

## The Decimal System

- To perform mental arithmetic or to do algorithms, you must instantly know the answers to the **36 multiplications** shown on page 2.
- The definition of 6 is  $6 \times 1$ , so it's not necessary to write out the complete table.
- Since  $3 \times 10 = 30$  and  $10 \times 45 = 450$  according to one general rule, that table has also been left out.
- **A visual:**  $6 \times 5 = 5 \times 6$  (CLM). To practise **seeing** this, there are 2 sets of test cards (Ex 19)
- Fluency is obtained by leaving out "times" and "equals". During a maths test, multiplication is the result of a thought process. If you say multiplications aloud, you should say 7 eights, 4 fives like 9 apples, 6 people. It's absurd to repeat oral questions!  
What's your name? James!..... 3 fours? Twelve!
- To facilitate learning answers in record time, I have created 11 Tables of various lengths and colours.  
Since the traditional order is lost, it's imperative that you become familiar with them.  
Special **recognition exercises** have to be done to achieve this.  
Six tables are clearly labelled, the five others are remembered with the aid of special links. Each exercise has to be done to perfection before attempting the next one!
- By manipulating the number cards and using **Verbal Rehearsal** (Seeing, Saying and Doing), you will employ 3 of your 5 senses to stimulate your brain.
- Once you have recognised these special tables, answers will be learnt by taking advantage of the most creative discoveries ever published.
- With the advent of the Internet, Google, Facebook, iphones and the like, memorising has become almost extinct causing braincells to die off (National Geographic); the price of technology and progress.  
Many children now have a TV brain, one that is only suitable to watch the screen. (Endangered Minds, Healey)

**It's not the apes we come from, it's where we are going!**

### Algorithms

- With the introduction of the calculator, doing algorithms might be considered an obsolete activity. In a realistic sense, of course it is. However, not if it is seen as a therapeutic one, especially in Primary Schools because it takes at least 10 years for the human brain to reach maturity; at birth, its weight is only 20% - 25% of the adult one. Although it's then only 2% of the average body weight, it consumes 20%-25% of the daily energy intake! (Uma História da Linguagem)
- Warning: To be beneficial, algorithms must only be done as an old-fashioned professional routine and only when you thoroughly know your tables.