

Teaching ideas for learning at home

Clare Truman, Spectrum Space

1. Using Lego to Make Arrays

Target: Multiply whole numbers in the range 0×0 to 12×12 (times tables)

Small Step Objective: To be able to use arrays to represent multiplication problems.

You need: Lego, paper and pens.

1. Set up a big piece of paper or roll of paper next to a tub of Lego bricks.
2. Pick a Lego brick at random and place it on the paper.
3. Count the number of rows of dots on the brick and write this down on the paper. For example this brick has two rows of four dots so I would write "Two rows of four dots".
4. Underneath write the sum 2×4 , then count the dots and write the answer = 8. (Make sure you model the counting of the dots even though you know the answer).
5. Repeat with several different Lego bricks and see if your child shows an interest in joining you.
6. If not, get stuck on one problem and ask for help.
7. If that doesn't work/she doesn't like being tricked. Try completing the task with your eyes closed, just feeling the bricks and ask your child to check if you are right.
8. Once she has been able to accurately correct your work, verbalise or write the sum shown on the Lego brick three times she has achieved the target. This may take several sessions.

2. Drawing Lego Arrays

Target: Multiply whole numbers in the range 0×0 to 12×12 (times tables)

Small Step Objective: To be able to use arrays to solve multiplication problems.

You need: Paper and pens

1. Set up several sheets of paper scattered around a table or the floor.
2. Write a multiplication sum at the bottom of one sheet (e.g. $2 \times 2 =$) leaving the answer blank for now.
3. Draw a lego brick to represent the sum (it doesn't have to look beautiful, four dots in a square is fine).
4. Write the next sum on a new sheet of paper and invite your child to draw the brick and answer the sum. If she is not keen, try it the other way around where she writes the sums for you and you draw the bricks and answer them, then she checks your work. You can tell her some will be right and some will be wrong and she needs to spot the ones you have got wrong.
5. If you are both engaging with the drawing and answering then you can get yourselves up and moving by making it a race like this:
 - a) Lay 12 sheets of paper on the floor/table.
 - b) Both write a sum at the bottom of a sheet of paper.
 - c) Swap places and answer each other's sums.
 - d) As soon as you have answered your sum, you write new sums for your opponent, each one on a new sheet of paper. You cannot write a new sum unless you have finished answering the one that was left for you.

- e) As soon as your opponent writes a new sum for you, you have to run to where that sheet of paper is and answer it before they answer the ones you left for them. Then when you've answered all of theirs you can run back and write more for them.
- f) Keep going until all the paper has been used.
- g) Count up the number of questions you answered correctly.
- h) The person who answered the most is the winner.

3. Dice Duel: Multiplication Facts Recall

Target: Multiply whole numbers in the range 0×0 to 12×12 (times tables)

Small Step Objective: To be able to recall multiplication facts.

You need: Two sets of twelve-sided dice (the sort that are used in role playing games)

A printed multiplication square.

You also need some way of keeping score (e.g. tally chart on a piece of paper).

1. Take turns to roll both dice.
2. Multiply the numbers you have rolled.
3. The highest total wins the round.
4. Play the best of ten rounds.

To start with, use the multiplication square to help you find the totals.

Play the game regularly so that the answers from the multiplication square begin to be recalled from memory and then take the multiplication square away and challenge yourselves to remember the facts.

Initially you could work with four sided dice, then six sided, then finally the twelve sided dice.

4. Bingo Multiplication

Target: Multiply two-digit whole numbers by single and double digit whole numbers.

Small Skills Objective: Multiply two-digit whole numbers by double digit whole numbers.

Getting started: You may want to start by watching some YouTube videos about two digit multiplication.

You need: A bingo wheel and bingo balls (you don't need the bingo cards)

Tokens or counters

Lots of paper to do your working out and keep score.

Pens or pencils for each player.

How to play:

- Take turns to roll the wheel and get two numbers.
- When everyone has their two numbers they multiply them
- The player with the highest answer wins a token.
- Repeat several times, with the winning player getting a token each time.
- The first player to get five tokens is the overall winner.

5. Dragons Hide and Seek

Target: Use appropriate positional vocabulary to describe position and direction including between, inside, outside, middle, below, on top, forwards and backwards.

You need: Several different dragon toys (or another type of toy character)

Some obstacles (things found in the kitchen work best - cups, mugs, pans, bowls)

A blindfold (a scarf will do)

Visual prompts, symbols or written words (see below)

between, inside, outside, middle, below, on top, forwards backwards

These games may be played all in one session or in three separate sessions.

Game One

Small Step Objective: To be able to give instructions using positional language with visual prompts.

1. Lay out the obstacles around the table or the floor.
2. Lay the toys out in a row in front of you.
3. Ask your child to give you an instruction using the prompt cards to help her (e.g. move the green dragon forward and put it inside the saucepan). You may have to model this once first.
4. Follow her instruction, practice a couple of times with different instructions.
5. Then put the blindfold on. Can you follow five instructions with the blindfold on. Can your child spot it when you go wrong and correct you?

Game Two

Small Step Objective: To understand positional vocabulary when it is used by others, without visual prompts.

Play game one as above except this time your child wears the blindfold and you give the instructions.

Game Three

Small Step Objective: To be able to give instructions using positional language without visual prompts.

Play game one as above, except this time there are no visual prompts available.

6. Dragon Sorting

Functional Skills Target: Sort and classify objects using two criteria.

You will need: Big sheets of flipchart paper or masking tape and a big space on the floor.

Marker Pens

Lots of different toy dragons (or other character toys).

Activity One

Small Step Objective: To be able to sort items using one criterion.

