Big Ideas in Number Resource Information

Big Ideas in Number Focus Area: **Multiplicative Thinking**

Name of Game or Activity: Got it covered

Instructions: 2 players roll a six sided dice and colour in that number of squares. Players make either a rectangle or square when they colour in. The player with the larger number of squares coloured in at the end wins.

Resources: Got it covered game board, 1 six sided dice, 2 different coloured markers (1 for each player)

BliN Micro Content

Cyclical pattern of 100-10-1 is repeated from ones to thousands	
Cyclical pattern of 100-10-1 is repeated beyond 100s to millions	
Ten times multiplicative relationship exists between places	
The multiplicative relationship extends to numbers less than one, that is to the right of the decimal point	
There is symmetry in the place value number system based around the ones place so that the patter in naming wholes is reflected in naming decimals	
Double count by representing one group (e.g. hold up 4 fingers) and counting repetitions of that group, simultaneously keeping track of the number of groups and the number in each group	
The multiplicative relationship between quantities is expressed as 'times as many' and 'how many times larger or smaller' a number is than another number	
Numbers move a place each time they are multiplied or divided by 10	
Basic number facts to 10x10 are recalled and patterns in number facts are investigated	
Number facts can be extended by powers of 10	
Multiplicative situations can be represented as equal-groups problems, comparison problems, combinations (Cartesian) problems and area/array problems	
The multiplicative situation is understood (factor X factor = multiple) with the meanings of the terms clearly understood.	

Big Ideas in Number Resource Information

Multiplication arrays are used to visualise and represent multiplication situations	
Division and multiplication are known as the inverse of one another	
The communitive property of multiplication is understood and can be shown to be linked to arrays	
Partition division involves finding the size of each group and quotition division involves finding the number of groups and can be also expressed in terms of factors and multiple	
Quotition division can be considered in terms of fractions so that a quantity can be split by 'halving', 'thirding', 'fifthing' etc.	
Prime and composite numbers can be linked to multiplicative arrays – prime numbers can be made only with a single row array	
Distributive property of multiplication over addition is applied and shown by a multiplicative array	✓
Multiplicative arrays are linked to the concepts or area and volume	✓
Measurement units have the same multiplicative relationship as the Base 10 system	
Cartesian products can be represented symbolically and in tree diagrams	

Got It Covered.
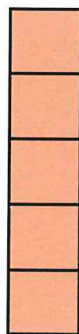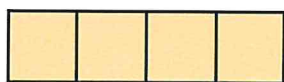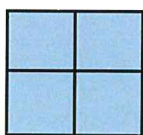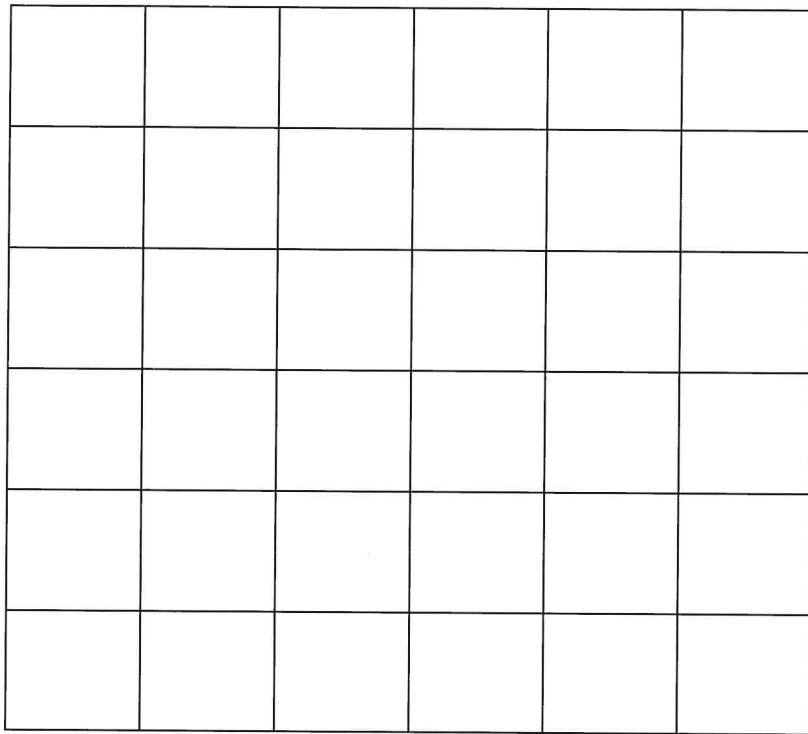
You need 2 different coloured markers and a 6 sided dice.

Roll the 6 sided dice and colour in that amount of squares . You can only make a rectangle or a square when you colour in. Some examples above.