
'To learn a language is to have one more window from which to look at the world.' Chinese Proverb

Why is it important to teach Languages? (Intent)
Learning a foreign language is an essential part of being a member of a multi-cultural society. We aim to ensure that every child is given the opportunity to study a foreign language and develop their interest in the culture of other nations. We provide children with a high-quality language education, which fosters their curiosity and deepens their understanding of the world. All children are enabled and supported to express their ideas and thoughts in another language, in order to understand and respond to its speakers, both verbally and in writing. Our teaching of languages provides opportunities for children to communicate for practical purposes and be open to different cultures and new ways of thinking.

It is intended that when children leave our schools, they will have developed a natural curiosity and confidence to explore other countries, cultures and languages, accepting that, in a multi-lingual society, it is a valuable skill to be able to communicate effectively with others. Language teaching should provide the foundation for learning further languages, equipping children to study and work in other countries if they so wish. With an exciting and stimulating languages curriculum, children will be engaged and excited to continue language learning at KS3 and beyond.

Key Concepts:

- understand and respond to spoken and written language from a variety of authentic sources
- speak with increasing confidence, fluency and spontaneity, finding ways of communicating what they want to say, including through discussion and asking questions, and continually improving the accuracy of their pronunciation and intonation
- can write at varying length, for different purposes and audiences, using the variety of grammatical structures that they have learnt
- discover and develop an appreciation of a range of writing in the language studied.

Curriculum Design (Implementation)
Our Languages curriculum ensures that pupils have access to high quality teaching and learning opportunities. Children have weekly French or Spanish lessons throughout Key Stage 2. Teachers use a variety of resources e.g. Kapow Primary scheme of work, resources from Oak Academy, Twinkl, Lightbulb languages and others. In Lower KS2, children acquire basic skills and an understanding of French or Spanish, with emphasis placed on developing Speaking and Listening skills. These will be embedded and further developed in Upper KS2, alongside Reading and Writing, gradually progressing onto more complex language concepts and greater learner autonomy.
Our Languages curriculum gives children the opportunity to:

- listen attentively to spoken language and show understanding by joining in and responding
- explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words
- engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help
- speak in sentences, using familiar vocabulary, phrases and basic language structures

- develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases
- present ideas and information orally to a range of audiences
- read carefully and show understanding of words, phrases and simple writing
- appreciate stories, songs, poems and rhymes in the language
- broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary
- write phrases from memory, and adapt these to create new sentences, to express ideas clear
- describe people, places, things and actions orally and in writing
- understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English.

Knowledge Focused

To ensure clear sequences of learning we use the Discovery MAT wide progression document to plan lessons. These give small steps that build towards key end points that link to the National Curriculum. These break down the National Curriculum statements into smaller steps. It should enable pupils to understand and communicate ideas, facts and feelings in speech and writing, focused on familiar and routine matters, using their knowledge of phonology, grammatical structures and vocabulary.

What we do well as a Trust (Impact)

Our children have extremely positive attitudes towards languages. As well as discrete lessons we celebrate languages through a languages day where children get to experience other cultures, art, music, food and a range of other experiences deepening their understanding of France/Spain and their language. Across the MAT we allow children to show off their skills by creating quizzes and games to show us and their peers what they have learnt.

Maths Curriculum Statement

Quote that guide us:

'Pure mathematics is, in its way, the poetry of logical ideas.' Albert Einstein

'We will always have STEM with us. Some things will drop out of the public eye and go away, but there will always be science, engineering, and technology. And there will always, always be mathematics.' Katherine Johnson (African-American mathematician)

Why is it important to teach Mathematics? (Intent)

At Discovery Multi-Academy Trust we are dedicated to ensuring that children are able to distinguish the importance of Mathematics in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of diverse contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically in both Maths and other subjects across the curriculum e.g. STEM and English. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Key Concepts:

- Number (Number and Place Value; Addition and Subtraction; Multiplication and Division; Fractions.)
- Measurement
- Geometry (Properties of Shapes; Position and Direction.)
- Statistics

Curriculum Design (Implementation)

Each school within the Trust follows the National Curriculum for Mathematics. The National Curriculum for Maths aims to ensure that all pupils:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically; follow a line of enquiry, conjecture relationships and generalisations.
- Develop an argument, justification and proof by using mathematical language.
- Problem solve by applying knowledge to a variety of routine and non-routine problems breaking down problems into simpler steps and persevering in answering

Teachers follow the National Curriculum to ensure that Maths objectives are covered during their timetabled lessons. A wide range of resources are also used to support the teaching of Maths, including White Rose. Multiplication tables are a focus (within school and at home) for KS2 pupils and in KS1 number facts are taught and practised to support with this.

Knowledge Focused

Retrieval practice is the opportunity for all children to recall previous learning, in order to remember it by storing the information in their long-term memory. This previous learning can be linked to the new learning about to take place or a gap that has been identified from assessments. Each child completes the task and is shared amongst peers. Children can observe if they have been successful, if it's something which they need to improve upon and acts as their next step.

