Maths Parent Workshop
What we Teach, -How we Teach it -

Number and the Stepping Stones to Multiplication and Division

Reception and Year 1

Lindow Community Primary School

Concrete, Pictorial, Abstract

The children's understanding of the calculation strategies that they are taught through school will be underpinned by a secure understanding of place value. At Lindow Community we teach through a **CPA (concrete, pictorial, abstract) approach.**

Understanding in all areas of maths will be developed by children using concrete resources and interpreting and using pictorial representations before moving onto solve abstract calculations.

There are a range of place value and counting resources available for the children to use in each classroom. The CPA process/approach will be clearly exemplified on maths working walls for the current maths focus.

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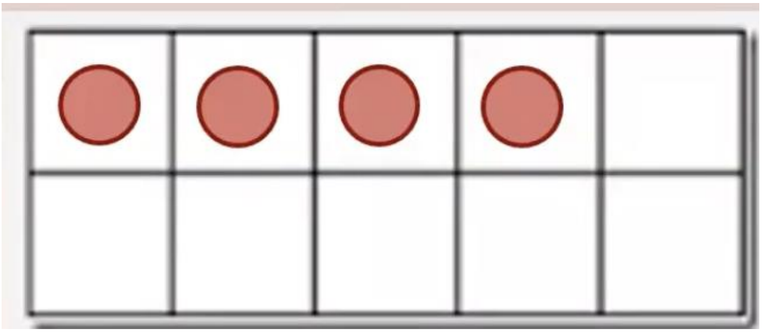
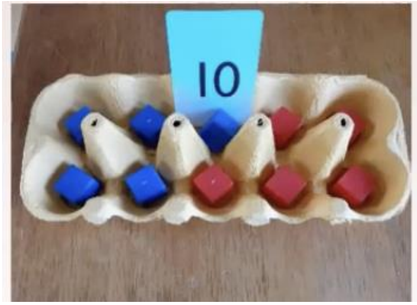
Useful Resources

Concrete resources are VITAL in the children's early understanding of number and calculation.





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Understanding Number as Steps in a Sequence

In reception, the children build a strong sense of what number is. They begin with understanding number as steps in a sequence. This will be from counting e.g. up and down the stairs, their toys when they are tidying etc.

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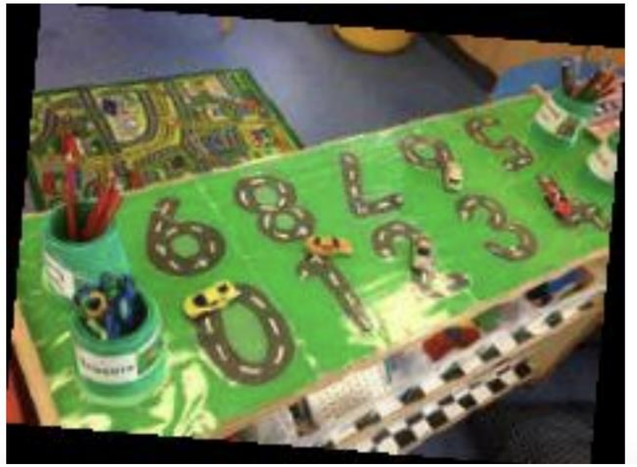
How do we approach Mathematical development in the Early Years?

- Playing, eg blockplay, number rhymes.
- Games and activities indoors and out, eg cooking, goal scoring.
- Making the most of routines, eg snacktime, tidying up.
- During ChilL (child-initiated) as well as through directed time.

Fun, hands on and in a meaningful context!



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EYFS End of Year expectations

Mathematics

Number ELG
Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns ELG
Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

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Doubling

In Reception, we give children opportunities to explore vocabulary using practical resources that will reinforce the concept of doubling.

Initially, this will start as matching pair games and activities to embed and demonstrate their understanding of it means to double.

This concrete experience is the precursor for building the children's understanding of multiplication.

