Year 2 Maths Activities - Week Beginning 22.2.21

We're back! Where does a week go?! Just before the half-term break, we had started to introduce division and this is where we will start from.

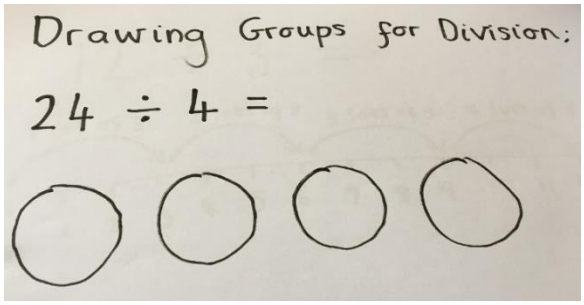
Before you get the activities, please familiarise yourself again with the method for dividing we teach in year 2.

Some of this week's activities are intended to be done practically using equipment. In school, we would be using counters of some description. You don't need specific counters; use whatever you have at home (e.g. dried pasta, pens, cereal, sweets [smarties!] etc.). Please don't worry if this isn't possible though; the below written method is to be used when counters are not available.

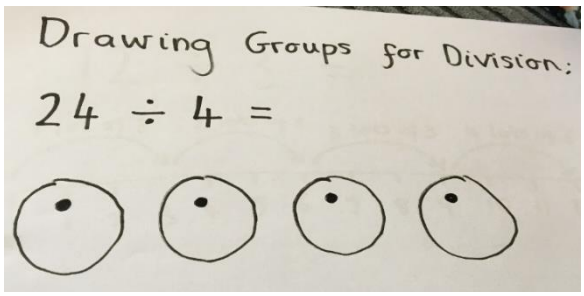
Division

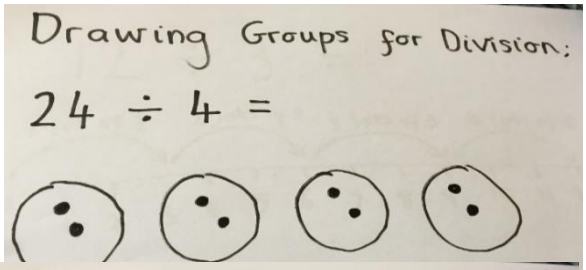
Children divide by sharing objects into equal groups using one-to-one correspondence. They need to do this using concrete manipulatives in different contexts, then move on to pictorial representations. Children will be introduced to the ÷ symbol. They will begin to see the link between division and multiplication.

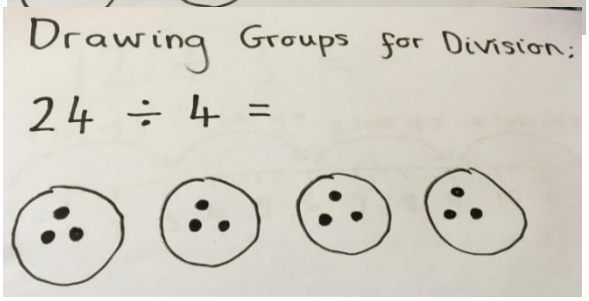
Steps for dividing using sharing:



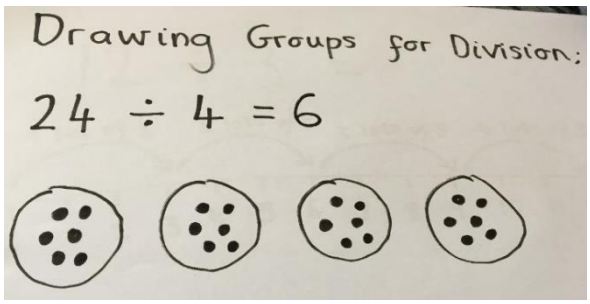
Step 1 – Draw your sharing groups. The number of groups you need to draw will be the smaller number in the number sentence and the larger number is how many 'things' we need to share amongst them.







Step 2 – Share the larger number amongst the groups. Do this systematically. Draw one in the first group and say 'one', then draw the second one in the next group and say 'two', the third in the next group and say 'three'. When you have put one in each group, go back to the first group and start again. Keep going in this way, counting the whole time until you get to the larger number (in this case 24).

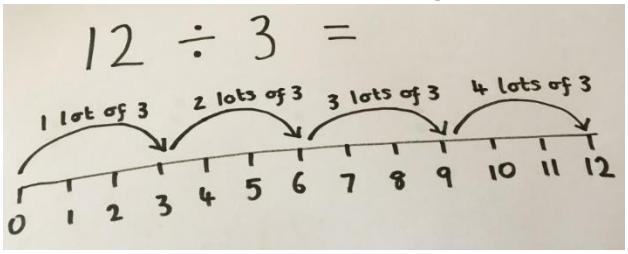


Step 3 – Once you have shared the bigger number equally between your groups, count how many 'things' are in each group and that is the answer.

