

MATHEMATICS RECOVERY CURRICULUM @ ST PETER'S CATHOLIC COLLEGE

Problem solving is a core part of mathematics, it involves being resilient and coming up with creative and effective solutions to problems, a skill which is key in overcoming current challenges we face.

All children are equal and have an equal entitlement to knowledge. The 2020 NPCAT Mathematics curriculum has been designed to further social justice by ensuring all pupils have access to 'powerful knowledge' and therefore narrow the disadvantage gap.

The best Mathematics lessons allow children to develop a conceptual understanding of the mathematics they learn, its structures and relationships, and fluent recall of mathematical knowledge and skills to equip them to solve familiar problems as well as tackling creatively and determinedly the more complex and unfamiliar ones that lie ahead. This is an intrinsic part of the Mathematics curriculum in NPCAT schools and an aspect that is now, more important than ever.

Mathematics Recovery Curriculum Plan - St Peter's Catholic College:

Relationships

Effective communication will be key to establishing a positive reintegration to school for pupils.

- Communication with parents and pupils beyond the physical and temporal restraints of the school day will be of vital importance and this will be achieved by: an engaging and regularly updated NPCAT Mathematics and Instagram feed, communication through our online platforms including Hegarty Maths and Year 11 parent and pupil revision sessions.
- A range of trust wide extra-curricular activities have been planned across the year to focus on the social and emotional development of pupils. There will be opportunities to attend events at Teesside University that encourage pupils to continue studying mathematics and highlight career opportunities. Schools will also take part in the Mathematics Challenge.

Recognise

We need an adaptive curriculum to identify and react to the gaps in knowledge of our pupils and which will enable us to then plan, recall and teach and reteach from this point forward. We will identify and then address gaps in pupils' understanding and knowledge by:

- Year 7: using the full package of GL assessments – CAT4, progress tests in English, maths and science, reading and spelling age tests, to effectively support transition from primary to secondary school.
- Years 7 – 11: carefully planned progression maps outline the skills and knowledge for each year group, recall tasks and low stakes testing based on the long term plan and progression maps will enable teachers to identify gaps in pupil knowledge to then adapt their planning. Formative assessment through skilful questioning and well planned teacher assessment of class work will inform future planning to prioritise the most important units for progression. Year 10 and Year 11 schemes of work have been carefully planned to interleave and reteach key knowledge and concepts.
- Pupils will be assessed summative three times throughout the year, however, they will complete formative end of block tests which will be followed by a feedback lesson in order to provide regular opportunities to intervene and consolidate learning.
- At St Peter's we have a form time retrieval timetable across all year groups, allowing us to identify misconceptions and gaps in learning. These are then monitored by DOPs and appropriate intervention is put in place.

Routines

We will implement a flexible, adaptive vocabulary rich, post lockdown curriculum that gives pupils the space and time to get into the routine of learning again. We will immerse all pupils in a world of number with explicit teaching of vocabulary to improve understanding.

- We recognise that many pupils will need support with their recall of fundamental number facts such as multiplication tables after such a long absence from school. Recall of key number facts will be a focus for pupils in Years 7 and 8 for at least the first three weeks of the term. Pupils who are struggling to catch up will be identified, parents will be notified and support will be provided.
- Lessons in all years will have the same routine to allow students to focus on learning.

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- Explicit vocabulary instruction is at the heart of our 2020 Mathematics curriculum. Tier two and three words have been identified for each half term in every year group. These words will be explicitly taught in lessons using the 'Freyer model'. Teaching will focus on how to use the word, examples and non examples to improve pupils' ability to recognise and decode unfamiliar words to solve worded problems.
- We will use a consistent approach to the teaching of mathematical methods across KS3 and KS4. Branded NPCAT slides will be used to reduce in school variation and therefore improve transition from one year to the next.
- The KS3 National Curriculum for mathematics overlaps significantly KS2. The KS3 curriculum has been designed to address gaps in learning as pupils progress through KS3. It is expected that more time will be needed in reinforcing KS2 content in Year 7, thus there will be less time to address the higher strand steps and fewer of these will be covered during 2020/21 than a more typical Year 7 cohort. Therefore, the higher steps will be revisited in Year 8 and 9 so that pupils can catch up by the end of KS3.
- Beginning with the study of Algebra in Year 7, will mean that this topic should not be impacted by lost learning as there is only a small amount of algebra at KS2. This will allow a fresh start for pupils. The next few half terms focus heavily on developing pupils' number skills, closing any gaps and moving on to apply their skills in a wide variety of new contexts.
- The Year 8 and 9 curriculum identifies where the content Year 7/8 Spring and Summer term will be met again in the KS3 curriculum. There is additional guidance for teacher in each block indicating:
 - How missed content may affect the study of this block, if relevant.
 - Where missed content could be incorporated into a Year 8 block.
 - Where review steps may need to be covered in more detail than before.
 - What steps could be left for future study.
- In Year 10, the curriculum significantly overlaps KS3 material to provide opportunity to spend more time on the review steps that revisit KS3/overlap content in some blocks, this will support pupils to catch up before they move on to new content.
- The Year 11 curriculum is bespoke to each school to make sure that gaps are closed and pupils are able to apply their skills in a wide variety of contexts. An after school intervention programme has been designed to focus on the needs of the students, indicated by the gap analysis from in class assessments and retrieval tasks.

Recall

- Low stakes recall tasks have been systematically planned across the curriculum. Recall tasks will focus on core knowledge. At St Peter's this also includes the retrieval curriculum implemented across all year groups during form time.
- Planned, targeted and frequent questioning across the lessons.
- Clear, structured and immediate formative feedback to avoid any further misconceptions.
- Interleaving of knowledge across the curriculum. Recall tasks have been systematically planned to interleave subject content.

Reteach

- The importance of immediate and purposeful feedback cannot be underestimated. Staff should refer to the NPCAT Feedback and Marking policy which details the different kinds of feedback that can be used during a lesson to support progress.
- The class teacher is the expert. They must use their own professional judgement when prioritising content for their classes.
- Supportive modelling is crucial. Consider the use of visualisers and planned WTMs particularly for Year 11.

React

- Where appropriate, in and after school intervention will be provided to pupils. This will be based upon a careful question level analysis of relevant and up to date data. Interventions will be carefully planned to focus on the specific needs of pupils.

