The Raglan Junior School

Written Calculation Method Using Decomposition

Subtraction

Rationale: - Pupils will be taught to calculate quickly and accurately using one secure approach in all mathematics work in school; it is our belief that children should be confident in accurate computation. This knowledge and ability provides a secure basis upon which to develop skills and understanding which are also extended through the teaching and use of mental calculation strategies.

STAGE 1 – Without exchanging

Rule: <u>Start with the top number and take away the bottom number</u>.
Use a finger to point. E.g. 7 subtract 4.

Step 1

```
  67
- 54
   3
```

Say aloud: 7 subtract 4 is 3, put the 3 in the units column

Step 2

```
  67
- 54
  13
```

Say aloud: 6 subtract 5 is 1, put the 1 in the tens column
Children are taught that the 6 is actually 60, and the 5 is 50 and so on

STAGE 2 – With exchanging

Step 1

```
  6 7
- 2 8
```

Say aloud: 7 subtract 8 can't be done. So we need to exchange from the next column.
Say aloud: take 1 from 6 equals 5 (cross out the 6 and put a small 5)
Carry the 1 and put it before the 7 (explain how we now have 17 in that column)

Step 2

```
 5
 ~~6~~ 17
- 2 8
    9
```

Say aloud 17 subtract 8 is 9. Put the 9 in place as shown above.

Step 3

```
 5
 ~~6~~ 17
- 2 8
  3 9
```

Say aloud 5 subtract 2 is 3, put 3 in the tens column.

Children should be taught to explain that even though they are subtracting 2 from 5, it is really 50 -20. Some children will be able to grasp the fact that 1 in the hundreds column becomes ten in the tens column and similarly that one in the tens column becomes ten units.

Stage 3 – With zeros as placeholders

Step 1

```
  6 ~~7~~ 1 ~~0~~ 1 3 6
-   2 9 8 5
        5 1
```

Say aloud 6 subtract 5 is 1.
3 subtract 8, can't be done. No ten to take from next column so move on.

Step 2

```
      9
  6 ~~7~~ 1 ~~0~~ 1 3 6
-   2 9 8 5
    4 0 5 1
```

Take 1 from 7 and make it 6. Carry the 1 to make 10.
Take 1 from the 10 to make 9 and carry it over to make 13.
13 subtract 8 is 5. 9 subtract 9 is zero. Then 6 subtract 2 is 4.