

KS2 Fluency Weekly Plan

Game/activity/challenge

Wiltshire Council
Where everybody matters

Game 10 – Flip ‘n’ Roll

Skill to be learnt: To multiply one-digit and two-digit numbers by 10 or 100, and describe the effect.

What you will need: 0 – 9 dice, coin

How to play: Roll the dice to generate a 2 digit number. Then flip the coin. Heads means multiply by 10 and tails means multiply by 100. The first to say the product (answer when 2 numbers are multiplied together) gets a point. The first to 10 points wins the game.

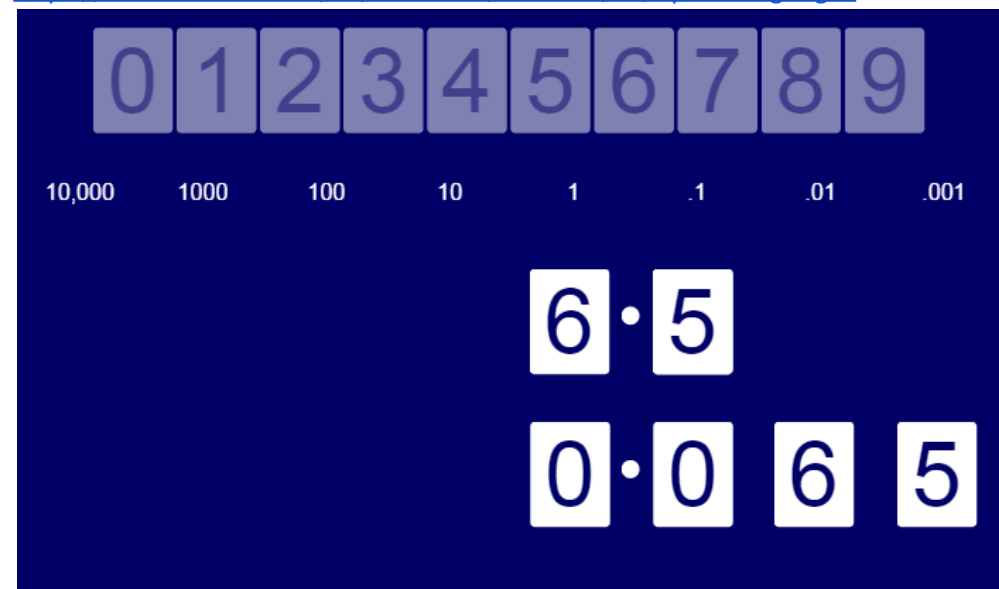
Talk points: Look together at the effect of multiplying by 10 - all digits move one place to the right and a zero becomes a place holder in the units column. Although it may look to the children as though a 0 has been added it should not be described in this way as this does not work for decimals!

Extension of this game: Use 3 or 4 digit numbers to begin with, then move onto decimal numbers. Multiply by 10, 100 and 1000.



Representation:

<https://mathsframe.co.uk/en/resources/resource/60/itp-moving-digits>



Abstract:


$$65 \times 10 = 650$$

$$65 \div 10 = 6.5$$

$$6.5 \times 100 = 650$$

$$6.5 \div 100 = 0.065$$

Objective: to multiply and divide by 10, 100 and 1000 mentally	Key Learning Point: to be able to multiply and divide by 10, 100, 1000 quickly and efficiently. Use of place value grid to model this.	Key equipment: laminated place value charts, dice, coins, counters			
	Representation – 3 minutes	Application Task – 7 minutes			
Monday Vocabulary development & Familiarisation	<p>Introduce the following maths words of the week:</p> <table border="1" data-bbox="488 643 947 683"> <tr> <td>greater</td> <td>digit</td> <td>value</td> </tr> </table> <p>(Orange = word to be carried to following week)</p> <p>factor x factor = product What is the product of 3 and 10? What is the product of 100 and 5?</p> <p>Introduce the representation. Follow the instructions 6.5 x 10, 100, 1000 and divide by 10, 100, 1000</p>	greater	digit	value	<p>Use the following stem sentence (using key words): If we make ___ 10 times greater, the value of the ___ is ___</p> <p>Teach game / open-ended challenge: flip ‘n’ roll</p>
greater	digit	value			
Tuesday Representation & Practice	<p>Highlight and address the tricky points: Where does the game become tricky? (When the number moves into the decimal numbers, when there’s zeros in the middle of the number)</p> <p>BUILD the representation using alternative manipulatives on a place value chart</p>	<p>Use the following stem sentence (using key words): If we represent the calculation on our place value chart, the digits stay the same but they move to a different position. The value of the digits changes.</p> <p>Play Game / open-ended challenge</p>			

Wednesday Talk for Maths	<p>Model a maths story: Sam has 5.5 litres of squash and he has been asked to make ten times this amount to keep the thirsty footballers hydrated. How much squash will he make?</p>	<p>In pairs make up a maths story OR represent it OR outside challenge</p> <p>Go outdoors and work in pairs to make a maths story to match the question 6.5×100. Use physical resources to build a representation for the question.</p>
Thursday Application & Variation	<p>What do you notice? http://ntimages.weebly.com/photos.html</p>  <p>How could we quickly find out how many cups there are? Can you think of another way? How many different ways can you think of?</p>	<p>Rapid Rainbow Recall - multiply/divide by 10, 100, 1000</p>
Friday Application & Talk for Maths	<p>Game extension or alternative (ie work with another partner) or championship or sharing</p> <p>Work with another partner. Can you find a way to win every time?</p>	<p>Use the following stem sentence (using key words): The digits stay the same but the VALUE of the digits changes.</p> <p>Discussion of Key Point OR Review of game strategy –</p> <ul style="list-style-type: none"> • Can you explain how to win every time? • Did you find a strategy which helped you? • How do you know that you have found all the possible solutions?

Representations / Talk Mathsbot.com Nrich number talks http://ntimages.weebly.com/photos.html		Games –Online links https://www.transum.org/Software/Game/ Maths Hub Nrich Love maths I See Maths I See Maths – Early number