Computing Policy

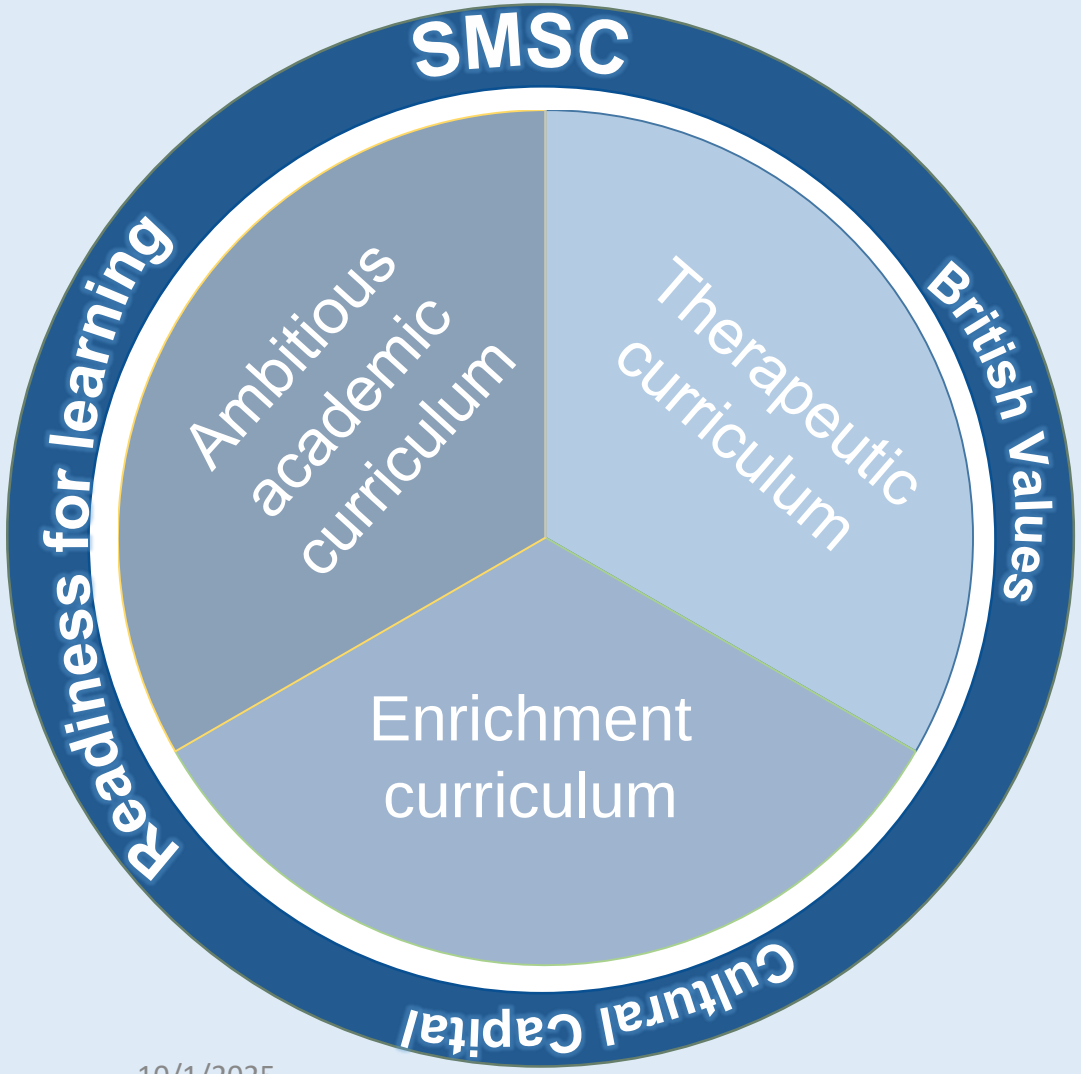
Successful – Confident – Responsible

ACER ACADEMY MISSION STATEMENT

To be inclusive
To provide nurturing/caring environments.
For children to feel safe.
To work with integrity and a strong moral compass.
To have the highest expectations and standards.