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Using the resources on your table, how could you demonstrate your understanding of double 3?

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MULTIPLICATION

Year 1

National Curriculum Objectives: Multiplication objectives from Multiplication and Division Strand	Key Skills/ other linked NC Objectives (Place Value)	Key Vocabulary
• Solve one-step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays, with support from the teacher.	• Count in multiple of 2,5 and 10.	groups of, lots of, sets of times, altogether, multiply, count,

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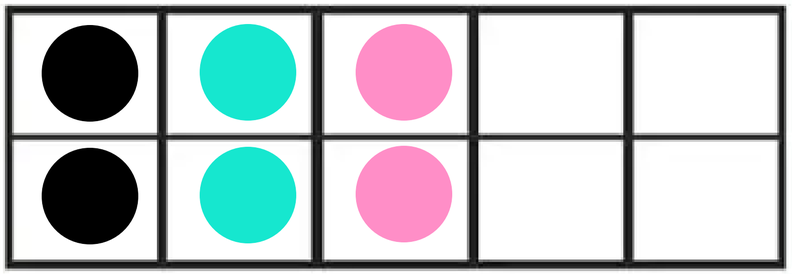
In year 1, the children will:

- Begin to understand multiplication by multiplying with concrete objects, arrays and
- pictorial representations.
- Experience counting equal groups of objects in 2s, 5s and 10s.
- Experience practical problem - solving activities in various contexts.
- Make connections between concrete resources and pictorial representations, number
- patterns, arrays and counting in 2, 5 and 10s.
- Be given the opportunity to explore and understand the vocabulary of early multiplication
- e.g. lots of, how many altogether etc. =



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Using the resources on your table, how could you demonstrate your understanding of 2+2+2?

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Halving in the EYFS

In Reception, we give children opportunities to explore vocabulary using practical resources that will reinforce the concept of halving.

Initially, this will start as sharing resources and activities to embed and demonstrate their understanding of it means to have an equal amount shared. This also links to the language of odds and evens as well as parts making a whole.

This concrete experience is the precursor for building the children's understanding of division.

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Using the resources on your table, how could you demonstrate your understanding of halving 6?

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DIVISION

Year 1

National Curriculum Objectives: Division objectives from Multiplication and Division Strand	Key Skills/ other linked NC Objectives (Place Value)	Key Vocabulary
• Solve one-step problems involving division, by calculating the answer using concrete objects, pictorial representations and arrays, with support from the teacher .	• Counting in 2s, 5s and 10s	share, share equally, one each, two each…, group, groups of, lots of, array

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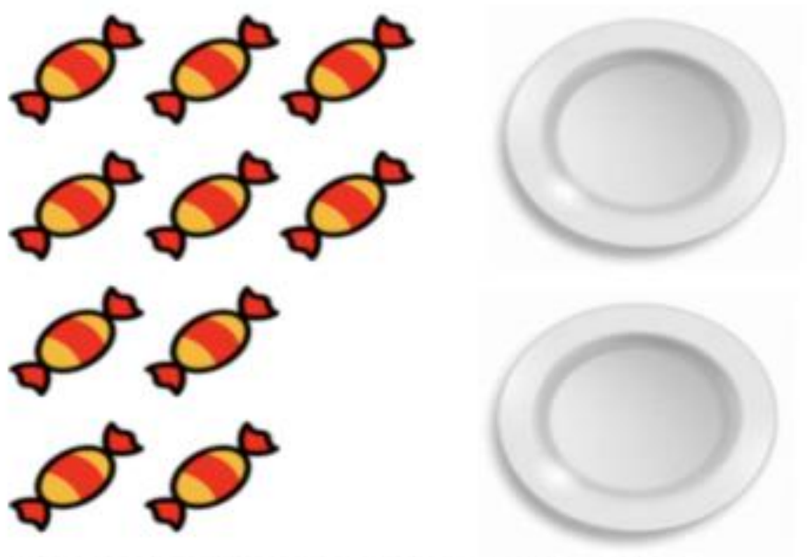
Using the resources on your table, how could you solve the question below?



