



# The Problem-solving Schools' Charter

## Values and ethos

We have a shared belief that:

- Mathematical ability is not fixed: everyone can learn and make progress
- Problem-solving often involves taking wrong turns and making mistakes: every learner has the right to struggle and the right to enjoy success
- Everyone should have the opportunity to develop the skills and attitudes necessary to become confident problem-solvers
- Problem-solving can motivate learners to learn new mathematics, apply previous learning and make mathematical connections

## Leadership and professional development

In our setting:

- Our staff promote positive attitudes towards problem-solving
- Time is set aside to discuss problem-solving in our meetings
- Our displays, newsletters, website, and social media content celebrate problem-solving for all
- Our monitoring system ensures that priority is given to problem-solving and mathematical thinking
- We engage with printed, online and face-to-face professional development opportunities offered by subject organisations

## Curriculum, pedagogy and assessment

We are committed to:

- Regularly embedding non-standard problem-solving opportunities in our maths curriculum for all
- Ensuring that problems, and classroom support, offer opportunities for all to experience both struggle and success
- Allocating time to developing key problem-solving skills and positive attitudes
- Including non-standard problems in our internal/formative assessments
- Liaising with other subjects so that meaningful cross-curricular links can be made

## Classroom culture

We aim to:

- Create a safe environment in which learners explore, take risks, and appreciate the value of learning from their mistakes
- Celebrate multiple approaches to solving problems and discuss the merits of the different strategies offered
- Provide frequent opportunities for individual and collaborative problem-solving, where learners are given both thinking time, and opportunities to share ideas and insights
- Celebrate the mathematical thinking of every learner

## Problem-solving beyond the classroom/school

We encourage:

- Learners to engage with school Maths Club(s) and high quality maths books, ideally stocked by the school library
- Learners to take advantage of printed, online and off-site mathematical enrichment opportunities
- Parents and carers to engage with problem-solving through family homeworks and in-school events, while recognising that not every adult has had a positive experience of maths
- Learners to appreciate, and learn more about, the achievements of a diverse range of mathematicians