Policy developed by:	
Policy to be reviewed:	
Summary of changes	New policy

Main aims of the Acer curriculum



	Provide an **ambitious academic curriculum** so that students can access a wide range of qualifications and vocational options that can support and impact on their further education and their employability.
	The enrichment curriculum at Acer Academy provides pupils with diverse opportunities to prepare for success in 21st-century Britain. We aim to bridge gaps with socially advantaged peers by offering experiences beyond the classroom, including inspiring visitors, assemblies, clubs, and extracurricular activities linked to subjects. These opportunities broaden horizons, develop essential skills, and foster confidence, ensuring pupils are well-equipped for life's challenges and opportunities.
	We offer a therapeutic curriculum to support our students' holistic development, fostering emotional well-being alongside academic progress. By integrating therapeutic approaches into our curriculum, we create a nurturing environment where students can thrive socially, emotionally, and academically.
	To ensure that our students are in the best position to be ready to access and participate in their academic lessons. To develop our students' **cultural capital**, for us this is providing students with the opportunities to experience people, places and things that contribute towards the essential knowledge that pupils need in order to be educated citizens. To promote pupils' physical health and personal development which includes the spiritual, moral, cultural, mental development of pupils at the school in order to prepare our students for the opportunities, responsibilities and experiences of later life

Introduction and aims

What is a curriculum?
A curriculum is ‘The framework for setting out the aims of a programme of education, including the knowledge and skills to be gained at each stage’ (intent)

What is curriculum design?

Translating that framework over time into a structure of narrative within a school (implementation); and for evaluating what knowledge and understanding pupils have gained against those expectations (impact). Curriculum lies at the heart of education.

