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| Year: Reception; Term: 3 | Week: 21 | Focus: Cardinality, ordinality and counting |

## Subject knowledge

This week, the children will continue to engage with activities that draw attention to the purpose of counting – to find out ‘how many’ objects there are. The children will also revisit the concept of cardinality – the idea that the last number in the count tells us how many things there are altogether. They will be given further opportunities to hear, join in with and develop their knowledge of the counting sequence, and, once they have become secure with their counting skills, they will be able to continue the counting sequence and be able to identify missing numbers within it. While consolidating their understanding of the word pattern embedded within most of our number names, the children will also be given opportunities to hear and practise key differences in the number names e.g. between ‘teen’ and ‘-ty’ numbers.

A key area of focus this week will be to develop confidence in counting strategies, including counting on from different starting numbers. The children will also consider strategies for counting larger numbers of objects, including those that cannot be moved. Practical activities – such as using counting wands and helping a puppet to develop their counting skills – will help to embed these key areas of understanding. During classroom routines, the children should also be given further opportunities to hear, and join in with, counts beyond 20. Adults should continue to draw attention to the pattern of the counting numbers beyond 20, e.g. by pausing and giving children time to anticipate the repeating pattern by saying, *‘twenty, twenty… ONE, twenty-two…’.*

## Connections

The children will have previously heard and joined in with counting activities. They will also have ordered numbers to 10 and explored cardinality by focusing on the ‘stopping number’.

As they move towards Year 1, the children will develop their counting skills by organising and counting larger sets of a wide range of objects. They will be able to use counting skills in a range of contexts, including counting things that cannot be seen (for example, the number of beats on a drum) or using counting to measure time (for example, when playing hide-and-seek).

The children’s growing understanding of ordinality will develop into a generalisation that every whole number is ‘1 more than’ the previous number, and ‘1 less than’ the following number. This will begin to provide a depth of understanding about our counting system, and will support activities such as positioning numbers on scales and number lines as the children move through Key Stage 1 and Key Stage 2.

## Further optional experiences

For children who need extra experiences, this concept can be further explored in the following ways:

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| Small group work | Continuous provision | Routines |
| * Repeat the whole-class teaching activities with smaller groups, enabling the children to 'help' the puppet once again.
* Give the children extra experiences of counting things that cannot be seen. For example, *I wonder who can stand on one leg for the longest time? Let’s count together!*
* Provide baskets of mixed objects (up to 20 of each item) for the children to sort. *How many of each object have we got?*
* Use images from this week’s presentation or other counting resources (e.g. wrapping paper, posters, flash cards, pages from picture books, etc) to provide counting practice. *Can you say how many […] you think there are? How are you going to make sure you count them all?*
* Ask the children to carry out a survey of their classmates with 2 simple choices, e.g. *Do we like apples or oranges best?* *Which of these 2 books would we like to read before hometime?* Provide clipboards or notebooks so the children can record their counting. Ask them to explain their representations.
 | * Provide a selection of 'counting wands' for the children to use to help them keep track of their tagging.
* Place skittles or similar games in the outdoor environment, so the children can count while they play. For example, how many skittles can they knock down; how many times can they catch a beanbag; how many steps can they take around an obstacle course without touching the ground?
* Invite the children to make collections of a target number of specified objects by labelling hoops or chalk rings with representations of quantities (e.g. worksheet images of fingers, number plates, etc.). *How can you make it easier to show how many […] you have collected?*
* Supply a range of appealing objects and various containers for the children to make collections.
* Lay out laminated pictures of interesting collections of objects that the children can tag with dry-wipe markers.
* Provide a range of musical instruments that can be used to make clear, defined sounds (e.g. drums or xylophones). Ask the children to use the instruments to make and count sounds.
 | * Practise ‘whisper counting’ sounds (see Session 1) while waiting on the carpet or lining up or during other transition times.
* Look for similar opportunities to practise counting in silly voices (as in this week’s Numberblocks clip).
* Sing number rhymes that involve counting as part of your daily routine, e.g. ‘1, 2, Buckle My Shoe’.
* Designate a number rhyme of the week (for example, ‘1, 2, Buckle My Shoe’; provide daily practice and, if appropriate, linking resources in the classroom.
* Count the children when they line up, split into small groups for PE, wash their hands, etc. Encourage them to join in with the count.
* Use ordinal numbers where appropriate. *Who’s first to be ready? Who’s second? Hmmm… what comes next?*
* Ask the children to help you count out resources for activities. *How many […] do we need? Help me to check we have enough!*
* Create shadow outlines in the environment for the children to place objects into when tidying up. Can they match the objects with the outlines? Have they got the right quantity of things?
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| Session 1 | Children will:* count things that cannot be seen – sounds
* revisit rules for how to count
* discuss and practise strategies for counting larger sets.
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| Revisit | Slowly and rhythmically make a repeating noise (e.g. clapping, tapping a drum or tambourine, dropping coins into a tin, etc.). Listen carefully! How many [e.g. claps] can you hear?Shall we all whisper the count to find out how many [claps] there are altogether? How many [claps] were there? [Begin with numbers less than 10 and build on the skill up to 10.] |
| Teach and practise  | Reintroduce the counting puppet to the children. Do you remember […]? They are here again today. They need our help! Pretend that the puppet is telling you that they’d like to help e.g. give out the fruit snack / bring in a sticker / bring a picture for each child tomorrow, but they don’t know how many items they’ll need.What do they need to do? Agree that the puppet will need to count the children, then ask the class to help out. Can you help them to say the number words?Slowly demonstrate the puppet counting the children one by one. [You could emphasise what’s being counted using a counting wand, such as those used in Week 2.] Include errors for the children to spot and advise the puppet about, e.g. saying the number words in the wrong order; ‘tagging’ children more than once; forgetting to stop and going around again; and not knowing how many children there are ‘altogether’ when asked.Encourage the children to articulate and share their rules for how to count.It’s tricky counting this many children, isn’t it? What can we do to make it easier? How can we make it easier to know who we’ve already counted and who we’ve got left to count? Take suggestions from the children and discuss their strategies together. Conclude the session by sharing and practising counting strategies that involve moving the children, e.g. asking everyone to stand up and then to sit down as they are counted; moving the children from one side of the room to the other as they are counted; and lining the children up and counting along the line.Count along with our puppet! Have we still got the same number? [For smaller groups or classes you may want to ask another class to join in.] |
| Resources | Counting puppet [hand puppet or soft toy]; counting wand |
| Session 2 | Children will:* count things that cannot be seen – actions
* discuss and practise strategies for counting larger sets by moving objects.
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| Revisit | Let’s practise counting together!Hold up a number of fingers. How many can you see? Let’s [e.g. hop/clap/jump/skip] that many times. Don’t forget your stopping number! |
| Teach and practise  | Bring out your counting puppet and a collection of objects to be counted (see resources below). Our counting puppet is here. They need our help again! They’ve remembered to bring the [e.g. fruit/stickers/pictures], but need to know if there are enough for everyone!What shall we do?Agree together that one way of checking is for the puppet to count the objects and see if there is the same number of objects as children. (The children may also suggest giving 1 object to each child, and seeing if everyone has 1. Acknowledge this as another way of checking, but suggest that it would be a good idea to check by counting before giving out the objects.) Tip the objects into a pile on the carpet.Model the puppet starting to count but getting in a muddle with what has and has not been tagged. [It may be helpful to use a counting wand here.]Hmmm… this looks tricky! Can anyone think of a good way to count all of these objects? [Gesture a circle around the pile of objects to emphasise the whole amount.] What can we do to make it easier?Encourage the children to articulate and share their ideas for counting this larger set. Take suggestions from the children and discuss their strategies together.Conclude the session by sharing and practising counting strategies that involve moving the objects, e.g. placing them in a line and counting along the line, or arranging them in rows and counting along each row. [Note that the objective here is to discuss different strategies for counting larger numbers of objects by moving them. The exact strategy used is not important; the focus is on encouraging the children to recognise that they need a strategy to keep track of which objects they have counted.]Has this made it easier to know what we’ve counted? How is it easier?Count along with our puppet! Are there enough objects for everyone? |
| Resources | Counting puppet [hand puppet or soft toy]; selection of objects to be counted, e.g. fruit, stickers or pictures [ensure there are enough objects to give 1 to each of the children counted in Session 1]; counting wand – optional |