Share the sweets equally between the two plates.

___ sweets shared equally between 2 is ___.

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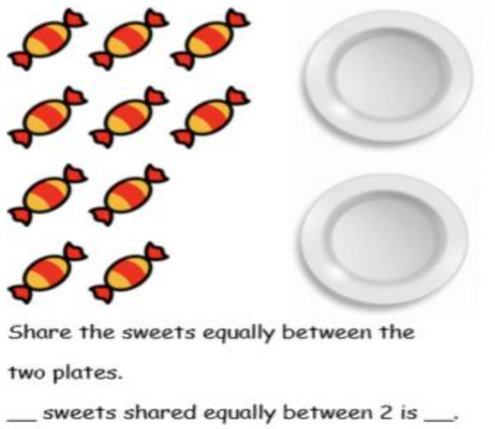
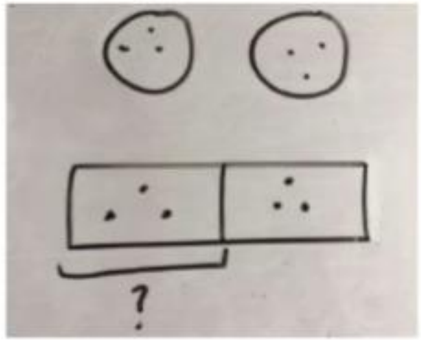
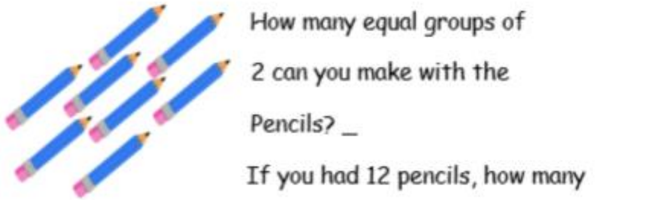
In Year 1, the children will be exposed to division through:

- Being given lots of opportunities to explore division as both grouping and sharing, using practical resources and pictorial representations to solve simple problems.
- Being taught to understand the difference between grouping objects (How many groups of 2 can you make?) and sharing objects (Share these sweets between two people).
- Being taught to find half of a group of objects by sharing into 2 equal groups.
- Children will be taught to interpret and use pictures to support their grouping and sharing, alongside the use of practical objects and resources.







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How to help at home

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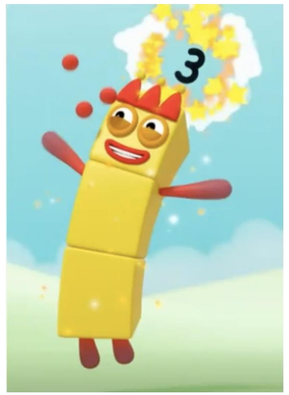
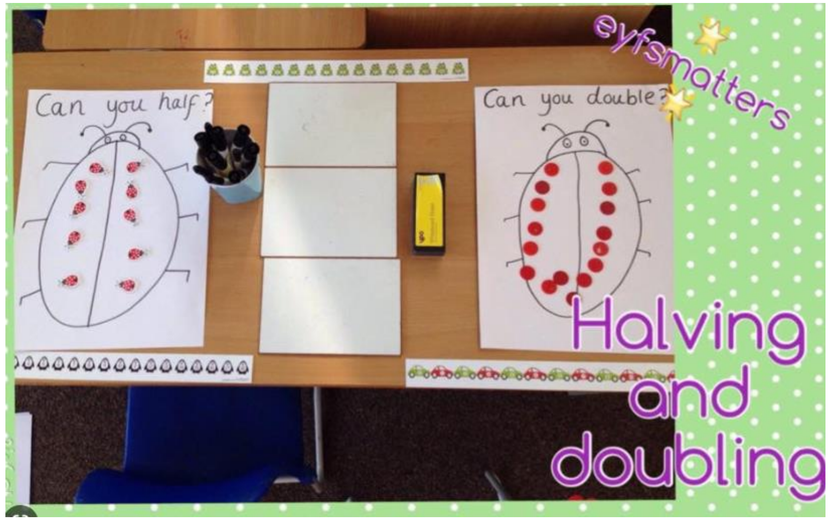
Doubling in the EYFS