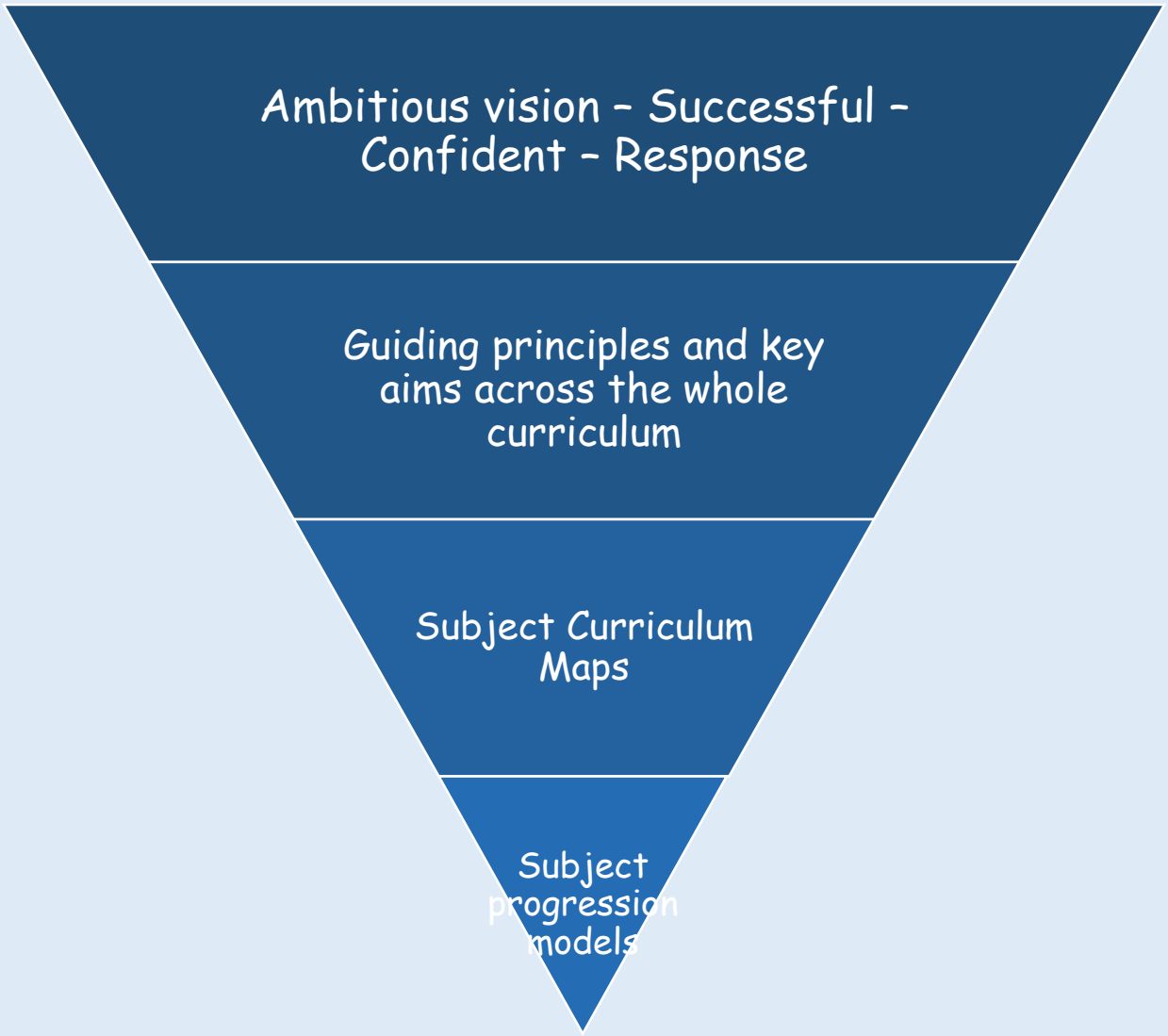
Aims of the policy

- Ensure that the design of the curriculum is tailored to meet the specific needs of all learners and has a significant impact on learning
- Provides a wide range of high quality, relevant and purposeful opportunities and qualifications which inspires young people to actively engage with their own learning and supports their development into adulthood

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.

Acer's curriculum design model



Do It Now

Memory Revie

Low Barrier

Starting point

Signposting

The guiding principles of our curriculum

Inclusion focus

- All students should see themselves celebrated through the curriculum. This is done through recognising and celebrating role models that reflect the diverse range of our school population.

Appropriate content

- The curriculum content has been chosen specifically for it's appropriateness for our students, this is driven by rigorous assessments of student starting points across all areas of the curriculum and the context of our school community

Locality

- Where fitting, the curriculum content will have a focus upon teaching students about their locality and influential figures with a link to their local area to create cultural capital for our students.

Evidence informed curriculum design

- Our curriculum is evidence informed through rigorous application of the best practice and the science of learning.

Science Policy – Rationale

- The rationale of this Computing policy is to:
  - introduce the key aims and objectives of the Computing department.
  - to explain the curriculum design and coverage.
  - to explain the effective Teaching and Learning strategies involved in Computing

Acer’s Science Policy Vision (Why)

- Provide an inclusive and ambitious computing curriculum.
- Build digital literacy, problem-solving, and ethical awareness.
- Equip students with practical skills and confidence to use technology effectively in a rapidly changing world.
- Inspire curiosity and creativity through real-world applications.

Curriculum intent

- The intent for the Computng curriculum is laid out in the National Curriculum in the Computing programme of study for key stage 3 and 4 . These are the things that we intend our students will study over their time at the Acer Academy. The starting points for our students is varied even within classes. As such we cannot easily define the educational outcomes of all our students by cohort. This has to be very individualised based on their starting points.

Curriculum Organization

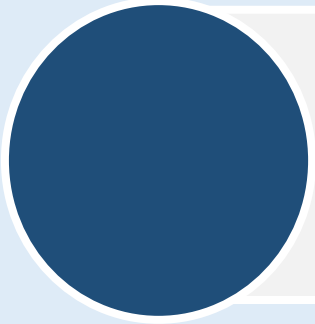
National Curriculum

Our computing curriculum is designed to align with national standards, ensuring all lessons and objectives meet the prescribed guidelines. This adherence guarantees that our students receive a high-quality education in digital skills, computational thinking, and online safety, preparing them for an increasingly technology-driven world.