New concepts are shared in a variety of ways. One of these ways includes sharing the concept within the context of an initial related problem, which children are able to discuss in partners. This initial problem-solving activity prompts discussion and reasoning, as well as promoting an awareness of

maths in relatable real-life contexts that link to other areas of learning. In KS1, these problems are almost always presented with objects (concrete manipulatives) for children to use. Children are also encouraged to use manipulatives in KS2 and are a part of the Quality First Teaching. Teachers use a range of questions to draw out pupil's thoughts and their reasoning. The class teacher then leads children through strategies for solving the problem, including those already discussed. A mathematics lesson includes a series of learning opportunities, each one building on the last to provide children with the confidence to successful complete the independent practice. Independent practice provides the means for all children to develop their fluency further, before progressing to more complex related problems. Mathematical topics are taught in small blocks, to enable the achievement of 'mastery' over time. The topics are also carefully planned to support the school's thematic approach to ensure the maximum opportunity to retrieve previous learning. Each lesson phase provides the means to achieve greater depth, with more able children being offered rich and sophisticated problems, as well as exploratory, investigative tasks, within the lesson as appropriate.

What we do well as a Trust

Teachers have the flexibility to plan creative, meaningful and contextual lessons. Planning supports the needs of the children and extends those who have the fluency but need reasoning and problem-solving activities to deepen their understanding. The impact of this flexible planning creates independent and resilient learners who thrive on achieving, and being the best, they can be.

Regular and ongoing assessment informs teaching, as well as Point of Need Intervention, to support and enable the success of each child. These factors ensure that we are able to maintain high standards, with achievement at the end of KS2 above the national average and a good proportion of children demonstrating greater depth, at the end of each key stage.

Music Curriculum Statement

Quotes that guide us:
'Music is a universal language that embodies one of the highest forms of creativity.' National Curriculum
"It is in learning music that many youthful hearts learn to love.' Matthieu Ricard

Why is it important to teach music? (Intent)
Listening and producing music is something that brings people joy and that in itself is important. Music also plays a huge role in brain development. Studies have shown that music activities particularly in Early Years facilitate many different aspects of development and learning, providing one of the most effective influences on young people's brain development at this key age. It has been shown to activate all three cortices (motor, visual and auditory) of children's brains. It helps develop creativity and can also support children with their mental health and well-being. Our objective at Discovery MAT is to develop an understanding and acceptance of the validity and importance of all types of music, and an unbiased respect for the role that music may wish to be expressed in any person's life.

Key Concepts:

- That there have been different styles of music, and these have varied throughout history and vary throughout the world.
- Music can affect what we think and feel and support our brain development.
- We are all musicians, and we can use our voices, instruments, technology to communicate and bring joy.
- Pitch, duration, dynamics, tempo, timbre, texture, volume and structure are key components to consider when listening to and creating music.
- Music notation is a form of communication and a way to capture music in a written form.

Curriculum Design (Implementation)
We currently use the National Curriculum to guide us to support our planning. Whenever possible and most appropriate we link Music learning to our topic work. The Trust Music Coordinator has worked to develop the Music Progression Map, which breaks down the National Curriculum objectives into the small steps needed to build towards the key end goals. Covid has been a significant factor in the recent teaching of Music lessons, and as a Trust we aim to develop the teaching of music further through more regular and consistent whole class music lessons, as we begin to head towards normality again. One way in which we have begun to successfully ensure this, is through securing an external whole class music teacher from Plymouth Youth Music Service, who has been teaching multiple year groups across our schools, how to play different instruments. We also provide a wide range of opportunity for our children to perform to an audience across all year groups; the Foundation Stage's Nativity, Year 6 end of year production, each class assembly and the school choirs who have the opportunity to perform in the wider community. The elements of music are taught in the classroom lessons so that children are able to use some of the language of music to dissect it, and understand how it is made, played, appreciated and analysed. In the classroom students learn how to play an instrument, from all four main instrument groups of wind, strings, percussion and keyboards. In doing so understand the different principle of each method of creating notes, as well as how to read basic music notation. They also learn how to compose focussing on different dimensions of music, which in turn feeds their understanding when listening, playing, or analysing music. Composing or performing using body percussion and vocal sounds is also part of the curriculum, which develops the understanding of musical elements without the added complexity of an instrument.
Our Music curriculum aims to give the children the opportunity to:

- perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions, including the works of the great composers and musicians
- learn to sing and to use their voices, to create and compose music on their own and with others, have the opportunity to learn a musical instrument, use technology appropriately and have the opportunity to progress to the next level of musical excellence
- understand and explore how music is created, produced and communicated, including through the interrelated dimensions: pitch, duration, dynamics, tempo, timbre, texture, structure and appropriate musical notations

Knowledge Focused

The Music Progression Map, breaks down the National Curriculum objectives which produces the small steps needed to build towards the key end goals. This also ensures clear progression of knowledge and skills throughout the year groups and across the school. It highlights key language to be taught in the year groups, which teachers can implement throughout their planning and assessing.