Numberblocks Episodes on BBC iPlayer

Series 2 of Numberblocks have some great visual animations that support the children's early understanding of number, including doubling and halving.





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How else can this stage be supported at home?

At home, you can support your child's understanding through modelling the language of doubling when having two of the same. (EG. Socks)

Playing matching pair games is another great way to encourage the understanding of what makes a double.

You can also use the language of doubling around the home.

Halving in the EYFS

How can this stage be supported at home?
At home, you can support your child's understanding through modelling the language of sharing, equal amounts and half.
Playing sorting and sharing games is another great way to encourage the understanding of halving.
You can also use the language of halving around the home.

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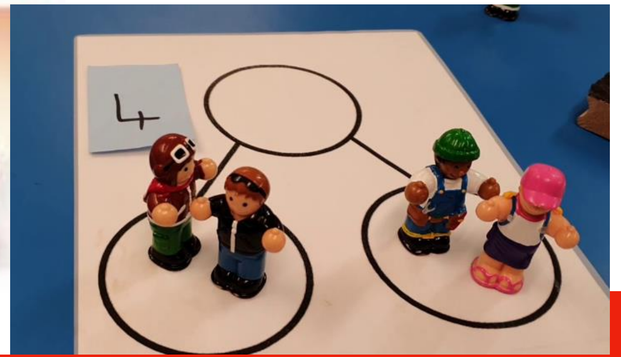

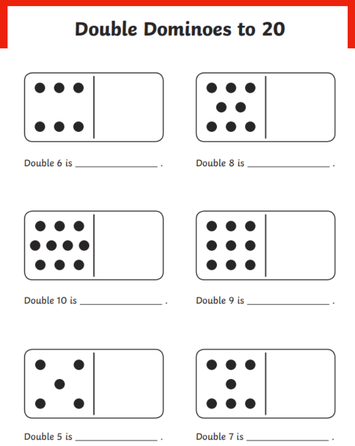

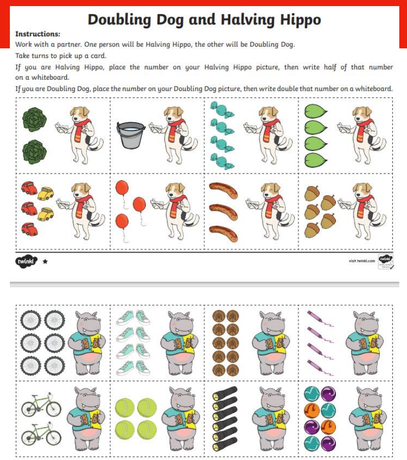

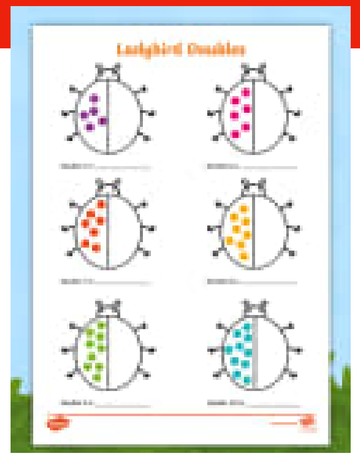

MULTIPLICATION

Year 1

National Curriculum Objectives: Multiplication objectives from Multiplication and Division Strand	Key Skills/ other linked NC Objectives (Place Value)	Key Vocabulary
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Mental Methods

Counting in multiples of 2, 5, and 10s.

