

Year 1 Problem Solving and Games: A Step-by-Step Guide for Parents

This step-by-step explanation to problem solving can help you support your child's learning at home. Each subject is broken down into manageable steps, providing you with a simple guide to follow when exploring. Whether your child is still building up confidence with problem solving or already beginning to solve real-world maths problems, there will be a right place in this guide for you to support your child's learning.

Within this area of the website, you will find a selection of resources intended to help your child learn about each step of this guide. Each step also contains a keyword or phrase that you can use to search the Twinkl site for more resources and activities, designed to support your child in achieving that stage. Simply type the keyword or phrase into the search bar and press enter to explore together.



We hope you find the information on our website and resources useful. The contents of this resource are for general, informational purposes only. This guide is intended to offer parents general guidance on what subject areas tend to be covered in their child's year group and where they could support their children at home. However, please be aware that every child is different and information can quickly become out of date. There are some subject areas that we have intentionally not covered due to the nature of how they are taught or because a trained professional needs to teach these areas. We try to ensure that the information in our resources is correct but every school teaches the national curriculum in its own way. If you would like further guidance or are unsure in any way, we recommend that you speak to your child's teacher or another suitably qualified professional.

Problem Solving and Games

Why Are Maths Games Important?

Maths games have many benefits, especially in the first few years of a child's formal education. In the UK, mathematics is often perceived to be a 'difficult' subject. A fear of maths can be easily passed on from adults to children and this can cause children to worry about maths being a set of skills that are difficult to acquire. Playing games is a motivator for children because the rules and conditions that are followed are part of a game, rather than a formal lesson.

In games, success and failure are part of the game whereas many children find coping with getting things wrong tricky in a more formal learning environment. Maths games usually present maths content randomly to a child; this is also good for future resilience in maths as problems and calculations are not usually presented in the real world one after the other in an identical way, but as they are needed. Games offer flexibility and encourage children to respond to maths as it happens.



Maths Laundry

Try sorting clothes into different colours or types (e.g. shirts, trousers); this will develop an understanding of shape, colour and patterns. Pairing socks will start an understanding of shape matching and counting in twos.

Setting the Table

There are many ways to multiply at the early stages. Repeatedly adding together (even by counting on) is a great way to start. Try getting your child to set the table for the family. If everyone needs one fork, one knife and two spoons, how many spoons do we take from the drawer? How many items of cutlery altogether?

Play Shops

Problem solving in school often uses real-life situations. Use pretend or real fruit, vegetables or other items and pretend to buy and sell. It's a great opportunity for counting and getting used to money as well as getting children used to solving problems.

What Are 'Problems' in Maths?

In the teaching of mathematics in England, 'problems' usually refer to mathematical calculations presented in words, rather than just as a number-based calculation. The fact that they are called 'problems' tends to give a feeling that these must be more difficult than number calculations. In the most recent version of the mathematics national curriculum for England, there has been an increase in the amount of problem-based maths in the teaching programmes and in the formal assessments in year 2 and year 6. This is because all problems involve an element of problem-solving thinking. The child has to puzzle out which operation (+, -, \times or \div) they need to use so they have to apply thinking skills to work out the calculation. Once this step is done, the maths is the same. Between the ages of 5 and 8, most problems are likely to involve just one step to get to the answer, but in the later years of junior school, children will be expected to solve problems with at least two steps needed to get to the final answer.



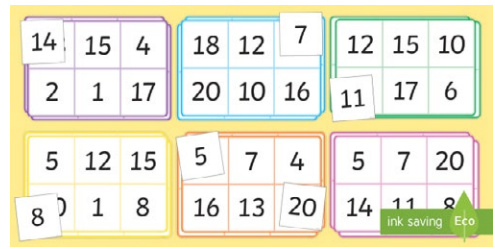
How Do Maths Games Improve Children's Performance?

Maths games improve children's maths performance, both through encouraging children to engage with maths and solve answers on their own and by encouraging resilience in coping with getting answers both right and wrong. This skill helps children to persevere with mathematics, especially when they hit a challenge.

Step 1

Numbers Bingo

As children move into year 1, it becomes more important to recognise numbers, rather than always counting arrays of pictures. This numbers bingo game will help your child to get used to the names we use to describe numbers and improve their speed. Not to mention that bingo is great fun. Why not introduce a little prize for the first person to get a 'full house'?



You will find a calling list, game boards and game cards. Simply read out the numbers on the list and have the players cover the numbers if they have it on their board. Alternatively, you can use the cards and boards together to create a simple lotto matching game.

Four in a Row Dice Game

In year 1, children begin to develop their ability to add up numbers without always needing to count on. This happens best when teachers concentrate on adding numbers in a small range and then gradually increase the totals. This makes dice games a great way of starting the mental addition process as the maximum total is 12.

All the instructions are on the side of this simple print-out game. All you need is two dice and enjoy adding to 12. Who will be the first to get four in a row?

Step 2

Step 3



Double Decker Bus Game

Doubling is the very beginning of your child's journey to understanding multiplication. This game reinforces the idea that adding two of the same digits together is the same as doubling, so double 6 is $6 + 6$ or 12. Be careful not to confuse your child by talking about multiplication or tables at this stage. Doubling is not the two times table. If we double, we go 1, 2, 4, 8, 16 whereas our two times table is 2, 4, 6, 8, 10.

Mathopoly

Before leaving year 1, teachers aim to ensure that most children can perform basic addition and subtraction and spot the signs and symbols in calculations. This Mathopoly game turns these formal calculations into fun learning that your child will enjoy with friends or family. The colourful board game involves adding and subtracting one-digit and two-digit numbers to 20. Your child will practise reading, writing and interpreting mathematical statements involving the addition (+), subtraction (-) and equals (=) signs. It's a perfect activity for revising simple addition and subtraction before moving on to year 2.

Step 4

Explore and Discover More

Twinkl Go! is a digital platform, hosting interactive content such as videos, games, audiobooks and more. Twinkl Go! enables digital content to be streamed to your computer or mobile device.



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Go!



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Book Club

Twinkl Book Club is our book subscription service. Enjoy our original works of fiction in beautiful printed form, delivered to you each half-term and yours to keep!



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Boost

Twinkl Boost is a range of intervention resources, created to support and lift learning with children at every level. These include our easy-to-use SATs and Phonics Screening resources.



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imagine

Imagine resources are designed to help your children to think creatively, question and imagine. Every week, a new topic consisting of five photos, each with related activities, is created.

Twinkl Originals are engaging stories written to inspire children from EYFS to KS2. Designed to encourage a love of reading and help curriculum-wide learning through accompanying resources.



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ORIGINALS



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KIDS' TV

Twinkl Kids' TV is our wonderful YouTube channel dedicated to fun and informative video-style resources full of new and creative activities you can try at home!