What we do well as a Trust (Impact)

As well as discrete lessons Music lends itself to being a cross curricular subject in every way. Therefore, we link our music sessions to our topics to give it a context and to use it to deepen our understanding of a topic. Music is often played in lessons to create atmosphere, particularly in across subjects such as Art & Design. Music will also develop an understanding of culture and history, both in relation to students individually, as well as ethnicities from across the world. During our 'Celebrating Diversity' house day for example (an opportunity for children across all year groups to come together in four houses) one of the many activities was music centred and focused on listening to music from different ethnicities. Children can enjoy music, in as many ways as they choose - either as listener, creator or performer. They can dissect music and comprehend its parts. They can sing and feel a pulse. Within Discovery MAT, children can listen to and discuss a wide range of composers, including during whole-school assemblies. All the children also get to perform to the rest of the school and to parent/carers as a class during their class assemblies. As part of the Plymouth Youth Music Service coming to teach whole class lessons over a substantial time to learn an instrument, the music teachers will perform to give the children further opportunities to listen to high quality live performances.

PE Curriculum Statement

Quotes that guide us:
'Every winner was once a beginner.'
'A healthy mind in a healthy body.' famous Latin quotation

Why is it important to teach PE? (Intent)
A high-quality Physical Education curriculum inspires all pupils to succeed and excel in competitive sport and other physically demanding activities. It should provide opportunities for pupils to become physically confident in a way which supports their health and fitness. Opportunities to compete in sport and other activities build character and help to embed values such as fairness and respect. (National Curriculum for PE 2014)
We believe that it is important for children to understand and embrace the links between physical activity and mental wellbeing. Children are encouraged to take part in regular physical activity, which lay the foundation for a healthy and active lifestyle. Alongside the physical benefits of a high-quality physical education curriculum, we recognise the positive impact it has on children's social and cognitive skills. Through a broad, well-taught curriculum, pupils will develop skills in decision making, analysis, resilience and collaboration.

Key Concepts:
- Promoting the importance of exercise and physical activity
- Sport and physical activity is for everyone
- Develop competence to excel in a broad range of physical activities
- Competition is an important part of sport and we all need to learn to win and to lose
- That skills in sport are transferrable to other sports but also other areas in life
- Working as part of a team is important in sport and in life
- Physical activity also supports our mental health and helps us to be happy
- That physical movement can bring us joy
- It is important to understand how our body works and how we can keep it healthy

Curriculum Design (Implementation)
All three schools within Discovery Multi-Academy Trust use Real PE, which is a unique, child-centred approach to PE. It is about teaching PE in a way that engages and challenges EVERY child in primary school. Real PE gives EVERY child the physical literacy, emotional and thinking skills to achieve in PE, Sport and life. It is fully aligned to the National Curriculum and it focuses on the development of agility, balance and coordination, healthy competition and cooperative learning.

Real PE develops the whole child. Each term there is a multi-ability focus:
- Personal
- Social
- Cognitive
- Creative
- Physical
- Health and Fitness

What we do well as a Trust (Impact)
Our curriculum is designed so that children are taught a variety of activities throughout their Key Stage and there is a progression journey through all of these. All three schools follow the same Real PE scheme, which gives consistency across the MAT. Children in all three schools, have the

opportunity to take part in extra-curricular activities and demonstrate their new skills in intra and inter sport competitions through the Plymouth Schools Sport Partnership. The partnership also offers CPD opportunities for staff to improve PE teaching. In addition to this, pupils across the MAT have swimming lessons to achieve the National Curriculum objective to be able to swim 25 metres unaided and use a range of strokes effectively. They also be taught about water safety, a vital life skill.

PSHE Curriculum Statement

Quotes that guide us:
'It is vital that when educating our children's brains, we do not neglect to educate their hearts.' Dalai Lama
'Do not judge me by my successes, judge me by how many times I fell down and got back up.' Nelson Mandela

Why is it important to teach PSHE? (Intent)
The purpose of teaching PSHE is to enable children to become a healthy, happy, independent and responsible member of society. It is important not just to help children develop academically but as people. School has a huge role to play in this. PSHE aims to help children understand and explore how they are developing personally and socially. It tackles many of the moral, social and cultural issues that are part of growing up.

Key Concepts:
- We need to respect ourselves and others
- We need to express our views confidently, listening to and respecting the views of others
- We are aware of different types of relationships
- We are aware of our feelings and emotions and know some techniques for dealing with them
- We can identify ways to cope with new challenges
- We develop a growth mindset
- We can make choices about how to develop a healthy lifestyle

Curriculum Design (Implementation)
Our PSHE curriculum provides a clear and comprehensive document that will show progression of skills and knowledge across all key stages. The coverage of the PSHE curriculum is suggested by the PSHE Association, Teachers use cross-curricular links when possible.
Our PSHE curriculum gives children the opportunity to:
- Work collaboratively to explore and develop understanding of: relationships, health and well-being and living in the wider world.
- Utilise themed national initiative days to raise awareness and encage with rich experiences

Knowledge Focused
To ensure clear sequences of learning we use the PSHE Association question-based model of learning to plan lessons. Development and progression is ensured across each Key Stage.

