

Dear parents and carers,

The children in Year One have started to work on developing their addition and subtraction fact fluency since joining Key Stage One. On Friday your child will bring home a fact sheet so that you can see the facts we would like the children to know by memory before the end of Key Stage One. At parent consultation evenings after half term we will explain this system in a little more detail to support your work at home. We hope that you find this useful.

**It is important that children work on their understanding of these facts initially using concrete resources (such as counters) or pictorial representations (drawing and diagrams).** This will enable them to truly understand the fact and to spot patterns.

Once this understanding is secure we can then work on fluency and memorisation of the facts. Fluency of these facts is really helpful when working on more complex mathematical problems as the children's working memory is not overloaded with trying to work out basic facts. **The children that worked on these facts regularly at home last year made the most progress before moving to Year Two.** It really does make a difference. We work on these regularly during school time. The children also have weekly fluency assemblies with Miss Duncombe to promote this in school.

The facts are coloured coded on your child's card to help you work on facts that follow a similar pattern/rule. Please find below the key messages that we teach the children when introducing each fact:

### **Adding zero**

When we add 0 to a number we are adding nothing, and so our starting number remains the same. The misconception here is that  $7 + 0 = 0$ .

### **Adding one**

Adding one is the same as 'one more than' a number. This is why it is beneficial to regularly chant numbers aloud in order from different starting points.

### **Adding two**

When we add two to a number we are working with the odd and even number patterns. When we add two to an even number we are just making the next even number and when we add two to an odd number we move to the next odd number. (The children need to know the odd and even number patterns before working on these facts). Using a number line can be helpful here.

### **Adding ten**

When we add ten to a number we can use our place value knowledge to combine the numbers e.g.  $10 + 5$  is 15 as this is written as 1 ten and five ones.

### **Number bonds to 10**

A number bond to 10 is two numbers that add together to total 10. Ten is the whole and can be divided into two parts in different ways. For example, ten is the whole and nine and one are the part. Nine and one are one of the number bonds to ten.

## Doubles

A double means adding the same number together twice e.g.  $5 + 5$ . The answers to all double facts to 10 are all even numbers. It is important to make these generalisations with the children to develop their mathematical thinking.

## Near doubles

These are facts such as  $6 + 5$  where the children can use a double fact that they have memorised such as  $5 + 5$  to simply then add one. **All double facts must be memorised before teaching near doubles.**

## Bridging/compensating

Bridging ten can often be helpful to solve some addition problems as ten is an easier number to work with. E.g.  $9 + 5$  could be completed mentally in two parts. We explain to the children that by making ten first we can make this easier. We encourage the children to first add one to the nine to make ten and to then add the other 4. This builds on the children's addition fact fluency when adding ten to a number. Alternatively when solving problems such as  $5 + 4$  children can use their knowledge of  $5 + 5$  and simply take away one. **Your child must be fluent with adding ten to a number before working on these facts.**

## Subtraction facts

The same rules (as described above) can be applied for the subtraction facts on the reverse of the sheet. For example when subtracting 0 from a number, the children need to know that zero is no quantity. This will mean that the starting number will stay the same.

**As well as working on addition fact fluency the children need to develop their subtraction fact fluency. Last year many children became fluent with addition facts but were not as strong with the subtraction facts. We would recommend working on these facts in order of difficulty and at the same time.**

A recommended order:

- Adding and subtracting 0 from a number
- Adding and subtracting 1 from a number (please remember to regularly count backwards from a number to as this will ensure children are just as confident with subtraction).
- Adding and subtracting 2 from a number
- Number bonds to 10 (e.g.  $8 + 2 = 10$  and  $10 - 8 = 2$ ).
- Doubles
- Near doubles
- Bridging and compensating (e.g.  $9 + 5$  can be completed as  $10 + 4$  or  $15 - 8$  could be completed by taking the 5 first and then the final three from ten)

The children are enjoying working on these at school and they can easily be incorporated into daily routines such as long car journeys or walking to school to work on your child's quick recall of facts. Little and often is the best approach to this. By the end of Y1 we would like all children to be fluent with most of these addition and subtraction facts. We will assess the children in January to track progress and update you on your child's development.

Thank you again in advance for your help with developing your child's fluency of addition and subtraction facts.

Kind regards,

Jade Huxley and the Y1 Team