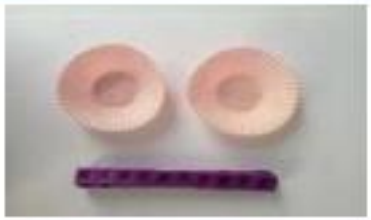
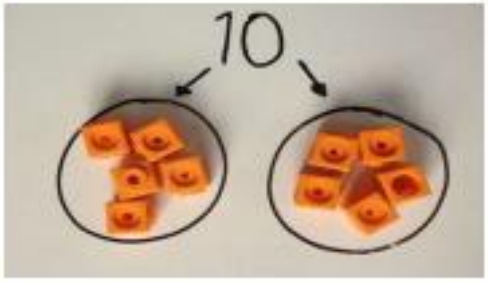
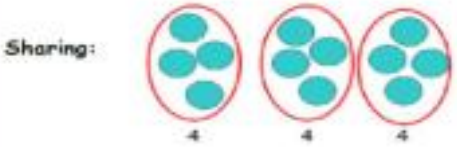
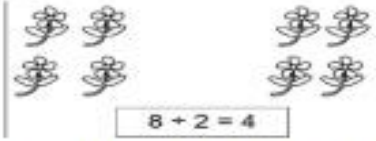
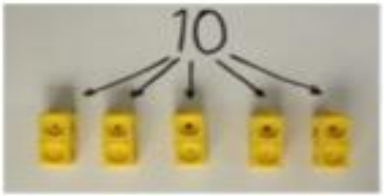
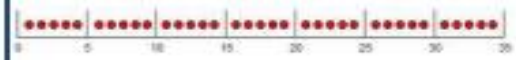
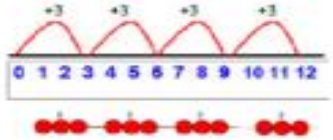
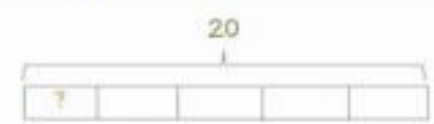
Bishop Lonsdale Church of England Primary and Nursery

# Division
# Maths
# Parent Guide

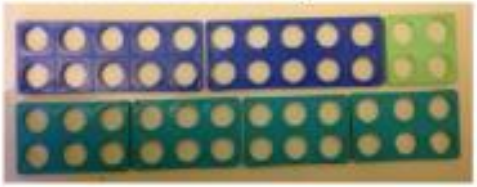
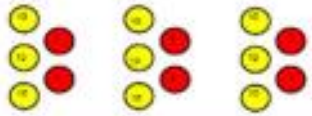
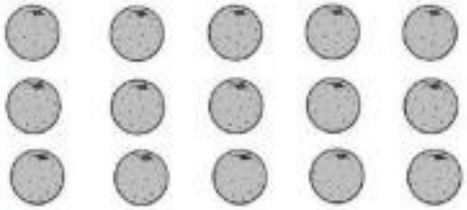
# Year 1 - Division

| Objective /Strategy | Concrete | Pictorial | Abstract |
|---|---|---|---|

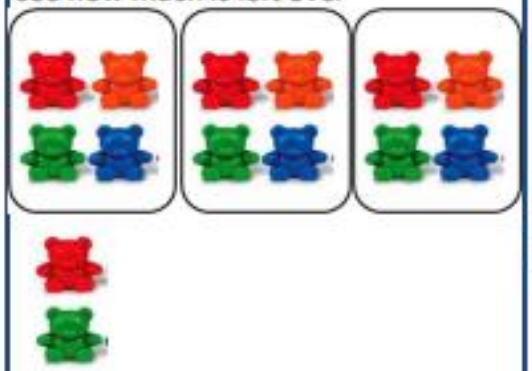
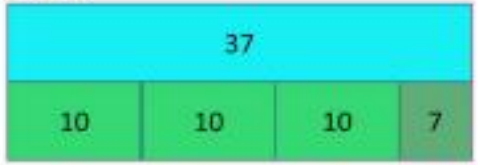
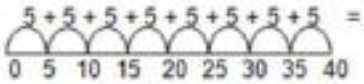
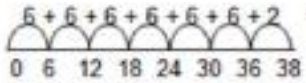
| Objective/ Strategy | Concrete | Pictorial | Abstract |
|---|---|---|---|
| Division as sharing<br><br>*Use Gordon ITPs for modelling* |  <br>  <br>  <br><br>I have 10 cubes, can you share them equally in 2 groups? | Children use pictures or shapes to share quantities.<br>  <br>8 shared between 2 is 4<br>  <br><br>12 shared between 3 is 4 | 12 shared between 3 is 4 |

| Objective/Strategy | Concrete | Pictorial | Abstract |
|---|---|---|---|
| Division as sharing |  I have 10 cubes, can you share them equally in 2 groups? | Children use pictures or shapes to share quantities.  Children use bar modelling to show and support understanding.  12 ÷ 4 = 3 | 12 ÷ 3 = 4 |
| Division as grouping | Divide quantities into equal groups. Use cubes, counters, objects or place value counters to aid understanding.   | Use number lines for grouping  12 ÷ 3 = 4 Think of the bar as a whole. Split it into the number of groups you are dividing by and work out how many would be within each group.  20 ÷ 5 = ? 5 x ? = 20 | 28 ÷ 7 = 4 Divide 28 into 7 groups. How many are in each group? |