Big Ideas

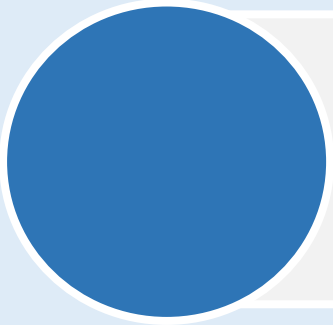
In computing, our curriculum is centered around foundational pillars, which represent the key aspects of computing education. These include **Programming**, **Data and Information**, **Creating Media**, **Computer Systems**, and **Safety and Security**. By organizing learning into these pillars, students can see how each lesson connects to a broader context, aiding their understanding of how computing impacts their daily lives and future careers.

The ‘Big Ideas’ identified in Computing



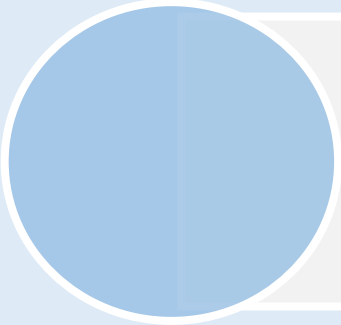
Programming

This pillar focuses on teaching students to write, debug, and understand code. Students explore key programming concepts such as sequence, selection, iteration, and subroutines, progressing from block-based coding to text-based languages like Python.



Data and Information

Students learn how data is represented, stored, and manipulated in computing systems. This includes exploring binary systems, databases, and real-world applications of data, such as visualizations and decision-making tools.



Creating Media

This pillar empowers students to design and develop digital content, including animations, graphics, video, and sound. It emphasizes creativity while teaching essential skills in digital editing and multimedia production.

The ‘Big Ideas’ identified in Computing

Computer Systems	Students gain an understanding of how hardware and software work together to process information. This includes learning about the components of a computer, networks, and the role of operating systems.
Safety and Security	This pillar ensures students are equipped to use technology responsibly and safely. Topics include online safety, protecting personal information, understanding cyber threats, and learning strategies to minimize risks.
Impact of Technology	Students explore the societal and ethical implications of technology. They learn how digital innovations influence individuals, communities, and the environment, fostering critical thinking and responsible digital citizenship.

Curriculum Organisation KS3

Curriculum Organization for KS3

In KS3, the computing curriculum is designed to ensure flexibility, inclusivity, and progression:

•**Year 9**: Students are taught separately and follow a bespoke computing cycle tailored to their specific needs. This approach allows for in-depth exploration of advanced topics and preparation for future academic pathways.

•**Years 7 and 8**: Teaching is mixed to accommodate different entry points and ages. To support this, the curriculum is organized in a two-year cycle:

- **Repeating Topics**: Topics are structured to repeat across Years 7 and 8, ensuring that all students cover the complete curriculum regardless of when they join or their prior experience.
- **Core and Extension Planning**: Each topic includes core content for first-time learners and extension activities for students revisiting the topic in their second year. This ensures appropriate challenge and progression.

Key Benefits of the KS3 Structure

1.Foundations: Every student builds a solid understanding of essential computing concepts, ensuring a strong base for future learning.

2.Gap Filling: Targeted instruction helps address gaps in knowledge, supporting new learners or those who require additional help.

3.Consolidation: Revisiting topics fosters long-term retention, enabling students to retrieve and apply knowledge effectively.

4.Extension: High-achieving students are challenged with advanced content, encouraging deeper understanding and mastery.

This scaffolded and differentiated curriculum ensures that computing is accessible, engaging, and aspirational for all students, allowing them to progress at a pace suited to their individual needs.