1. Divide the paper in two with a pen or the floor in two with the masking tape.
2. Write two categories at the top of each column (e.g. "Yellow" and "Not Yellow")
3. Model sorting the first two dragons into the categories.
4. Can your child finish the sorting?
5. If not, can you make some mistakes for her to correct as you sort them.
6. Repeat with different categories.

Activity Two

Small Step Objective: To be able to sort items using two criteria.

1. Draw a Carroll diagram like this on the paper or create one using the masking tape:

	Yellow	Not Yellow
Standing on two legs		
Standing on four legs		

2. Model sorting the first two dragons into the Carroll diagram.
3. Can your child finish the sorting?
4. If not, can you make some mistakes for her to correct as you sort them.
5. Repeat with different categories.

7. Odd and Even Jenga

Target: Recognise and sequence odd and even numbers up to 100

Small Step Objective: Recognise odd and even numbers up to 100

You need: Two players

Jenga/A tumbling tower game

A flat surface to play on like a table or hard floor

Set-Up

Write numbers on the end of each block. Try to ensure a roughly even mix of odd and even blocks.

Instructions:

Take turns to carefully move a block from the tower and place it on the top. You can only touch the block to move it, you cannot touch the rest of the tower.

The child can only move the even numbered blocks

The adult can only move the odd numbered blocks

Whoever makes the tower fall down is the loser.

If the child is learning about odd and even numbers for the first time, it can be helpful to have a colour coded number grid to support the child in identifying the even numbers.

You could then swap round so that the child is moving odd numbered blocks.

Adaptation of this game:

Spread all the blocks out on the table or floor.

Set the timer for three minutes.

Start the timer and race to build the tallest tower out of your blocks but there is a catch:

The child can only move the even numbered blocks.

The adult can only move the odd numbered blocks.

Whoever makes the tallest tower before the timer runs out is the winner.

8. Odd and Even Bingo

Target: Recognise and sequence odd and even numbers up to 100

Small Step Objective: Recognise odd and even numbers up to 100

You need:

Two players

A bingo wheel and bingo balls.

The odds and evens square.

Cups or bowls to collect the balls in.

(You don't need bingo cards for this game)

Instructions

Round One:

The child collects odd numbers
The adult collects even numbers

Roll the bingo wheel and read out the number.

Look on the odds and evens square to see whether it is an odd or even number.

If it is an odd number, the child keeps the ball. If it is an even number, the adult keeps the ball.

The first person to collect ten bingo balls is the winner.

Round Two:

The instructions are the same but this time, the child collects even numbered balls and the adult collects odd numbered balls.

9. Make your own Alphabet Bingo instructions

Target: Write the letters of the alphabet in sequence and in both upper and lower case

Small Step Objectives: To be able to write the letters of the alphabet in lowercase.

To be able to sequence lowercase letters in alphabetical order.

You will need: 26 ping pong balls

Permanent markers

Bingo mats for each player

Whiteboard markers

A carrier bag or big box

Instructions:

- Use the permanent makers to write the letters of the alphabet on the ping pong balls. Write the letters in **lowercase**.
- Put the letters in the bag/box.
- Use the whiteboard markers to write **capital letters** in each box on your bingo mat.
- Shake the bag/box to jumble up the ping pong balls, then pull one ping pong ball out of the bag/box.
- Read the letter on the ball.
- If anyone has that letter on their bingo mat they cross it off using a whiteboard marker.

- Keep going until someone crosses off three in a row, they shout bingo and win. (Or you could play until you get a full house).
- At the end of the game, get all the ping pong balls out of the bag/box and line them up in alphabetical order.

10. Cup Stacking Game

Targets: Any reading targets.

Small step objective: To be able to read X number of sight words fluently.

Resources: Paper cups, marker pen

Setup: With or without the child write the sight words on the cups, one on each cup.

Play: Set the cups up into a tower, reading each cup as you pile them up.

See how quickly you can unstack them reading the words again as you squash them all down, one on top of the other. Then how quickly you can put them back into a tower. Keep going trying to get faster and faster each time.

Too difficult? Reduce the number of cups.

Too easy? Race against a timer.

11. Choose something more interesting to write on or in

Targets: Any spelling objectives

Small step objective: To be able to spell X number of sight words.

Resources: You will need sight word flashcards and one of the following:

Magnetic doodle pad

Sand/salt tray

Cornflour and water tray

Invisible Ink Pen

Shower gel in a zip lock bag

Play: Read the words from the flashcards out to the child and they write them down.

Too difficult? Allow the child to copy from the flashcard while they practice. Then try and write it from memory afterwards.

Too easy? Try racing against a timer.

Adaptations: You can use this to make any writing task more motivating, writing phrases and sentences as well as words.

12. Water Balloon Sight Words

Targets: Any reading objectives

Small step objective: To be able to read X number of sight words.

Resources: Chalk, water balloons, bag to put the balloons in

Setup: With or without the child write the sight words on the patio.

Fill up as many water balloons as there are words.

Play: Shout out one of the words and the child tries to hit that word with a water balloon.

Keep going until you have hit all the words.

Too difficult? Write words in pairs and give the child a 50/50 choice of which one to hit.

Too easy? Add more words!

Adaptation: You can also play this game with initial sounds, blends and diagraphs.

13. Sight Word Splat

Targets: Any reading or spelling objectives

Small step objective: To be able to read/spell X number of sight words.

Resources: You need sight words written on sticky notes, some fly-swats, a timer.

Setup: Lay one set of sight word sticky notes, spread out, face up on the table or floor.

Play: If you have three people - one person reads out the words and the other two race to "splat" the correct word with the fly swat. If they splat the correct word first they keep the card. The winner is the person with the most cards at the end of the game. If you only have two people. One person reads out the cards and the other races against the timer to get as many cards as they can in the time. Can they beat their personal high score?

Too difficult? Reduce the number of words.

Too easy? Add new words.