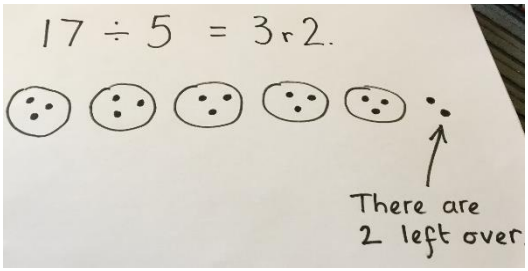
$$12 \div 2 = 6$$

Total quantity	Number of groups	Number in each group

Like with Multiplication, children should use their times tables where they are able to. As shown, the children begin by seeing division as 'sharing' into equal groups, but they should now also start to see the link between multiplication and division. They are 'inverse operations', so to do 12 ÷ 3, they should be able to count in 3s until they get to 12 and then see that they counted 4 times, it took 4 lots of 3 to get to 12. They may just know this as a number fact, or they may be able to do it mentally. Alternatively, it helps some children to see it drawn on a number line, as shown.

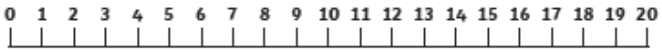
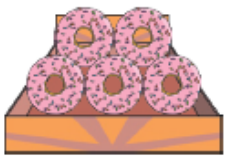


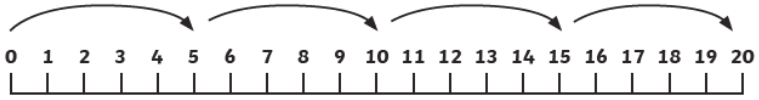
Extra things for stretching further:
Understanding of remainders.

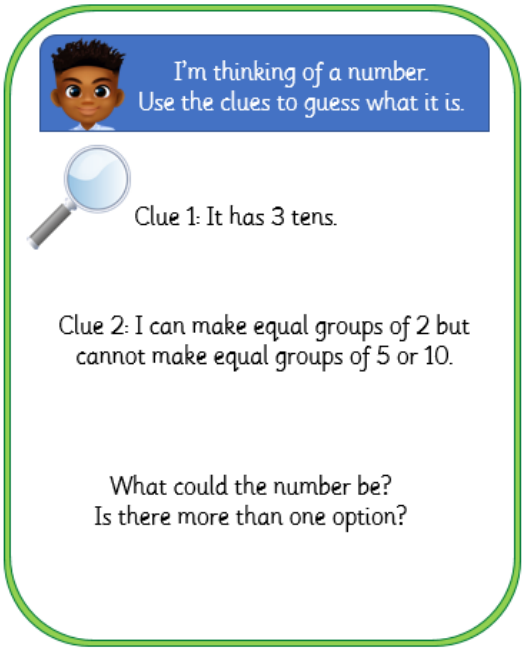
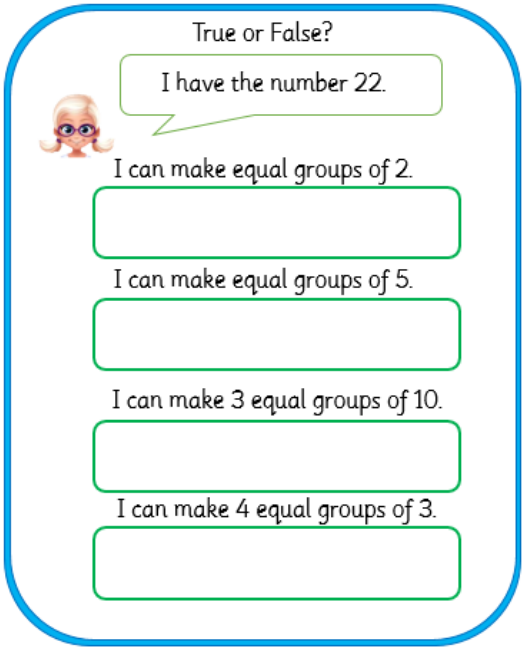


