Blocks: Exploring Number

Step in Progression	Interaction Ideas (Blocks)
Pre-counting	You notice a child building towers with the blocks. Take the opportunity to build and compare towers with the child. Sometimes children will be able to compare the blocks by looking at them, but where the towers both have a similar number of blocks they will need to pair these to find out which tower has more. Note these questions are based on a direct comparison of the number of blocks in the two towers rather than a comparison of the heights of the towers. • Does your tower have more blocks than mine? • Does your tower have as many blocks as mine? • Does your tower have fewer blocks than mine? • I'm going to make a pile with more/fewer blocks than yours. How are our piles different? You see that children have made piles of blocks. Encourage them to compare these piles. • Jodie, do you have as many blocks as Sarah? • Do you have more/fewer blocks than her? • Do you think your pile has more/fewer blocks than hers? • Do you need more/fewer blocks to have the same as her? • Which pile do you think has more/fewer blocks? • Can you make a pile that is more/fewer than this one? • Can you make a pile that is the same as this one? Follow the comparisons with questions that ask children to describe their thinking: • How do you know you have more blocks? • Why do you think there are fewer blocks in this pile? • Tell me more about the piles. • Are you sure there are fewer blocks here? • How could you check? Click to see an annotated interaction.
One-to-one counting	The children are playing with the blocks. Encourage them to count the blocks they are using as they play. How many blocks? • How many blocks do you have? Can you count them for me? • Do you have fewer blocks than me? Let's check by counting. • How many red blocks have you used? • How many long blocks are in my tower? • I have 4 blocks in my road. How many do you have? Can you get some blocks? • I have got 2 blocks. Can you get two blocks? How do you know we have the

	same? • Can you give Jane 2 blocks please? Let's check you both have the same number of blocks. Children are making towers with the blocks. Encourage them to count the blocks they are using. For example: • Build a tower and count the number of blocks used. Count each block as it is placed on top of the next: "1, 2, 3,…" • Once the tower is tall enough take each block off one at a time and count backwards "4, 3, 2, ..." • Build a tall tower then count down from 5 before you "bombs away" and knock it over. Children are building houses. Encourage them to count the blocks they are using as they build: • My house has 4 walls (windows/doors). How many does yours have? • How many blocks are on the bottom layer of your house? • Can you get me 3 blocks for my roof please? • I have 6 short blocks in my house. How many do you have? Follow up counting with questions that ask children to describe their thinking: • How do you know there are 6? • How can you tell there are 3? • Are you sure there are 9? • How could you check?
Counting sets	Children are building towers with the blocks. Focus their attention on the total number of blocks they are using. • Let's make a tower with 5 blocks, "1, 2, 3, 4, 5" • How many are in our tower? Let's count again to check. • Let's knock it over and build it again with the same blocks. How many blocks are there now? Let's count to check again. You notice some children have taken boxes into the block corner. Encourage them to count the blocks in a box: • Can you please count 6 blocks for me? • Teacher puts these blocks in a box. How many blocks are in the box? Can you tell me how many without counting? Children are making piles with the blocks. Support them to focus on the total number of blocks in each pile. • Which pile has 3 blocks? • Which pile has 5 blocks? • Which pile has the most? How do you know? • Which pile has the fewest? How do you know?

	Follow up by asking children to describe their thinking: • How do you know there are 6? • How do you know there are 3? • Are you sure there are 9? • How could you check? Use numbered boxes/plates to develop numeral recognition: • This is the number 6, let's put 6 blocks on this plate. • What number is that? How many blocks need to go on that plate?
Counting from one to solve number problems	Children are making towers with the blocks. Encourage them to count the blocks to describe the ways they are joining and separating groups. • How many blocks are in this tower? If we take off 3 how many will be left? • Let's use all of them to make one tall tower. How many blocks are there now? • How many red blocks are in the tower? How many green blocks are in the tower? How many is that altogether? • How many blocks are in the tower? If we take out these 4 short ones how many will be left? You see some children building roads with the blocks. Encourage them to use counting to describe the ways they are joining and separating groups of blocks. • This road has 4 blocks. How many blocks are in that road? How many blocks do we have altogether? • How many short blocks are in this road? How many long blocks are in this road? How many is that altogether? Ask follow up questions which encourage children to describe their thinking: • Why do you think we will have seven altogether? • How could we check? • Tell me why you think there will be three 3 left? • Are you sure? • How could we find out?
Counting on to solve number problems	You see some children building roads with the blocks. Encourage them to use counting to describe the ways they are joining and separating groups of blocks. Focus on the initial number of blocks to encourage children to count on or back. • How many blocks are in that road? That's right, there's 6. How many will be left if we move 3 of them over here to make a garage? Let's check, we have 6...5,4,**3**. • There are 5 blocks in the road to the petrol station. If we add on 3 more blocks to go around the corner, how many blocks will there be altogether. We have 5...6, 7,**8**. As children play with the blocks, use counting to describe the way the blocks are

	being shared. Focus on the initial number of blocks to encourage children to count on or back. • I have 3 blocks. If you give me 2 more how many will I have? Let's check, starting from 3....4,**5**. • How many blocks do you have? That's right you have 7. If you give me 2 blocks how many will you have then? Let's check, 7... 8,**9**. Ask follow up questions which encourage children to describe their thinking: • Why do you think we will have seven altogether? • How could we check? • Tell me why you think there will be three 3 left? • Are you sure? • How could we find out?