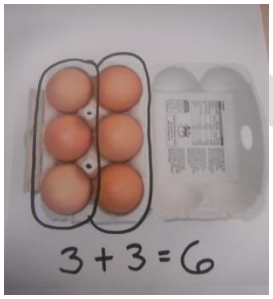
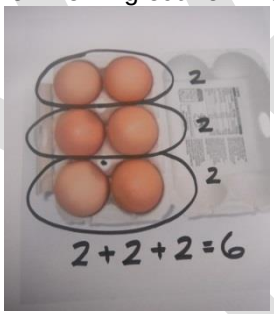
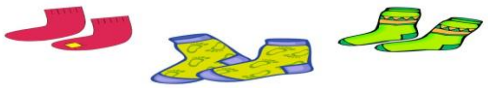
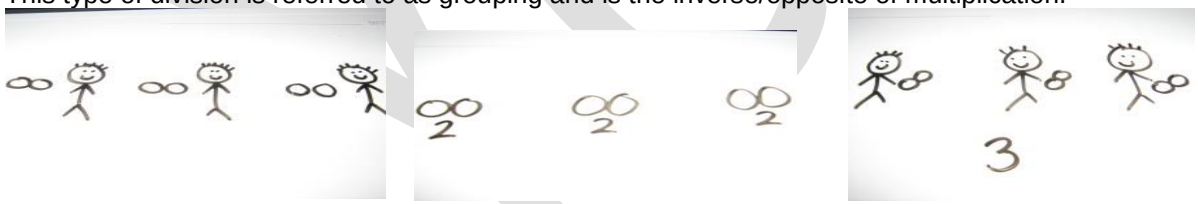
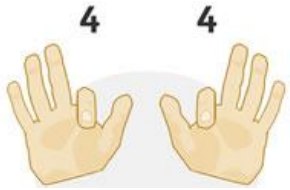
All Saints C of E Primary School

Year 1 – Multiplication and Division

By the end of Year One children have been taught to:

Objective	Why is it important? Things to watch out for! Taught strategies	Ways to support a Year 1 child
solve one-step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays	As a Year 1, multiplication is presented to children through real life contexts, images and practical activities. The year is spent laying the foundations for multiplication, building on the doubling learning in the Early Years. Mathematics has a vocabulary which does not always transfer into our everyday lives. Arrays for example, are used in maths to establish a visual image for children to pin part of their developing multiplication understanding. We use mathematical vocabulary, such as rows and columns to describe the 'groups' or 'lots of' objects in the array. Arrays are everywhere, as some of the examples below demonstrate.    Repeated addition, which is the first step for calculating multiplication problems, lays the foundations for children to calculate the total. For example, when working out how many eggs there are in the egg box, it could look like this:   When discussing children's mathematical recording with repeated addition, we often say things like 'How many times have you added 2?' OR 'How many lots of 2 have you added?'. This reinforces the vocabulary for multiplication, **<u>even though the multiplication sign has not been introduced.</u>** *The symbol for multiplication is not introduced in Year 1;just the concept of multiplication is taught. If symbols are introduced too soon in a child's mathematical development, it can cause a great deal of confusion.* Showing multiplication in many ways, not only arrays, is crucial in developing a broad and balanced understanding of the concept of multiplication.	Play Simon says with a bit of a twist! Discuss how the game is going to focus on rows and columns so when we say 'Simon says be a column', the child needs to stand up tall, whereas if we say 'Simon says be a row', the child has to lie down straight on the floor. Counting in multiplies of 2s, 5s, and 10s helps children to add more quickly and efficiently. If we count in 2s three times what number do we get to? During meal or snack times talk to the child about the food on the plates. We are going to cook the four of you two fish fingers each for dinner. How many do we need to get out of the freezer? 

	When solving multiplication problems, children are encouraged to use equipment or draw pictures to help them find the solution to their problem.  I have three pairs of socks. How many socks do I have altogether? *When using word problems, we always have to check that children understand the context – If a child has never heard the word pair before he will not know how many socks make a pair.*  There are two bicycles in the playground. How many wheels are there? If one teddy has two apples, how many apples will three teddies have? Within guided and independent learning tasks, children explore multiplication through mathematical play, real life activities and role play areas, such as pizzerias, bakeries and shops to name a few. This helps to develop a broad and balanced understanding of the concept of what multiplication is.	**Spot the mistake** Use a puppet to count but make some deliberate mistakes. e.g. 2 4 5 6 10 9 8 6 See if the child can spot the deliberate mistake and correct the puppet.
solve one-step problems involving division, by calculating the answer using concrete objects, pictorial representation	As a Year 1, division is presented to the children through real life contexts, images and practical activities. The year is spent laying the foundations for division, building on the halving learning from the Early Years. *The symbol for division is not introduced in Year 1;just the concept of division is taught. If symbols are introduced too soon in a child's mathematical development, it can cause a great deal of confusion.* When solving division problems, children are encouraged to use equipment or draw pictures to help them find the solution to their problem. There are two types of division problems, ones involving sharing which is linked to fractions (see fraction materials) and grouping which is the inverse to multiplication. Being clear as to the type or problems or questions being asked is key in developing children's understanding of division. There are 6 sweets, each child is given 2 sweets each. How many children receive sweets? Examples of children's mathematical recording. This type of division is referred to as grouping and is the inverse/opposite of multiplication.  These examples show the different levels of children's pictorial recording. The first image shows pictures and no numbers. This shows how many children received sweets. The second shows the sweets and the number, but no drawings of the children. The final image shows the amount of sweets each child gets, however the child went one step further and recorded how many children received sweets numerically. Even if a child does not record every part of the calculation, if he/she can	Practical everyday scenarios are some of the best ways to support a child with division. Teddy bears and dolls' tea parties, garages, lego and many children's toys and games can be used to support the developing division expert.

	explain what he did and how he reached the answer, then this is what we are looking for. Children verbalising their understanding helps to highlight secure understanding. Examples of problems I can see four wheels. How many bikes are there? If one teddy has two apples, how many apples will three teddies have? Here are 10 lego people. If 2 people fit into the train carriage, how many carriages do we need?	
Find doubles of numbers to 10	The concept of being a double involves having two of the same thing, whether it be a number or an image. Doubles are everywhere! To fully understand the term doubling or 'What is double 2? Children need to know that it means adding the same thing twice or having two of the same thing. Therefore, responding to a question such as 'What is double 2?' children need to know that it means 2+2. They then work it out whilst knowing that the value will increase because they are adding.  double scoop  double decker  double 6 When children know their doubles of numbers, it can help them to apply this knowledge in other situations. If they know 2+2=4 children can use this knowledge to work out 3+2 by internalising *'3 is one more than 2, so if I add one onto 2+2=4 the answer must be 5'.* Having internalised and remembered what double 2 is, the child can calculate the number sentence mentally and by so doing be a lot more efficient and fluent in his calculating. Likewise, if children know doubles of numbers, it also means they know halves of numbers. For example, if they know double 6 is 12, then half of 12 is 6. Obviously to illustrate this inverse operation we would use equipment to reinforce that halving undoes doubling and vice versa.	Pointing out doubles of things in everyday life is the best way to reinforce doubles and discuss why it is a double. **Activities we could try:** Doubling fingers – Challenge the child to show us double 1 by putting up one finger on each hand. Ask, "So how many fingers are you holding up altogether?" Extend by asking for double 2, double 3 etc.  Encouraging children to sort dominoes into ones that are doubles and ones that are not doubles, is a great way of developing understanding in a practical way.

Year 1