

Year 4 Problem Solving and Games: A Step-by-Step Guide for Parents

This step-by-step explanation to problem solving and games will help you to support your child's learning at home. Each subject is broken down into manageable chunks, providing you with a simple guide to follow. Whether your child is still needing regular practice with times tables to help them recall those tricky multiplication facts or your child just needs to build their confidence with thinking mathematically, there'll be a right step in this guide to help.

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 However, please be aware that every child is different and information can quickly become out of date.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

How Do Maths Games Help with Times Tables?

By the time a child is eight or nine years old, they've usually learnt the core tables. In the national curriculum for England, it is suggested that children start to learn their $2\times$, $5\times$ and $10\times$ tables around the age of six. By nine, most children have some grasp of the tables up to $12\times$. What is needed once tables have been introduced is repeated practice. Maths games help children by giving value to knowing tables and by children spotting the same tables over and over. Games with dice help because they usually give numbers randomly and so children learn to give answers to tables given in an unpredictable order, which improves recall of tables.

What Are Two-Step Word Problems?

Word problems are maths calculations that present the information for a calculation in words, rather than in numbers only. In primary school mathematics, the questions usually use an everyday situation. In the maths curriculum for England, children are expected to work out answers to problems with more than one step from year 4 onwards. This means a child is expected to work out which operations ($+$, $-$, \times or \div) they need to use at both steps of the calculation. For example, if asked how much change someone would receive after buying 4 sweets in a shop and paying with £1, the child would need to work out that they need to add up the cost of the 4 items and then subtract that total from £1 to work out the change.

Do Interactive Games Help with Primary Maths?

Interactive games, like Twinkl Go games, can really help with children's maths. Not only are children keen to practise this type of computer game more than they are with a traditional worksheet activity, but they also get instant feedback and constant praise. Games often present the content at random so children become more fluent in their responses. It is especially effective to use these games where maths facts need to be learnt, such as times tables, number bonds and inverse operations.

As well as using the resources in this category and the keyword searches, below are a few ideas for games and activities to help your child to practise at home.

Mixed Operations

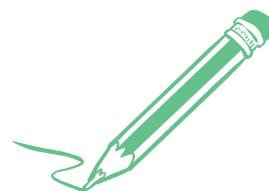
Try a verbal game as a group. State a number up to 20. Go around the group and state as many calculations as you can that give this answer. To make the game trickier, you must change the operation each time in order from $+$ then $-$ then \times then \div . So for 12, person 1 might say $10 + 2$, then person 2 says $20 - 8$, person 3 says 6×2 and person 4 says $24 \div 2$. Start with single-digit numbers (numbers below ten) first.

Twinkl Go

One of our steps in this guide uses a Twinkl Go computer game. Why not take a look at the amazing range of maths games by following this **Twinkl Go link**? You'll find a huge range of games that your child won't want to put down! You can often set the difficulty level and/or range of times tables or numbers used at the beginning, giving your child confidence and allowing you to monitor their progress.

Square Tables

If members of your family know their tables, can anyone do their square tables by heart?
 $0 \times 0 = 0$, $1 \times 1 = 1$, $2 \times 2 = 4$ and so on.



Step 1

Snakes and Ladders

In year 4, some children still lack confidence with their multiplication tables. The easiest way to build confidence with tables is to focus on small groups of tables. If your child finds recall of tables tricky, practise counting in 2s, 5s and 10s. First of all, count upwards to 10 or 20 (or 100 for 10× tables). Once this is mastered, count up and then reverse back down. Then try 3× and 4×. This verbal counting helps children to practise the 'answers' to tables. This step contains a useful snakes and ladders game that you can use with your child to further reinforce these basic tables.

Emoji Maths

Repetition is a great way to practise tables and number bonds with your child. Emoji maths is a relaxed alternative activity that will maintain your child's interest in practising tables and number facts. In contrast to active games, this lets your child engage in tables practice without needing to verbalise or interact with other children, so it is an activity for a plane journey, quiet Sunday afternoon or a few minutes a day. Adult supervision isn't needed but the benefits of repeated practice in a relaxed environment can make all the difference.

Step 2

Step 3

Monkey Mystery Crime

Can your child find out which monkey stole the keys? As your child nears the summer term in year 4, most of the year 4 topics will have been taught. The national curriculum in England expects children to use reasoning and problem solving with the maths topics they've been taught so they can use their maths. This entertaining task gets your child to solve a range of maths calculations using the contents of maths your child has been learning. From fractions and decimals to statistics and time, this is a great chance for your child to show what they've learnt. Your child can try a separate activity page each day and there's an answer sheet included so you can check on progress each day.

Space Explorers

This space-themed interactive game helps your child to practise memory skills and inverse operations which are a key part of maths learning in year 4. Multiplication is the opposite (inverse) of division and subtraction is the opposite of addition. Practising calculations working in both directions improves your child's thinking speed and fluency in maths and gives a great foundation for problem solving and mental arithmetic. Your child should be able to attempt this task independently once you've set up the game on a computer. Just press the green 'Launch' button once you've signed in to Twinkl. Start with one-star and pick the options that your child is confident with, and then build up the tables and difficulty level as the days go by.

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!