Big Ideas in Number Resource Information

<u>Big Ideas in Number Focus Area:</u>   **Place Value**

<u>Name of Game or Activity:</u>   **Beat the Teacher**

<u>Instructions:</u>

The teacher rolls a 0-9 die. The teacher and students record that number in one of the place value columns, but the teacher does not reveal where they are placing their numbers. Repeat this 3 times so that a number is in each box.

Teacher reveals their number and if students made a higher numner, they receive 5 poiints. If the student's number is the same as the teacher, they receive 3 points and if it's less than the teacher's they receive 3 points also.

<u>Resources:</u>

- Beat the teacher sheet
- 0-9 die

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	

Big Ideas in Number Resource Information

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)	

How To Play

Object of the game - To make a number higher than the teacher using place value knowledge

The teacher rolls a 10 sided 0-9 sided dice. Students record the number rolled and so does the teacher. The teacher does not share where they have placed the number on their table. The teacher rolls the dice a total of 4 times, each time recording the number on the table with the object of making the largest number possible. The students must record each number rolled on their table before the next number is rolled. They need to make a decision about where to best place the number to make the highest number possible to "Beat the Teacher"

After 4 rolls the teacher reads out the number recorded on their table. If a student has made a higher number than the teacher they receive 5 points, if the student's number is the same as the teacher they get 3 points, if it's less than the teacher 3 points are scored.

Students can explain why their number is bigger, smaller etc and the decisions they made and why.

Variation- Try to make the smallest number possible

- Use decimals or higher place values
- Could use playing cards instead of dice

BEAT THE TEACHER

Thousands	Hundreds	Tens	Ones	Number I made	Points