Spotting number patterns when counting in 2, 5 and 10s.

Repeated addition

Links to doubling

Use of arrays

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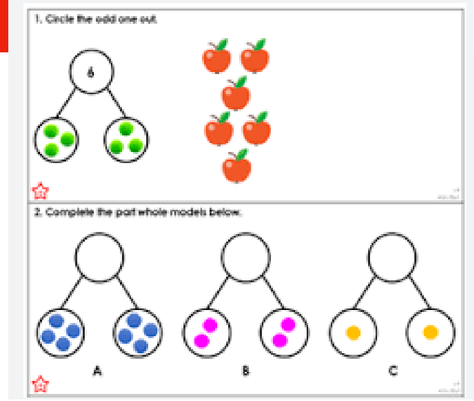
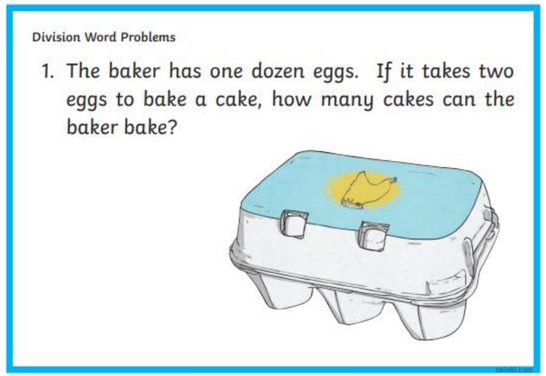
How can this stage be supported at home?

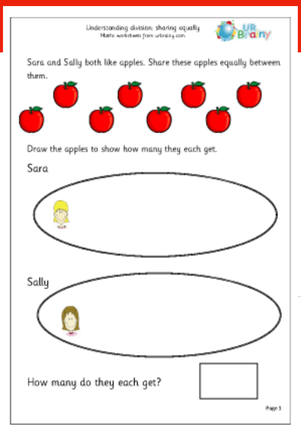
At home, you can support your child's understanding through modelling the language of doubling when having two of the same. (EG. Socks)

Counting in 2s, 5s and 10s when counting coins, or climbing the stairs etc.

Playing games where they win points (such as kerplunk) but the points can count up in 2s, 5s or 10s.







DIVISION

Year 1

Mental Methods:

- Counting in twos, fives and tens
- Links to halving
- Use arrays
- Through grouping and sharing small quantities, children will begin to understand division and finding simple fractions of objects, numbers and quantities.

National Curriculum Objectives: Division objectives from Multiplication and Division Strand	Key Skills/ other linked NC Objectives (Place Value)	Key Vocabulary
• Solve one-step problems involving division, by calculating the answer using concrete objects, pictorial representations and arrays, with support from the teacher.	• Counting in 2s, 5s and 10s	share, share equally, one each, two each…, group, groups of, lots of, array

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At home, you can support your child's understanding through modelling the language of halving when you are splitting something equally into two parts. EG. pizza, grapes, an amount of a snack.

