

Reinforcing strategies for intermediates – Multiplication Facts

We tend to rely on skip counting when we are helping children stuck with their multiplication facts. This is inefficient. We need to help children practice a quicker way to figure out a fact when they are stuck. I prefer games that reinforce one strategy at a time. Once they are proficient then can mix their fact practice. A great book that explains many of the strategies in rhyme is called, 'The Best of Times,' by Greg Tang. This picture book is available in most of our libraries. I present the strategies in the following order. The order is important as some of the strategies build on each other. Once children realize how important the strategies are that as I slowly teach them the strategies or a period of weeks and provide them with practice, they begin asking for the next one.

x0	Obvious one, but some children don't recognize that 0 groups of a number such as 7 gives the same product as 7 groups of 0. The commutative property needs reinforcing.
x1	This is the identify property. Help the child understand that this represents one group so the product is the same as the none - 1 factor.
x2	I always refer to this as the double strategy as so much hinges on it.
X4	This is the Tim Horton's strategy because it is a double, double. Help a child see that 4 groups of a number is the same as 2 groups – doubled. That way they can double the number and then double it again. 4×7 is ... 7 doubled is 14 and then 14 doubled is 28.
X8	This one is a double double double. (2 cream, 2 sugar and double whip cream). 6×8 is 6 doubled is 12, 12 doubled is 24 and 24 doubled is 48.
X 10	It doesn't take many repetitions of figuring out x 10 products for them to realize that the answer ends in a 0. Avoid the language 'add a zero', instead they are shifting the digits over to make the number 10 times as much.

<p>X5</p>	<p>It is hard to break the skip counting habit with this one. That becomes inefficient with factors greater than 4. Instead, multiply by 10 and then find $\frac{1}{2}$. For example, 9×5 is 90 then half is 45. Try it for a larger factor – 24×5!</p>
<p>X3</p>	<p>I get children to double it then add another one. For example, 7×3 is ... 7 doubled is 14 then 7 more is 21.</p>
<p>X6</p>	<p>There a few ways to approach this one, they could $\times 5$ then add one more. (4×6 can be thought of as ... 4×5 is 20 then 4 more is 24). That is often called finding a related fact. Or they could $\times 3$ then double it. 4×3 is 12, 12 doubled is 24).</p>
<p>X9</p>	<p>Related facts are best for this one. X 9's have lots of patterns, however do not show them as tricks. Once a child is given the finger trick, they tend to not ever move on from this. That is not much different from finger counting. I like to show them that $\times 9$ is one fact less than $\times 10$. For example, 7×9 is 70 less 7 which is 63.</p>
<p>X7</p>	<p>I always leave this one until last. I don't have an efficient strategy for this one and instead rely on related facts or the strategy of the none 7 factor.</p>