Timetable Allocation

Year Group	Lessons per week
Year 7	1
Year 8	1
Year 9	1
Year 10	1 + option
Year 11	1 + option

Subject Specific Pedagogy

Model Everything!	Use physical computing and making activities that offer tactile and sensory experiences to enhance learning. This provides an engaging context to explore and apply computing concepts.
Make Concrete	Bring abstract concepts to life with real-world, contextual examples, and a focus on interdependencies with other curriculum subjects. This can be achieved through the use of unplugged activities, proposing analogies, storytelling around concepts, and finding examples of the concepts in learners' lives.
Structure	Use supportive frameworks when planning lessons, such as PRIMM (Predict, Run, Investigate, Modify, Make) and UMC (Use-Modify-Create). These frameworks are based on research and ensure that differentiation can be built in at various stages of the lesson.

Subject Specific Pedagogy

Read and explore code first

When teaching programming, focus first on code ‘reading’ activities, before code writing. With both block-based and text-based programming, encourage learners to review and interpret blocks of code. Research has shown that being able to read, trace, and explain code augments learners’ ability to write code.

Assessment

Formative assessment

Every lesson includes formative assessment opportunities for you to use, and they are listed in the lesson plan. The formative assessments may be, for example, observations, questioning, or marked activities. We include these in every lesson to ensure that you can recognise and address learners' alternate conceptions if they occur. You can use the assessments to decide whether and how to adapt your teaching to suit the needs of the learners you are working with.

At the beginning of every lesson, the learning objective and success criteria are introduced in the slides.Every lesson has a starter activity and a plenary that can be used as an opportunity for formative assessment.

Assessment

Summative assessment

Every unit includes a linked summative assessment designed to test the knowledge and skills explicitly taught in that unit. These are either in the form of multiple choice quizzes (MCQs) or rubrics, depending on the unit's focus.All assessments are aligned with the taught curriculum, providing insight into how well learners have understood and retained key concepts and skills. Because progress in computing can vary significantly between learners, each strand is supported by progression descriptors from K1 to K9. These descriptors help teachers identify missed learning and gaps, enabling focused re-teaching or support.This approach ensures that assessment is meaningful and reflects the purpose of the learning, rather than just the activity used to deliver it.

British Values & SMSC

SMSC and British Values are mapped across all computing units at Acer.Each scheme of work identifies opportunities to promote pupils' spiritual, moral, social, and cultural development, as well as the fundamental British Values.For every unit, we have included linked reflection questions that teachers can use during lessons to encourage discussion and personal development.

Unit	Democracy	Rule of law	Individual liberty	Mutual respect	Tolerance	Social	Moral	Spiritual	Cultural
Digital communication and messaging	Pupils may vote on design ideas or presentations and learn how to respectfully share opinions during group critique. Why is it important that everyone in our group has a say? What happens when we all contribute fairly?	Pupils learn about copyright (e.g. when using images online) and why it's important to respect usage rights. Am I allowed to use this image in my work? Why does that matter?			When creating media for a broad audience, pupils consider how not to offend or exclude anyone based on culture or beliefs. Could anything in my design be misunderstood or offensive? How can I make sure everyone feels included?		When designing charity posters or branding, pupils consider how best to honestly represent a message or issue. Am I presenting this charity in a truthful way? How do I know this image or text is respectful and fair?		

Assessment Type	Details	Frequency
End of unit tests and tasks	Tests / tasks based specifically on the work covered during a topic. These are not always completed at the immediate finish of the topic so that we can test that long-term remembering has been achieved.	Ongoing
Pupil assessment	Self- assessment sheets for pupils to assess their progress against unit objectives	Ongoing
Teacher assessment	Teachers to assess pupils progress against the intended outcomes for a unit.	Ongoing
Low Stake assessments	Ongoing teacher assessment used to direct planning on the outcomes of low stakes testing.	Ongoing
Data capture	Formal data captured across all strands of the curriculum using formative and summative methods.	Once per term baselining new students