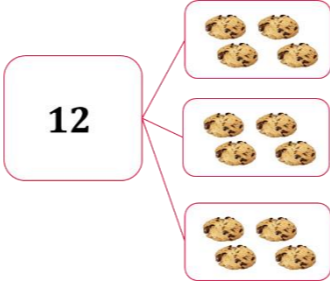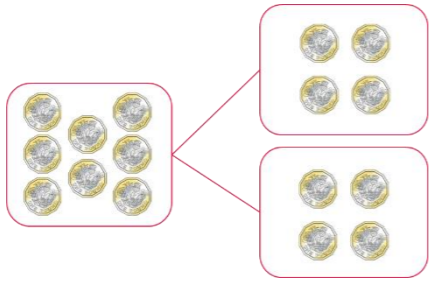# Year 1 Unit 15: Multiplication and division (2 weeks)
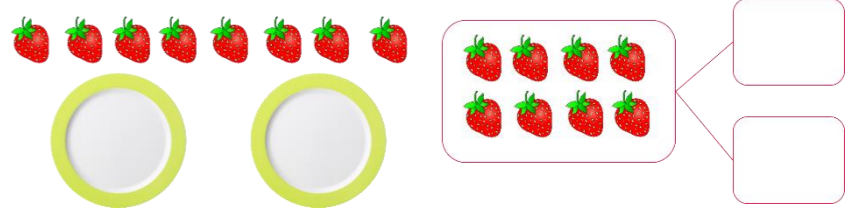
Before you start…
- *How familiar are pupils with skip counting in 2s, 5s and 10s?*
- *How familiar are pupils with the part-whole representation?*
- *How will you make connections to previous learning on fractions?*

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$$\boxed{} = \boxed{} + \boxed{} + \boxed{}$$

Doubling and halving
L1 Find double and half of amounts of money

Pupils consolidate their understanding of halving and doubling by applying it in the context of money. They calculate the cost of items in a half price sale and learn that if someone buys double the amount, they need to add two equal parts to find the whole.

? *What representations will you use to support pupils to make connections between doubling and halving?*
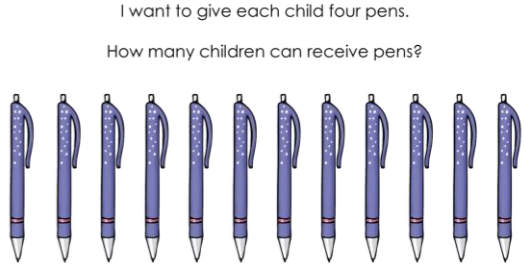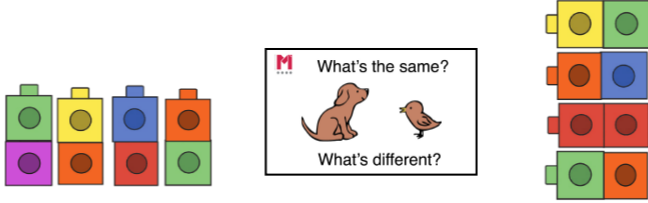? *How will you respond if a pupil says, 'odd numbers cannot be halved?'*

Using repeated addition
L2 Recognise and add equal groups
L3 Add equal groups
L4 Solve problems using repeated addition

Pupils explore equal and unequal groups and go on to connect this to recording equal groups as a repeated addition equation, as well as being introduced to a part-whole model with more than two parts. Concrete manipulatives should be used to practise representing repeated addition before pupils apply this to problems.

? *What language will be necessary to draw attention to connections between the representations you plan to use?*
? *What opportunities will pupils have to notice patterns?*

Division as sharing
L5 & L6 Share equally between a set number of groups

Pupils identify fair and unfair sharing and learn that the most efficient way is to share the items one at a time in turn. Pupils will move on to identify the number of objects in each group when given the number of groups. They then solve problems by sharing fairly, including what happens when there are objects 'left over'.

? *What language structures will you model to support pupils to identity the number of parts and the size of the parts correctly?*
? *How will you respond to a pupil who says '9 shared between two is equal to four'?*

Lesson 10 is suggested as a consolidation lesson. However, you may want to use this earlier in the unit to allow time to secure pupils understanding of repeated addition or division.

⚠️
Spot the mistake.
To add challenge, consider giving pupils images of 'quarters' where one of the four groups is unequal. Pupils identify the mistake and correct it to make quarters.

What's the same? **What's different?**

I want to give each child four pens.
How many children can receive pens?

Fractions of a quantity
L9 Develop understanding of halves and quarters of quantities

Pupils are given either a half or a quarter of a quantity and they apply their understanding of equal groups to find the whole. Emphasis should be placed on how visual representations can be used here to support conceptual understanding.

? *What representations and examples will you use to support Conceptual Understanding?*

Exploring Arrays
L8 Explore Arrays

Pupils explore arrays using cubes, describing the arrangements using the language of 'rows' and 'columns'. The focus here should be on pattern seeking, and teachers should be led by pupils in their observations of the similarities and differences between the arrays.

? *What questioning and prompts will you use to prompt pupils to look for patterns?*

Division as grouping
L7 Share equally and find the number of groups

Pupils explore problems where they are told how many objects make each group and they explore how many groups they can make, focusing on making equal parts. Clear modelling and re-modelling here will support pupils to identify the difference between grouping and sharing.

? *What contexts and practical opportunities to group objects will you provide throughout this lesson?*