What we do well as a Trust (Impact)
As well as discrete lessons and being taught through topics, PSHE weaves through all that we do and is at the heart of our Trust ethos and culture. For example, PSHE is regularly taught through well prepared and planned assemblies which focus on such topics as having a Growth Mindset, how to be resilient, emotional literacy, self-regulation, diversity and bullying. PSHE is also taught through whole class Circle Times and discussions and even through other means such as class novels and poetry. As a Trust we have display boards which celebrate hard work and effort. We have regular Mindfulness activities throughout the day, this includes things such as yoga, meditation, colouring and massage. The school gets involved in a variety of fundraising events throughout the year. The Trust also engages with national days such as Odd Sock Day and anti-bullying week.

The wellbeing and happiness of our children is a priority. The Trust is trauma informed and mental health aware. All staff have received TIS training and there are specially trained TIS practitioners. When appropriate 1:1 sessions are provided by staff to children who are suffering from anxiety or other mental health issues, this sometimes happens in our schools' HUT (Helping Us Thrive) rooms.

The Trust has a Relationship Policy which guides and articulates how everyone treats everyone else. Our Managing & Supporting Positive Behaviour policy compliments this policy. We also share information about PSHE topics with parents, for example things such as values discussed in assemblies are also added to the weekly newsletters.

Our children are also encouraged to develop their self-worth by contributing to school life and the wider community, for example charity events, providing community donations (Harvest festival).

RE Curriculum Statement

Quotes that guide us:
'No colour, no religion, no nationality should come between us, we are all children of God,' Mother Teresa.
'RE is like an iceberg. As you unpack ideas, you come to understand deeper meaning.' Anon

Why is it important to teach RE? (Intent)
Religious Education (RE) is a compulsory subject in the state education system in England, despite it not being part of the National Curriculum. Schools are required to teach a programme of religious studies according to local and national guidelines. As well as being an obligation, we believe much can be gained from RE lessons
Learning about religion and learning from religion are important for all pupils, as Religious Education (RE) helps pupils develop an understanding of themselves and others. RE promotes the spiritual, moral, social and cultural development of individuals and of groups and communities. Good teaching of RE will inspire in pupils a curiosity, fascination and understanding about the values, beliefs and traditions of people around the world – including themselves. The teaching and understanding of respecting diversity is at the core of British Values and is delivered throughout our RE curriculum.

Key Concepts:

- Development of pupils' knowledge and understanding of Christianity, other principal religions, and religious traditions.
- Encouragement of pupils to explore their own beliefs (whether they are religious or non-religious), in the light of what they learn, as they examine issues of religious belief and faith and how these impact on personal, institutional and social ethics; and to express their responses.
- To enable pupils to build their sense of identity and belonging, which helps them flourish within their communities and as citizens in a diverse society.
- Teaches pupils to develop respect for others, including people with different faiths and beliefs, and helps to challenge prejudice.
- To prompt pupils to consider their responsibilities to themselves and to others, and to explore how they might contribute to their communities and to wider society. It encourages empathy, generosity and compassion.

Curriculum Design (Implementation)
Our Trust RE curriculum is based on the Devon agreed syllabus 2020 – 2024. It follows a four-year rolling programme to allow for appropriate provision in our mixed age classes. The religions studied in KS2 include Christianity, Hinduism, Islam Judaism, along with world views such as humanism. In KS1 the religions covered include Christianity, Islam and Judaism.

What we do well as a Trust (Impact)
It is clear to us as a Trust that religious education is not religious instruction. The "material" of religious education stands separately as an object for study and exploration and, as such, the personal beliefs of the pupils and teachers are "irrelevant". It is every pupil's entitlement to have access to the key concepts underpinning religions and beliefs whether they are of that tradition or not.

Reading Curriculum Statement

Quote that guides us:
'Reading should not be presented to children as a chore, a duty. It should be offered as a gift.' Kate DiCamillo

Why is it important to teach Reading? (Intent)
Within Discovery Multi Academy Trust we believe that every child is a reader. We want to foster a lifelong love of reading, giving them the skills and knowledge to understand and critique what they read. Our philosophy is to teach reading for meaning and exposing children to a variety of high-level fiction and nonfiction texts. We know that Reading is the foundation upon which all learning begins and we are committed to enabling our children to become lifelong readers. We give our children the reading skills they need to access all areas of the curriculum and enable children to access and understand the information given to them.

Key Concepts:
Early reading skills, vocabulary, phonological awareness, reading for meaning and pleasure.