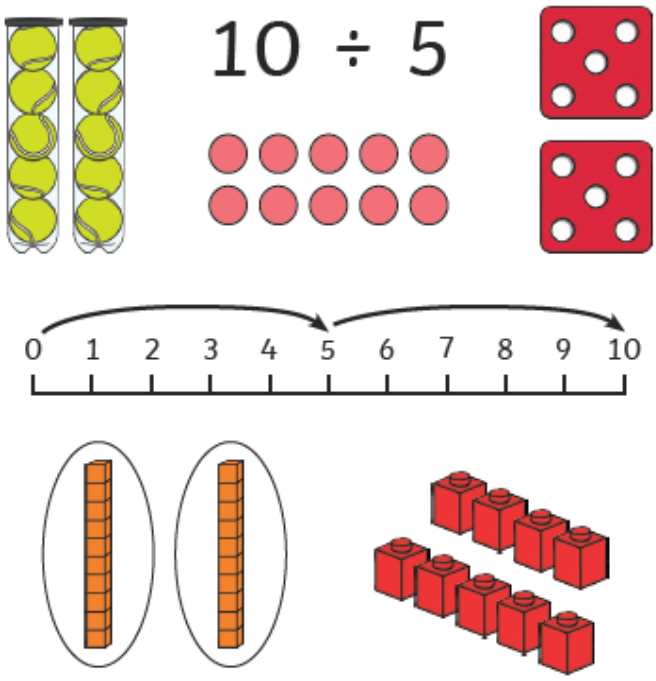
1) When your child draws the counters for sharing, they should see that the groups are not equal and they have some 'left over' that will not share exactly.

2) Alternatively, they might be able to use their times tables. So in the above example, they may know that 17 does not occur in the Five Times Table, but 15 does. If it was 15, there would be 3 in each group and then 17 is 2 more than 15, so there will be 2 left over.

Day 1	**Objective:** To make equal groups - grouping **Learning video:** https://vimeo.com/492603899 **Activity**: Use Activity 1 **Extra activity for 'stretching further':** Doughnuts are sold in a box of 10. Two doughnuts are given to each person. How many people can be fed? There are ____ doughnuts. There are ____ doughnuts for each person. The box will feed ____ people.  Use a number line to calculate how many groups of 5 can be made from 20.  Put 15 doughnuts into groups of 5. Show this grouping on a number line. 

	Answers: *There are 10 doughnuts.* *There are 2 doughnuts for each person.* *The box will feed 5 people.*  *Children complete the drawing by adding two more bags of five doughnuts.*
Day 2	**Learning objective:** To make equal groups – grouping **Use Activity 2.** This is in three levels, please choose an appropriate place for your child to start. They do not have to do more than one sheet, but can if they wish. **Page 1:** Children start with a given total and make groups of an equal amount. They record their understanding in sentences, not through formal division at this stage. On this sheet, they count the groups they have made with images placed mostly rows and columns. **Page 3:** The same principal as page 1 but on this sheet, the children will count the groups they have made with scattered images which poses a little more challenge. **Page 5:** On this sheet, children are exposed to numbers, which do not group equally and will be left with remainders. As stated in the guidance at the start of this week's plans, this is for children who are eager to stretch their learning further. We would not expect all children to be using remainders at this stage; however, some will be ready and able to. Children should complete the number in the equal groups along with the rest of the sentence.

	Extra activity for 'stretching further':   **Answers:** 32, 34, 36, 38 True, False, False, False
Day 3	**Objective:** To make equal groups - grouping **Learning video:** https://vimeo.com/492603961 **Activity:** Use Activity 3

	Extra activity for 'stretching further': Which of these pictures match the calculation?  Can you think of other ways to represent this calculation either with equipment or by drawing? Answer: *All of these models match the calculation except the base ten blocks which represent the calculation 20 ÷ 10 and the red multiplink which do not have equal groups, one has 5 cubes and the other has 4.*
Day 4	**Learning objective:** To make groups **Activity**: Use Activity 4 This is in three levels, please choose an appropriate place for your child to start. They do not have to do more than one sheet, but can if they wish. **Page 1:** Children divide by grouping using images. They can group directly on the worksheet using the images. **Page 3:** Children divide by grouping. They use less images and will need to make links to what the already know (counting on in 2s, 5s etc). **Page 5:** Children starting here should be efficient in division. This sheet has more complex word problems to solve with more than one step to do before they reach the answer.