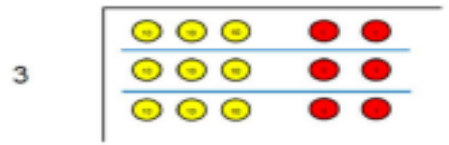
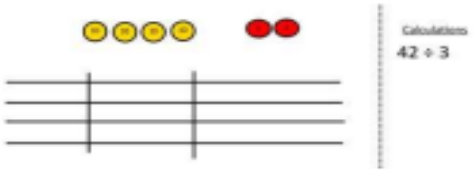
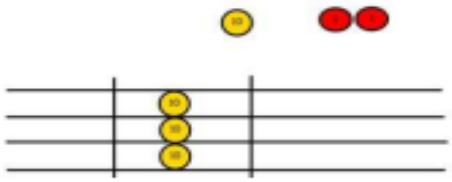
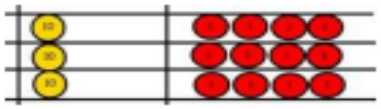
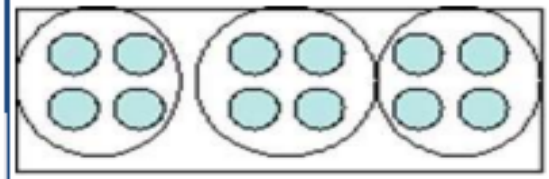
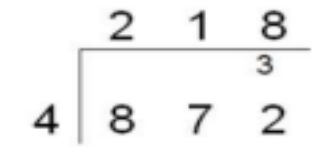
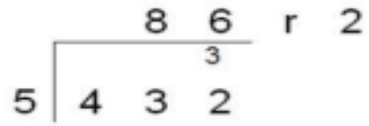
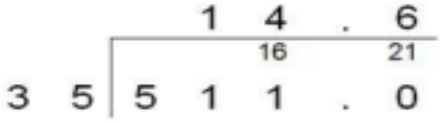
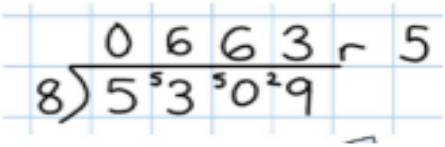
# Year 2 - Division

| Objective/Strategy | Concrete | Pictorial | Abstract |
|---|---|---|---|
| Division as grouping | Use cubes, counters, objects or place value counters to aid understanding.<br>  <br>24 divided into groups of 6 = 4<br>96 ÷ 3 = 32<br>  | Continue to use bar modelling to aid solving division problems.<br>  <br>20 ÷ 5 = ?<br>5 x ? = 20 | How many groups of 6 in 24?<br>24 ÷ 6 = 4 |
| Division with arrays |  <br>Link division to multiplication by creating an array and thinking about the number sentences that can be created.<br>Eg 15 ÷ 3 = 5 5 x 3 = 15<br>15 ÷ 5 = 3 3 x 5 = 15 | Draw an array and use lines to split the array into groups to make multiplication and division sentences<br>  | Find the inverse of multiplication and division sentences by creating eight linking number sentences. 7 x 4 = 28<br>4 x 7 = 28<br>28 ÷ 7 = 4<br>28 ÷ 4 = 7<br>28 = 7 x 4<br>28 = 4 x 7<br>4 = 28 ÷ 7<br>7 = 28 ÷ 4 |

# Year 3 - Division

| Objective/Strategy | Concrete | Pictorial | Abstract |
|---|---|---|---|
| Division with remainders. | 14 ÷ 3 =<br>Divide objects between groups and see how much is left over<br>  | Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.<br>  <br><br>Draw dots and group them to divide an amount and clearly show a remainder.<br>  <br><br>Use bar models to show division with remainders.<br>  <br><br>remainder:<br>5s in 40?"<br>  <br><br>mainder:<br>  <br><br>= 6 sixes with<br>rs, when it becomes inefficient to count in single mu<br>orded using known facts. | Complete written divisions and show the remainder using r.<br>29 ÷ 8 = 3 REMAINDER 5<br>↑ dividend ↑ divisor ↑ quotient ↑ remainder |

# Year 4 – Year 6 Division

| Objective/Strategy | Concrete | Pictorial | Abstract |
|---|---|---|---|
| Divide at least 3 digit numbers by 1 digit.<br><br>Short Division | 96 ÷ 3<br>Tens Units<br>3 2<br>3<br>  <br>  <br>Use place value counters to divide using the bus stop method alongside<br><br>42 ÷ 3=<br><br>Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.<br>  <br>We exchange this ten for ten ones and then share the ones equally among the groups.<br>  <br>We look how much in 1 group so the answer is 14. | Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.<br>  <br>Encourage them to move towards counting in multiples to divide more efficiently. | Begin with divisions that divide equally with no remainder.<br>  <br>Move onto divisions with a remainder.<br>  <br>Finally move into decimal places to divide the total accurately.<br>  <br>  |

# Long Division

Step 1—a remainder in the ones

```
   h t o
   0 4 1 R1
4 ) 1 6 5
```

4 does not go into 1 (hundred). So combine the 1 hundred with the 6 tens (160).

4 goes into 16 four times.

4 goes into 5 once, leaving a remainder of 1.

```
     th h t o
     0 4 0 0 R7
8 ) 3 2 0 7
```

8 does not go into 3 of the thousands. So combine the 3 thousands with the 2 hundreds (3,200).

8 goes into 32 four times (3,200 ÷ 8 = 400)
8 goes into 0 zero times (tens).
8 goes into 7 zero times, and leaves a remainder of 7.