Curriculum Design (Implementation)
Within our Trust our children from Foundation – Year 2 follow a synthetic phonics programme called 'Read Write Inc' produced by Ruth Miskin. Read Write Inc is a method of learning letter sounds and blending them together to read and write words. Our staff teach the relationship between sounds and the written spelling patterns, or graphemes, which represent them. Children have daily phonics sessions in small groups where they participate in speaking, listening and spelling activities that are matched to their developing needs. The teachers draw upon observations and continuous assessment to ensure children are stretched and challenged and to identify children who may need additional support. Children work through the different phases, learning and developing their phonics sounds and knowledge. We recognise that systematic, high quality phonics teaching is essential, but additional skills and opportunities are needed for children to achieve the goal of being a well-rounded reader, namely comprehension. When children have completed the Read, Write, Inc phonics programme, reading is developed during whole class Reading lesson, with a focus on reading comprehension.
When children have completed the RWI programme (by the end of Year 2) the focus in KS2 changes to whole class Reading lessons. These are taught 3x week for 45 minutes. At the beginning of every academic year children spend lessons recapping the seven key Reading Skills (linking to the KS2 reading domains) This embeds their knowledge of them, enabling them to discuss these skills in depth and recognise how they contribute to their comprehension of their reading material. Children will also be able to identify where, when, and how to utilise these skills effectively, with high quality modelling from the teacher taking place. The 'emoji' assigned to each skill area is used to support the children to recognise which skill they are using in a reading session.
Reading lessons are planned from a skills-based approach, using a range of high-quality texts. All sessions are interactive, and teachers facilitate speaking and listening opportunities. Children are given time to discuss their prior knowledge and make predictions on what they are reading. A variety of tasks ranging from vocabulary games to collecting evidence from texts takes place. Where it is suitable, texts linking to the children's curriculum theme are used to support their learning, enabling children to be immersed in a class book, which they may not have been exposed to otherwise. Further to modelled sessions, children are given the skills to read texts with greater independence and apply their skills when responding to the wide range of domain questions. More complex questions are evaluated between wider groups and teachers model how to refine answers to a high standard. Each class also enjoys a daily story-time session with their teacher. It is important for children to be read to daily and for our staff to model and share a story with a real focus on children being immersed in a range of different genres.

Each school has a large library which has a range of books banded to our Renaissance Star Accelerated Reading Programme (REN) and children can select books within their reading levels. We have children who act as Librarians, creating a rotation of books displayed and organising returned books. We have organised book fairs to raise funds for our schools' libraries. Children have benefited from paired reading sessions with different year groups and there are plans to start parent reading groups in support the development of reading comprehension skills at home.

What we do well as a school (Impact)

Children's attainment and progress is regularly monitored and reviewed through tests and teacher and support staff records. Children are also assessed using more formal tests. Our test data comes from PIRA, SATs, Benchmarking and Accelerate Reader (AR test outcomes and the termly Star Reader tests). This is then used to inform both planning and teaching and ensure that all children have reading targets that are achievable, yet still foster the importance of reading for enjoyment. Children work through a rewards-based reading scheme and their hard work for reading is recognised at different milestones for books and words read.

Science Curriculum Statement

Quotes that guide us:
'It is important to view knowledge as sort of a semantic tree – make sure you understand the fundamental principles, i.e. the trunk and big branches, before you get into the leaves/details or there is nothing for them to hang on to.' Elon Musk

Why is it important to teach Science? (Intent)
Science, Technology, Engineering and Maths (STEM) is the main driver for our MAT curriculum, ensuring that we capture the natural curiosity of young children. We nurture this curiosity and allow children to ask questions and develop the skills they need to answer those questions. We aim to prepare the children for life in an ever-changing world in which they live in. They can discover, explain, and develop skills of inquiry through working scientifically, experimenting and observing. Science plays a crucial role in developing our understanding of the world around us.

Key Concepts:
EYFS – exploring the natural world, seasons, materials, solar system, growing, life cycle of a butterfly

Year 1 – animals including humans, the body and senses, seasons, materials, plants and trees, comparing characteristics of animals (Kenyan Animals)

Year 2 – animals including humans, living things and habitats, plants and life cycles, materials and their properties, ocean habitats, food chains

Year 3 – materials and properties, rocks and fossils, dinosaurs, forces, light, plants and life cycles, animals including humans (skeletons and muscles)

Year 4 – water cycle, states of matter, irrigation, sound, digestive system, skeletal system, living things and their habitats, classification, circuits

Year 5 – sundials and water clocks, solar system, forces, living things and their habitats, classification and adaptation, environmental changes, life cycles (Amazon), testing temperature

Year 6 – light, electricity, circuits, evolution and inheritance, living things and their habitats, classification, animal adaptations, biomes, animals including humans (health and lifestyle), nutrients and water

Underpinning the knowledge are the following processes of science –

- Asking questions
- Designing experiments
- Reasoning and arguing with scientific evidence
- Analysing and interpreting data

Curriculum Design (Implementation)
With STEM a key curriculum driver, many topics throughout the school year are Science based. We carry out the curriculum planning for Science in two phases, long-term and medium-term planning. The long-term plan maps the scientific topics studied in each term for each year group. The medium-term plans are based on the scientific topics listed on the long-term plan. They ensure an appropriate balance and distribution of work across each term. Planning is annotated by the class teacher and used for reference in future teaching. To ensure clear sequences of learning, staff have knowledge of the progression of teaching throughout the school. For example, Year 4 know that their class will have covered the skeletal system in Year 3, Term 4 in their topic 'Farming for Food'. Vocabulary is

