

## **Guidance for the teaching of Multiplication Facts across the Lighthouse Federation**

Our schools are small, rural schools with mixed age classes. We teach multiplication facts in our Fluency sessions as well as some specific content during maths lessons. To monitor progress, we test children as and when we have worked on a particular times table.

We use a range of manipulatives to support our pupils in the development of their knowledge of multiplication facts. We use:

- Numicon to show multiplication as repeated addition.
- The counting stick to support knowledge of facts rather than just counting in steps.
- Arrays to enable children to calculate unknown multiplication facts.
- A multiplication grid to support use of other manipulatives - to look for patterns and to identify relationships between different facts.
- Videos and songs to help children to learn the multiplication facts.

Each year group teaches specific multiplication facts. These are the end of year expectations for each year group:

Year 1 – count in multiples of 10, 2 and 5 in order fluently

Year 2 – Recall multiples of 10, 2, 5 in any order including missing numbers and related division facts. Count in multiples of 3 to  $12 \times 3$  in order with growing fluency.

Year 3 – Recall multiples of 3, 4 and 8 in any order including missing numbers and related division facts.

Year 4 – Recall multiples of 6, 7, 9, 11 and 12 in any order including missing numbers and related division facts.

Years 5 and 6 – consolidation of previous learning - recall multiples of all times tables up to  $12 \times 12$  in any order, including missing numbers and related division facts.

We explore the connections between 2,4,8 as doubling.

We explore the connections between 3,6,9,12 by doubling / tripling.

We teach children to use the facts they know to work out unknown facts. For example if pupils find  $9 \times$  difficult, can they use  $10 \times$  and take away  $1 \times$ ? E.g  $6 \times 9$ .  $6 \times 10 = 60$ ,  $60 - 6 = 54$ . (Compensating)

We teach the related division facts as the children learn the multiplication facts so they see the link between the two.

We teach both the multiplication and division facts simultaneously.