	Extra activity for 'stretching further': Zach has some counters. He makes 5 equal groups. The amount he started with is greater than 10 but less than 25. How many counters could he have started with? How many will be in each group?  **Answers**: He could have 20 counters in 5 groups of 4, 15 counters in 5 groups of 3.
Day 5	**Learning objective:** To make equal groups For the activities in this session, we'd hope that the children can experience grouping practically with practical resources. If counters of some description aren't easy to get hold of, try cutting out squares from a piece of paper for your child to use. Alternatively, drawing dots on blank page should be fine too. **Activities**: Activity 5 *and* Activity 6 Both activities are in three levels. Please choose an appropriate place for your child to begin. **Activity 5** For all pages, a tick list is provided on each sheet for children to follow and tick each step as they go. **Page 1**: Multiples are kept within the 2s, 5s and 10s. Children are then given division problems and will complete grouping on a structured number line. **Page 3:** Multiples are kept within the 2s, 5s, 10s and includes one from the 3s. Children are then given division problems and will complete grouping on a number line. They will need to fill in the missing multiples on the number line before grouping to find the answer to the division problem.

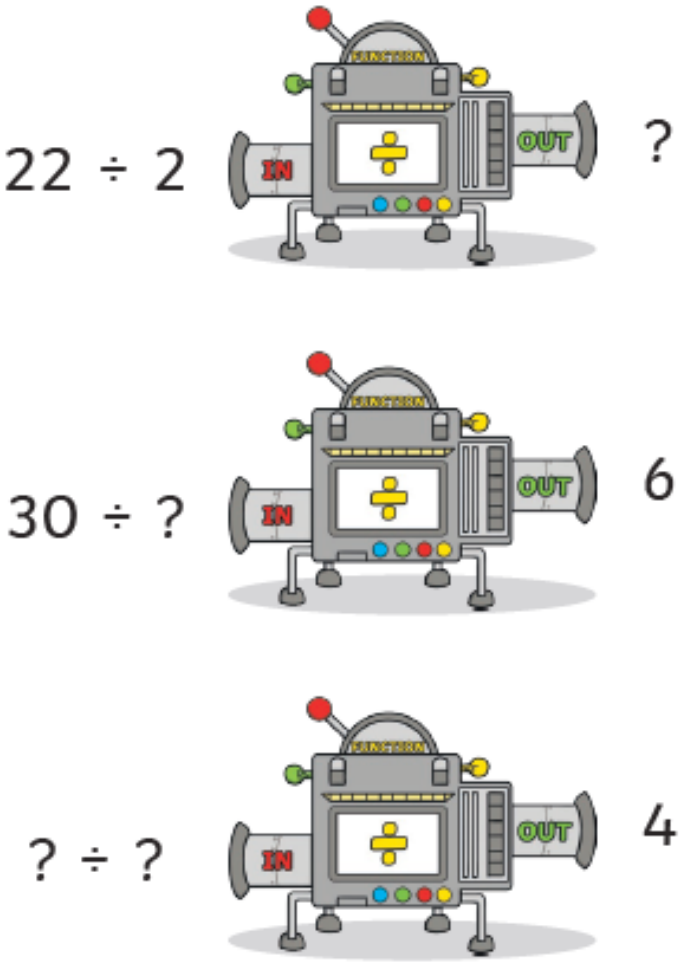
Page 5: Multiples are kept within the 2s, 5s, 10s and includes one from the 3s. Children are then given division problems and will complete grouping on an unstructured number line. They will need to fill in their number line in the appropriate number pattern in order to group and find the answer to the division problem.

Activity 6

Again, this is in three levels. Children should find the number of different ways of dividing a number by grouping on a number line, They will hopefully then see which of the given numbers can be grouped equally explaining why some may not.

Extra activity for 'stretching further':

Derek the Divider has done these divisions.



	Answers: 22 ÷ 2 = 11 30 ÷ 5 = 6 These calculations are all possible to give an answer of 4: 40 ÷ 10 20 ÷ 5 8 ÷ 2 4 ÷ 1

If your child is wanting an extra challenge, keep scrolling…!

A Little Extra

Birthday Sharing!

It's Sahila's birthday and she is having a party! Pre-lockdown, of course!

Show us how you could answer these 3 questions using:

- words
- pictures
- numbers
- objects
- other ways...

Sahila has 18 cupcakes for the party tea and she would like to share them out equally onto two plates for the table.

How many cakes will go on each plate?

Sahila has invited nine children to her party.

They are going to play a game in pairs. Each pair will need a balloon.

How many balloons will they need?

Sahila is going to give everyone five juggling balls to take home after the party.

Will 55 balls be enough?

Help for children getting started:

Try using counters or something else to show the cakes or balloons or juggling balls and make sense of the problem. You could use Lego people to show the children at the party.

Talk to your child about how different people do things in different ways and explain that this activity is all about that - it's important that children don't presume that there is one way and one way only to see the calculation. They may decide to not to use objects or make a picture and just record the answer, which is fine.