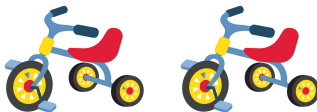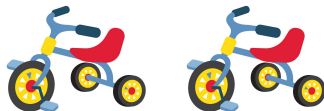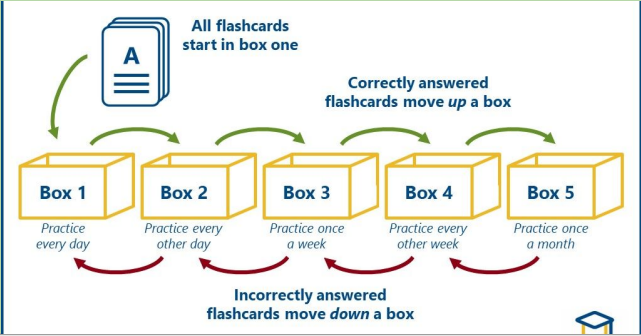# PGPS Times Table Teaching Sequence

Leitner box and cards is in use everyday and cards moved up or down accordingly for times tables which have already been taught using the sequence below. Green steps become part of daily practice once they are reached.

Step	Example	Resources
Real life contexts Children are presented with the times table where it is found in real life. Discuss how the images represent different times tables.	3 x 3 = 9 3 lots of 3 is equal to 9	Pictures of things in groups of whatever times table you are looking at.
Skip counting Count forwards and backwards in whatever times table you are studying using the picture examples to support. Don't always start at the beginning.	3, 6, 9, 12,	Pictures of things in groups of whatever times table you are looking at.
Groups of language Still using the picture context, discuss using the language of how many groups are there? How many are there altogether?	2 groups of 3 is equal to 6	Pictures of things in groups of whatever times table you are looking at.
Factor and product vocabulary Begin to present the whole times table written out. Introduce the language of product and factors. Use the picture context and identify what would be the factor and what would be the product. **Sentence stems:** _____ **is a factor.** **The product of ____ and ____ is ____**	2 x 3 = 6 Product = total number of wheels = 6 Factor = number of tricycles = 2 And Factor = number of wheels per tricycle = 3.	Picture examples
Example of multiplying by 0 Discuss how multiplying by 0 means the product is 0. Use the context and language of groups. **Sentence stems:** **When 0 is a factor the product is zero.**	If I have zero tricycles how many wheels do I have? If I have zero groups of three what is the product?	Picture examples
Counting stick Introduce the counting stick. Use post it notes to give each section of the stick the value of the times table you are working on. Count forwards and backwards. Remove certain post it notes, what number is here?	3 6 9 12 18 21 30 33 36	Counting stick Post-it notes
Ratio Table Build a ratio table as a class. First with the picture context then with just the numbers. Ask questions use the ratio table.	<table><tr><td>No of tricycles</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr><tr><td>No of wheels</td><td>3</td><td>6</td><td>9</td><td>12</td><td>15</td><td>18</td><td>21</td><td>24</td><td>27</td><td>30</td><td>33</td><td>36</td></tr></table> If I have 6 tricycles how many wheels do I have? If I have 15 wheels how many tricycles do I have?	Flip chart
Chanting Times Tables Present the times table as a whole written out on flip chart. Chant the times table in full. E.g. 4 groups of 3 is equal to 12. After a few times simplify to 4 times 3 is 12. Everyone says the whole times table. Remove the visual prompt.	1 × 3 = 3 4 × 3 = 12 2 × 3 = 6 5 × 3 = 15 3 × 3 = 9 6 × 3 = 18	Flip chart to write out the times table and annotate.

Step	Example	Resources
Adjacent Multiples Rule Point out to the children that each multiple is 3 more than the last. So this can be used to find the answer to an unknown times table from a memorised fact.	E.g Even if children haven't studied x6 or x7. They can find the answer to 6 x7 by using 5x7 and adding another 7. Although this seems obvious it is not a strategy children are using.	
Spotting Patterns Discuss what patterns are in the times table. E.g. odd and even products, what is the same? What is different? Which times tables have already come up in other times tables so we already know them? Matching pictures to times tables-which times table could this image represent?	Annotate patterns of class flip chart copy of the times table.	Flip chart to annotate
How do we know this number is a multiple of X? Discuss how we can take numbers from this times table and use the patterns discussed above to prove or disprove a number is a multiple of another number	E.g. the sum of the digits of all multiples of 3 is a multiple of three. Test this out with pupils. 3 x 4 = 12 1 + 2 = 3 Is 234 a multiple of 3? 2+3+4 = 9 Nine is multiple of 3 so it is in the three times table.	
Cards and Leitner Box Begin to use the times tables cards and Leitner Box for this times table. Begin by sorting the cards into which ones are already know by all. Test the whole class, groups and individuals to check.		Class set of cards. Leitner Box. Individual cards to send home.
Maths Hub Times Table Booklets Children get retrieval practice using these booklets no more than once a week. At the beginning they have just the timestable being learnt then they gradually add in previously taught times tables.	Can be found here: https://drive.google.com/drive/folders/10Xlinhjd5ae5DgK4AMQyyxJ289IWoOHq?usp=share_link	Booklets