a key focus and is identified for each topic. Retrieval techniques are used to embed vocabulary, and in the following term to ensure deeper learning and understanding.
Enquiry-based approaches enable pupils to enhance their scientific knowledge, understanding, skills and attitudes and further develop their curiosity about the world around them. Pupils have regular access to appropriate hands-on practical activities that: support the development of motor, manipulative and age-appropriate technical skills, underpin their understanding of key scientific concepts, encourage them to ask productive questions, explore and investigate possible answers and communicate their findings to others and provide opportunities for developing both independent learning and team working skills.
Science in Early Years is taught through the Understanding the World part of the Foundation Stage Curriculum. The strands link into to termly topics as well as crossing into other areas of the curriculum. Children are provided with hands on opportunities to investigate, observe, ask, and answer questions, become inquisitive and to further their knowledge and understanding of the world. All these skills help to prepare them for Science in KS1 and beyond.
There is a STEM room, based at Beechwood, that can be used by all three schools within the MAT. Classes can book to use the room on a regular or individual lesson basis. It is a well-resourced room with suitable materials for all year groups and all areas of the curriculum. Replenishable resources, such as batteries can be ordered to support upcoming topics. This also includes resources to support the other subjects under the umbrella of STEM. There are links to BABCOCK and other local businesses who also support us with equipment for specific topics.

Knowledge Focused
Learning during the academic term is shared with parents in each of the schools e.g. through learning maps. These include the main aim of the term's topic and how this is explored through each subject. This is also available to access on each of the school's websites. Websites and books are also shared with parents to support learning and topic knowledge. Social media (school Facebook pages) regularly shows parents any Science learning that has taken place in school, within each year group.

What we do well as a Trust (Impact)

The long-term plans were implemented in September 2022 and ensure that all areas of science are covered in each year group. The learning is generally the focus of the whole term topic, so Science teaching is fundamental to lessons in most weeks, for most year groups. Children indicate in their Discovery learning journey books the focus subject of their lesson. Therefore, books signal the progression of learning throughout the term with Science learning marked in the margin by an S. The Trust use many outside businesses to deepen children's knowledge and understanding of specific science topics. This is magnified in our three STEM weeks throughout the school year. This is where an area of STEM is decided upon and taught in each year group through the school with an outcome that can be shared. This is generally in an A3 year group celebration page, an assembly, or links with the parallel year groups across the MAT schools.

STEM heads were introduced in January 2022 to maintain a link between learning styles and learning behaviours to the STEM skills. An action plan was created to embed those into the curriculum and the children's understanding of their learning, not just in Science and STEM, but across subjects.

The Science Coordinators liaise across the MAT to build relationships between the schools and plan parallel activities, with guidance from the Trust Science/STEM Coordinator. The individual Science Coordinators signpost staff to any relevant courses, useful websites, and age-appropriate competitions.

Writing Curriculum Statement

Quotes that guide us:
'If I waited for perfection I would never write a word.' Margaret Atwood
'Every child is natural born writer.' Carole Marsh

Why is it important to teach Writing? (Intent)
English sits at the heart of the curriculum and we value our children's right to be literate and to enjoy literature. At Discovery Multi-Discovery Trust, we recognise the central importance of English. Gaining and using skills in language not only affects the child's progress in school, but also has a profound influence upon the course of his or her whole life.
We aim to develop pupils' abilities in speaking, listening, and writing. Pupils will be given opportunities to develop their use, knowledge and understanding of spoken and written English within a broad and balanced curriculum.

Key Concepts:

- Being able to spell, punctuate, edit to a suitable standard
- Being able to compose pieces of text for a variety purposes and audiences
- Reading and writing with confidence, fluency and understanding, using a range of independent strategies to take responsibility for their own learning including self-monitoring and correcting their own errors
- With an interest in words and their meanings; developing a growing vocabulary in relation to grammatical terminology
- Understanding a range of text types, media types and genres
- Appreciate our rich and varied literary heritage
- Able to write in a variety of styles and forms appropriate to the situation
- Using their developing creativity, imagination, inventiveness and critical awareness
- Having a suitable technical vocabulary to respectfully articulate their responses in a discussion
- Have the enjoyment of composing a piece of writing and be proud of their achievements

Curriculum Design (Implementation)

Our English Writing curriculum ensures that our English teaching and learning provides many purposeful opportunities for reading, writing and discussion. We use a wide variety of experiences, quality texts and resources to motivate and inspire our children. All pupils receive a daily English lesson. Teachers also ensure that cross curricular links with concurrent topic work are woven into the programme of study.

- Teachers create a positive writing culture in school, where it is promoted, enjoyed and considered 'a pleasure' for all pupils.
- Pupils in EYFS and KS1 to have daily RWInc sessions.
- Weekly Spelling lesson to teach the children the necessary skills to learn and understanding their spelling rules. Age appropriate spellings sent home weekly for pupils to practise their words at home and tested weekly in school.
- Pupils are being adventurous with vocabulary choices.
- Pupils to acquire strategies to enable them to become independent learners in English (spelling rules and patterns and how to tackle unfamiliar words when reading).
- Pupils to discuss and to present their ideas to each other by talking, being able to elaborate and explain themselves clearly, make presentations and participate in debates.
- Working Walls – all classes aiding pupils and guiding them through the process of Writing and Analysing, Gathering Content, Planning and Writing.

