Big Ideas in Number Resource Information

Big Ideas in Number Focus Area: **Place Value**

Name of Game or Activity: Race to 200 - Today is a maths race!

Instructions:

Students race to 200 on top of 2 hundreds blocks as each of their game boards.

Roll a 3-sided die (or pull cards from a number bag with 1, 2 and 3 in it) to determine how many tens they can collect each time. Then count your tens and figure out your current total – 10 20 30 40 50 60! I have 6 tens, that makes 60!

Students can record how they skip-counted each new total: 10, 20, 30, 40, 50, 60 = 6 tens in their books.

Students can also practise counting by 10s, saying 1 ten, 2 tens, 3 tens, 4 tens, 5 tens 6 tens, recording 6t makes 60. This highlights the pattern of just increasing the tens by 1, since the ones place stays the same.

When students reach 200, go backwards and race to zero. Take away 1, 2 or 3 tens each turn, depending on the number you roll or pull from the bag. It is more important to consolidate the 10s up to 200 (to avoid misconceptions over the 100 bridging mark), rather than go too high, particularly until these patterns are fluent both forward and backwards. This also avoids most of the renaming involved in the session.

Questioning:

• If a student is on 4 tens and rolls 2 more tens – how did you figure out the new number? Encourage students to just think – 4 tens and 2 more tens makes 6 tens or 60. This is far preferable to thinking 40 + 20 because a student thinking that may be counting forward by ones from 40 to add the extra 20.

• When did the hundreds change? At 9 tens. Why is this? Because we rename at 10 of each place.

Support:

Race to 100 using only one hundred block at their gameboard in like-ability pairs until the 10s pattern is fluent.

Extension 1:

Figure out how many tens they left to win with each turn. For example, with their current total at 60, count how many tens are missing to reach or partition 200 – 1h 4t = 140 to go. Write this in red beside the regular recording.

Students could record the full fact family each turn in a second column:

60 + 140 = 200

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140 + 60 = 200

200 – 140 = 60

200 – 60 = 140

Change the total for extension pairs, asking them to race to 300, then 400, then 500 and roll a 10-sided die. This challenges extension students to partition and record the fact families of all hundreds numbers.

Extension 2:

Roll 2 dice, blue for the ones, red for the tens. This makes it more challenging to figure out how many are left to reach victory. For example, if the student's current total is 45, they need to avoid saying 165 to go because it is actually 155 left to reach 200.

Resources:

2 hundred blocks per student

20 tens blocks per student

6-sided dice, or 3-sided if available to increase the amount of numbers students need to record on their way to 200.

BliN Micro Content

Order of digits makes a difference	✓
Additive property – The quantity represented by the whole numeral is the sum of the values represented by the individual digits	✓
Positional property – The quantities represented by the individual digits are determined by the position they hold within the whole numeral	✓
Base 10 property – The value of columns or positions increases by a power of 10 moving right to left and decreases by a power of 10 moving from left to right	
Multiplicative property – The value of a number is determined by the products of its face and place values	
There are patterns in the way we read and say numbers	✓
There are patterns in the way we write numbers	✓
Patterns in the number system can help us build other numbers	✓
Place value columns have names	✓
Zero can hold a place	✓
A 10 group is seen as a special entity which can be counted	✓
The term 10 group can be applies to 'ten tens' or 'ten hundreds' and so on	✓

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We can skip count by ten, hundred etc. both forwards and backwards in place value parts	✓
Numbers can be partitioned in flexible ways using standard and non-standard partitions	
Number partitioning can be shown as indicative of digit value and place value. For example, 26=20 + 6 or (2x10) + (6x1)	