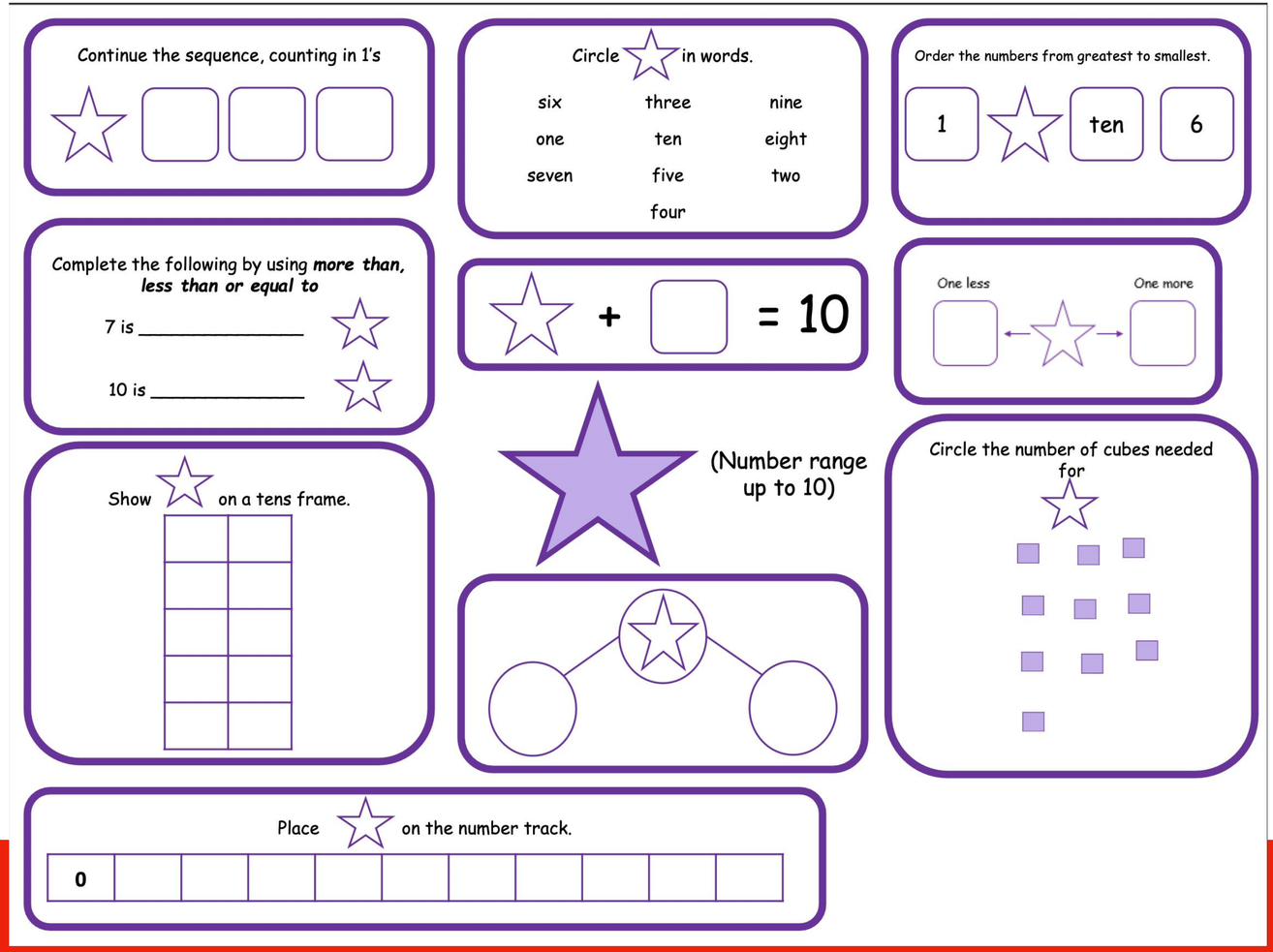
Counting in 2s, 5s and 10s when counting coins, or climbing the stairs etc.

Playing games where they need to share equally between 2 or more, showing what it means to have a fraction of an amount and that several equal parts make a whole. EG. Teddies' tea party, amount of marbles for a marble run.