- Vocabulary promoted through displays in class, all curriculum areas, enhancing and encouraging a wider use of vocabulary.
- Vocabulary mats to be used where needed and thesauruses and dictionaries which are easily accessible for pupils to use.
- Teaching a range of genres across the school (progressing in difficulty) both in English and other curriculum areas; resulting in pupils being exposed to, and knowledgeable about, literary styles, authors and genres. They can express preferences and give opinions, supported by evidence, about different texts.

Our English Writing curriculum gives children the opportunity to:

- Express their ideas in the development of writing, from the process of planning, writing and editing to improve their work.

Knowledge Focused

To ensure clear sequences of learning we use the Discovery MAT wide progression document to plan lessons. These give small steps that build towards key end points that link to the National Curriculum. These break down the National Curriculum statements into smaller steps. The key skills covered link to key vocabulary is identified for each year group.

What we do well as a Trust (Impact)

The impact and measure of this is to ensure children not only acquire the appropriate age-related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

Long term pupils will:

- be confident in the art of speaking and listening and to be able to use discussion to communicate and further their learning
- be able to read fluently both for pleasure and to further their learning
- enjoy writing across a range of genres
- pupils of all abilities will be able to succeed in all English lessons because work will be appropriately scaffolded
- have a wide vocabulary and be adventurous with vocabulary choices within their writing
- have a good knowledge of how to adapt their writing based on the context and audience
- leave primary school being able to effectively apply spelling rules and patterns they have been taught
- make good and better progress from their starting points to achieve their full potential Pupils of all abilities will succeed in all English lessons because work will be appropriately scaffolded.

APPENDIX B

PEDAGOGICAL PRINCIPLES TO SUPPORT TEACHING & LEARNING

Students learn most effectively when they connect new knowledge and skills to what they already know, and successfully retain that new knowledge. To achieve this, effective teaching involves the following:

- Challenge and inspiration
- Explanation
- Modelling
- Questioning
- Feedback
- Deliberate practice
- Positive and effective classroom climate and relationships
- Developing long term memory

Principles	Active Ingredients	Description	Research	Area	Agreed Terminology	Notes
Increase helpful challenge	Cognitive challenge is embedded in the curriculum and lessons	Willingham's definition 'Memory is the residue of thought' means we remember what we think about. Curriculum choices and tasks should challenge students to think hard about the things we want them to remember. In other words, it should aim to impose germane cognitive load: thinking devoted to the processing, construction and automation of schemas. Lessons that do not impose genuine challenge are less likely to help students retain information.	Willingham (2009) Why Don't Students Like School Sweller (1988) Cognitive load during problem solving: Effects on learning	Lesson/ curriculum design	• Learning outcome	• Learning plans will clearly display the learning outcome of the lesson. This will be linked to the national curriculum/subject specification where appropriate.

Reduce unhelpful challenge	Teachers aim to identify and reduce unhelpful challenge	Building on the point about challenge above, it is possible to create an unhelpful level of challenge: challenge that actually impedes learning. Poorly designed instructional materials – materials that are confusing, distracting or irrelevant – impose this kind of unhelpful challenge (called 'extraneous cognitive load'). The curriculum can help to reduce extraneous cognitive load by clarifying key concepts.	Sweller (1988) Cognitive load during problem solving: Effects on learning	Lesson/ curriculum design	• Learning outcome • Key concepts	• Learning plans will clearly display the learning outcome of the lesson. This will be linked to the national curriculum/subject specification where appropriate. This is shared with learners at the beginning of a lesson/sequence of lessons. • Use of key concepts
Explicit instruction	Teacher explanations are purposeful, clear and unambiguous	Explicit instruction is not 'lecturing' or 'excessive teacher talk'. It involves planned teacher explanations, extensive practice, and independent work. Commonly explicit instruction includes: • teaching skills and concepts in small steps; • using examples and non-examples; • using clear and unambiguous language; • anticipating and planning for common misconceptions; and • highlighting essential content and removing distracting information.	Rosenshine (2012) Ten Principles of Instruction EEF SEN in Mainstream Schools guidance report (2021) Allison and Tharby (2015) Making Every Lesson Count Kirschner et al. (2006) Why Minimal Guidance During			

		Rosenshine's Principles of Instruction is a popular approach.	Instruction Does Not Work			
Scaffolding, worked examples and concrete examples		A worked example is a step-by-step demonstration of how to perform a task or solve a problem. This guidance - or scaffolding - can be gradually removed in subsequent problems so that students are required to complete more problem steps independently. Teachers can alternate concrete examples (e.g., word problems) and abstract representations (e.g., mathematical formulas) to help students recognise the underlying structure of problems.	Deans for Impact (2015) The Science of Learning Rosenshine (2012) Ten Principles of Instruction The EEF Guide to Supporting School Planning: a Tiered Approach (2021)			
Modelling	Students are explicitly taught how to learn.	Modelling should be used to make implicit, expert thinking explicit. EEF Metacognition guidance report: 'Teachers should verbalise their metacognitive thinking ('What do I know about problems like this? What ways of solving them have I used before?') as they approach and work through a task.'	EEF Metacognition and Self-Regulated Learning guidance report (2018) – see Recommendation 3 for a modelling framework	Modelling and instructional strategies	• My Turn/Your Turn (MTYT) and I Do, We Do, You Do). • Key vocabulary	• Used to describe the stages that can be used when modelling a process. • Language required to access the curriculum.

