

# General Interaction Ideas: Number

Step in Progression	Interaction Ideas
Pre-counting	<p>Use whatever items the children are playing with to compare the size of sets without counting. Sometimes children will be able to compare sets by looking at them, but where the sets have a similar number of items they will need to pair items to find out which set has more.</p> <ul style="list-style-type: none"><li>• Which has more/fewer? Why do you think that?</li><li>• Who has more/fewer? How do you know?</li><li>• Are there enough? Tell me more.</li><li>• Can you make sets that are more/fewer/same as Jamie's?</li><li>• Can you find sets that are more/fewer/same as Anna's?</li></ul> <p>Follow the comparisons with questions that ask children to describe their thinking:</p> <ul style="list-style-type: none"><li>• How do you know?</li><li>• Why do you think that?</li><li>• Tell me about that</li><li>• Are you sure?</li><li>• How could you check?</li></ul> <p>Watch for: Are the children able to identify which set has more/less by looking at the two sets? Can they match the items from two sets to see which has more/fewer? Note they do not need to be able to say how many there are to do this successfully.</p>
One-to-one counting	<p>As appropriate contexts arise, ask children to form a set of a certain number of items. Start with small sets of up to five items.</p> <ul style="list-style-type: none"><li>• I see you have some animals. Can you find 3 bears?</li><li>• Isn't that an interesting picture. Can you see 2 frogs?</li><li>• What a lot of crayons you have. Can you pick up 6 crayons each?</li><li>• Aren't they pretty flowers. Who can find me 4 of them?</li><li>• What sticky fingers you have. Can you show me three fingers?</li></ul> <p>As opportunities present themselves ask children to count the number of items in a set.</p> <ul style="list-style-type: none"><li>• What a lovely tea party you have set up. How many cups do you have?</li><li>• Thanks for bringing in some apples to share. Can you count the apples?</li><li>• What a great red hat you have on. How many people are wearing hats today?</li></ul> <p>Follow up counting with questions that ask children to describe their thinking:</p> <ul style="list-style-type: none"><li>• How do you know?</li><li>• Why do you think that?</li><li>• Tell me about that</li><li>• Are you sure?</li></ul>

- How could you check?

Practice the counting sequence from any number, both forwards and backwards.

- Let's start counting from 5. "5, 6, 7, 8 ..."
- Let's count down from 5 before the rocket blasts off "5, 4, 3, 2, 1, blast off!"

Watch for:

When children are counting do they say the standard list of counting words in order? Which parts of the sequence do they know? Which parts do they need help with?

When children are counting do they match each spoken number with one object? Do they move more than one object for spoken number? How do they coordinate spoken numbers with objects when counting?

## Counting sets

Use opportunities that arise in play to ask children to count the number of items in sets. Focus on the total number of items.

Matching sets activities, such as:

- There are 3 teddy bears, how many porridge bowls will we need?
- There are 6 paint pots, how many brushes will we need?
- There are 5 cars, how many garages will we need to make?

Encourage children to use numbers to compare sets rather than matching items one to one. Extend their thinking with questions such as:

- How do you know you have the right number?
- How many have you got?
- How many more do you need?

Follow up counting with questions that ask children to describe their thinking:

- How do you know?
- Why do you think that?
- Tell me about that
- Are you sure?
- How could you check?

Develop children's awareness of numerals around them, for example on the clock or the calendar:

- What number is this?
- How could we write the number 3?

Other numbers to use include those on posters, dates of birth, birthday charts, sign-in sheets, books, puzzles, profile books, games, snakes and ladders, cards.

Watch for:

Do children need to recount to tell you how many are in a set? For example "Can you count these teddies for me?" then after they have counted "how many teddies are there?"

	<p>Do children need to match one to one to make sets of the same size or can they use numbers to make the comparison?</p>
<p>Counting from one to solve number problems</p>	<p>Use everyday situations which involve joining and separating sets to develop children's ability to count to solve number problems. For example:</p> <ul style="list-style-type: none"> <li>• How many cups are on the table? How many cups are on the tray? How many cups are there altogether? Let's count to find out.</li> <li>• How many jackets in the pile? If 2 children put their jackets on how many will be left in the pile? Let's count to find out.</li> </ul> <p>Ask follow up questions which encourage children to describe their thinking:</p> <ul style="list-style-type: none"> <li>• How do you know?</li> <li>• Why do you think that?</li> <li>• Tell me about that</li> <li>• Are you sure?</li> <li>• How could you check?</li> </ul> <p>Watch for: Do children use counting to solve everyday number problems? Can they reliably produce an accurate result?</p>
<p>Counting on to solve number problems</p>	<p>Incorporate counting into children's play. Encourage children not to count the first set of items but to count on or back from the largest number to solve number problems. For example:</p> <ul style="list-style-type: none"> <li>• There are five animals in this pen and the farmer adds three more sheep. Let's count how many we have altogether as we put them in.</li> <li>• There are 7 trucks on the road but these 2 pull over to park. How many trucks are left on the road? Let's count to find out.</li> </ul> <p>Ask follow up questions which encourage children to describe their thinking:</p> <ul style="list-style-type: none"> <li>• Why did we start from 5?</li> <li>• How do you know?</li> <li>• Why do you think that?</li> <li>• Tell me about that</li> <li>• Are you sure?</li> <li>• How could you check?</li> </ul> <p>Watch for: Do children start their counting from one, or can they count on or back from the largest number?</p>