Year 1 Practising Number and Calculation Skills at Home

- Building Fluency -

Autumn Term



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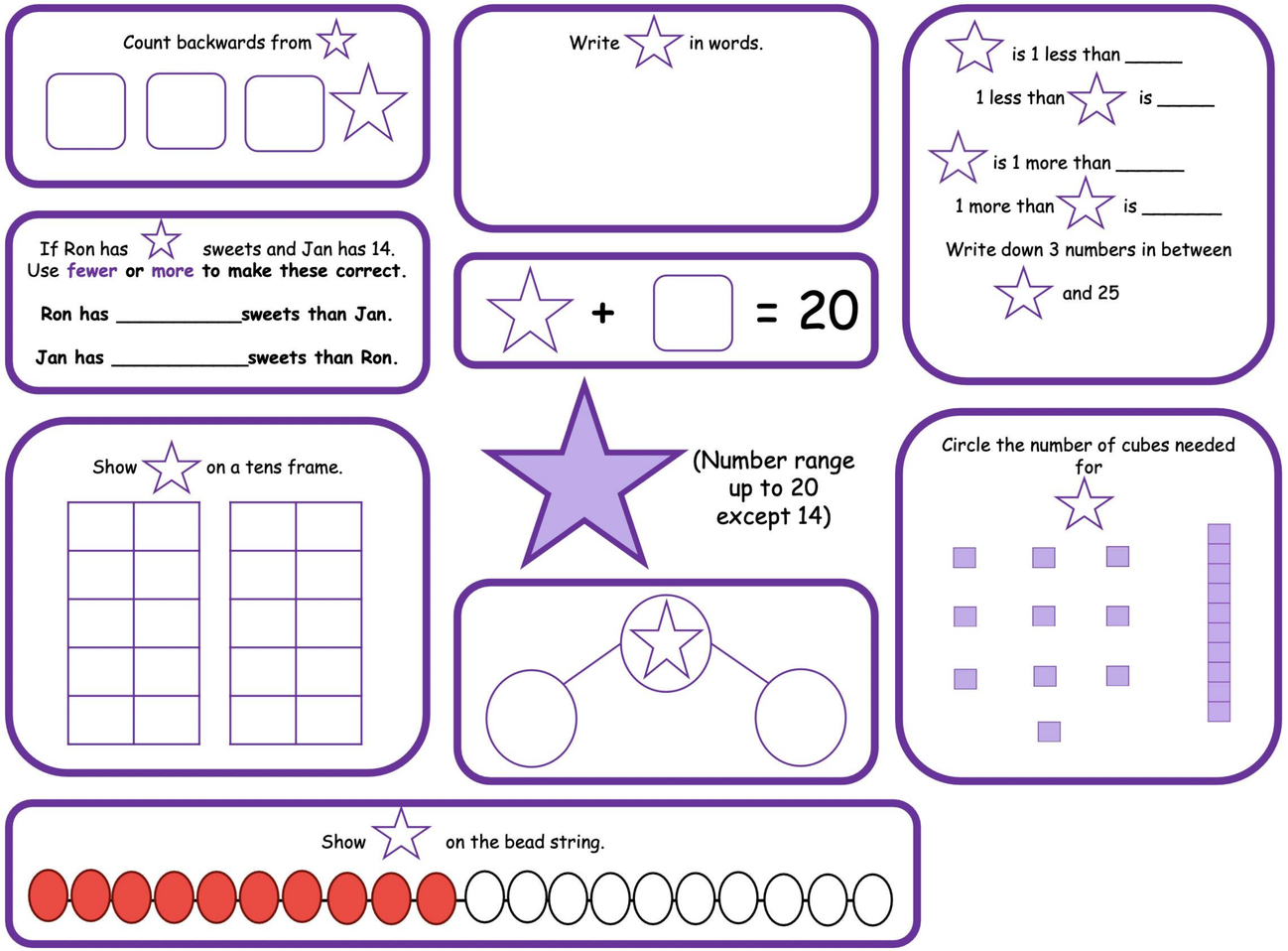
Year 1 Practising Number and Calculation Skills at Home