Deliberate practice	Purposeful practice	It is recommended that deliberate practice includes: • highly structured activities explicitly directed at improvement of performance in a particular domain • working at the edge of competency • specific informative feedback • rigorous skills assessment • Building comfort level and confidence levels in students • Spacing practice over time	Didau and Rose (2016) What every teacher needs to know about… psychology.	Deliberate practice		
Questioning	Teachers and students ask questions to: • assess understanding and the effectiveness of instruction, • practice retrieval, • develop understanding • challenge and extend learning • promote metacognitive thinking.	Ask a large number of questions and check the responses of all students (Show Me) Ask questions which focus on the salient elements in the lesson; avoid questioning students about extraneous matters. Ask 'why' and 'how' questions so that students elaborate on existing knowledge Depending on the stage of instruction, questions can focus on lower cognitive levels (recall questions) and higher cognitive levels (questions that require students to manipulate previously learnt material).	Rosenshine (2012) Ten Principles of Instruction	Questioning	• Cold call • No Opt-Out • Right is Right	• The teacher strategically chooses which student answers questions rather than taking hands up. (TLAC terminology, also known as no hands up). • Teachers use No Opt-Out to respond to pupils. Students always have to answer a question (although sometimes this will be after they have heard a model answer from the teacher or another student). • Teachers do not accept part or weak answers but work with pupils so they

						can give fully correct answers.
					• Rounding up	• They avoid Rounding Up: Rounding up is when a teacher adds detail to a student's answer. It is something to avoid.
					• Hinge questions	• A diagnostic question that you ask your students when you reach the point in the lesson when you need to check if pupils are ready to move on (the hinge).
					• Show me	• Responses to the question will give information evidence about what the teacher and students need to do next. Whole class questioning technique where pupils respond to a question by writing an answer and then revealing simultaneously. Commonly performed with mini-pupil whiteboards.

Feedback	Feedback should aim towards (and be capable of producing) improvement in students' learning	(From the EEF'S Teaching and Learning Toolkit): Effective feedback tends to: • be specific, accurate and clear (e.g. "It was good because you..." rather than just "correct"); • compare what a learner is doing right now with what they have done wrong before (e.g. "I can see you were focused on improving X as it is much better than last time's Y…"); • encourage and support further effort; • be given sparingly so that it is meaningful; • provide specific guidance on how to improve and not just tell students when they are wrong; • be supported with effective professional development for teachers.	EEF Teaching and Learning Toolkit	Feedback	• Responsive feedback & Live marking	• This is done through effective circulation of the class. Aim to give individual feedback to a smaller number of students each lesson and be prepared to stop the class to feedback and address any common misconceptions.
Self-testing and Retrieval practice	Lessons provide opportunities for recalling information. The testing effect is used to help pupils store	For ideas about ways to implement retrieval practice - Tom Sherrington. 10 Techniques for Retrieval Practice – teacherhead	Sherrington (2019) Rosenshine's Principles in Action Jones (2019)	Assessment and recall	• Low stakes quiz	Low stakes quizzes should be: • Delivered in quiz/assessment style conditions (so they are the student's own work) • Framed with low stakes language to explain the assessments to pupils: For

	knowledge in long term memory. Note: the terms are often used synonymously, though retrieval practice is perhaps the better term since it more accurately describes the process.		Retrieval Practice Research & Resources for every Classroom Dunlosky et al. (2013) Improving Students' Learning with Effective Learning Techniques			example: 'Its just a bit more practice', 'Its' so we know what to teach you next', 'we want to see how successful our teaching has been', 'we are testing our teaching, not your ability', 'it doesn't matter if it goes a bit wrong' etc… • Designed to be fast to mark (so that pupils get fast feedback) • Designed to provide feedback to teachers (to inform the planning of future teaching)
Spaced practice	Teachers implement a schedule of practice that spreads out study activities over time.	Students often "mass" their study—in other words, teachers/they cram before assessments. But distributing learning over time is much more effective. Longer intervals are generally more effective: 'Long delays between study periods are ideal to retain fundamental concepts that form the basis for advanced knowledge.' (Dunlosky et al 2013)	Dunlosky et al. (2013)			• The idea that practising a particular skill or retrieving particular information is more effective when spread over time, rather than repeated sequentially over a short time period

Dual-coding	Combine words with visuals. (Firstly, we remember pictures better than words. Secondly, we process verbal and visual information through separate channels - hence it is 'dual coded'. Providing information in two formats increases the chance of recall.)	Dual coding is especially helpful for novice learners. Dual coding can help to make schema explicit - and show where new information belongs in an existing schema. Timelines, graphic organisers, diagrams, cartoon strips and infographics are commonly used examples of dual coding.	Caviglioli (2019) Dual Coding with Teachers			• Dual coding is not visuals for the sake of visuals. Poorly chosen or unnecessary visuals (or words) will increase extraneous cognitive load, impeding learning.