- Building Fluency -

Spring Term



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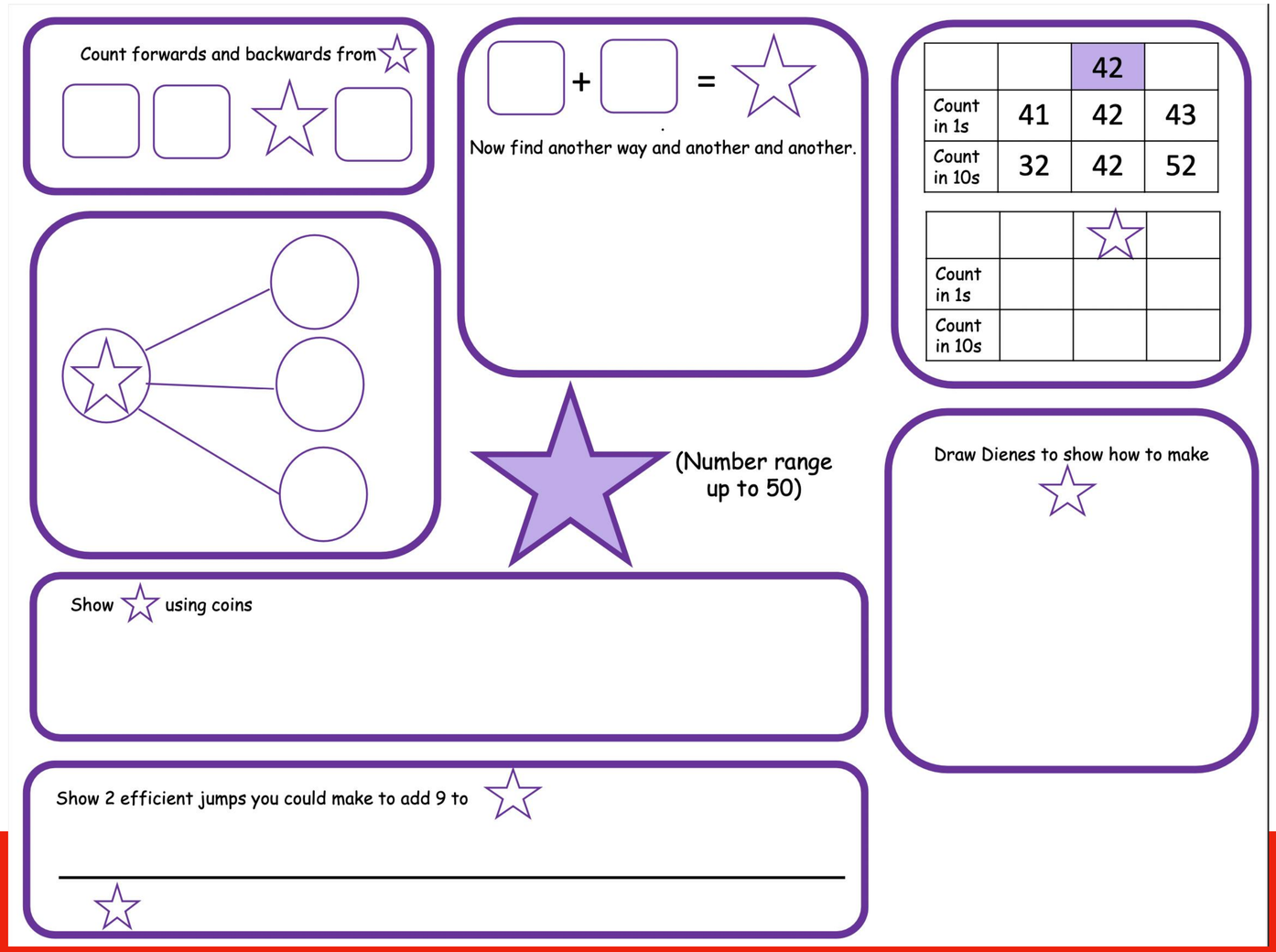
Year 1 Practising Number and Calculation Skills at Home

- Building Fluency -

Summer Term



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