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| Session 3 | Children will:* count things that cannot be seen – periods of time
* discuss and practise strategies for counting larger sets by moving images
* make or represent their own collections of larger amounts.
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| Revisit | Let’s practise counting together. I’ve got a challenge for you today!Set the children their challenge in pairs. Ask the first child in each pair to e.g. stand on one leg / travel around an obstacle course, etc. while both children count together. Then ask the children to take it in turns to e.g. stand on one leg / travel around an obstacle course, before coming back to share their results. Do you know who’s really good at this challenge? Mr/Mrs […]! [You or another adult in the room.] Let’s count again!Count together as the nominated adult carries out the challenge – ensure that you reach a number greater than 20. Draw attention to the correct pronunciation of the ‘teen’ numbers. |
| Teach and practise  | Watch the Numberblocks clip on slide 3 of the presentation. Let’s do some more counting! Display slide 4 to introduce the activity, then display slide 5.What a lot of Ones! Can we say how many there are without counting? Draw attention to the fact that subitising is not a useful strategy to use on this occasion.Can we GUESS how many Ones there are? Do you think there are more than 20? Who thinks there are fewer than 20?How can we count the Ones without getting into a muddle?Count the Ones together as you move them into a more structured arrangement on the slide (e.g. groups or rows of 5/10). [Emphasise the pronunciation of the ‘teen’ numbers. Note that in order to move the images on slide 5 you will have to view the slide in the standard view and not as a slideshow.]Conclude the session by providing objects for the children to make their own collections (see resources below).I wonder if we can make our own collections of 20 objects? What could you collect in our classroom or outdoor area? How will you show that you have 20? Perhaps some of you would like to draw 20 things instead? |
| Resources | Objects in the continuous provision for the children to use to make collections [ensure there are enough objects available for each child to make a collection of 20, e.g. blocks, counters, buttons, pine cones, stickers, toy cars, etc]; paper and writing pencils |
| Session 4 | Children will:* practise counting on from a given number
* discuss and practise strategies for counting larger amounts that cannot be moved.
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| Revisit | Bring out your counting puppet and a counting wand. Sit the children in a circle or ask them to work with a partner. Our counting puppet is here again today. They are going to use their counting wand to count. Let’s all help!Point to a child or pair of children, or gently touch them on the head with the counting wand, and support them to count for 2, 3 or 4 numbers. Then move on to a different child/pair and encourage them to continue the count, saying the next 2, 3 or 4 numbers, before moving on to the next child/pair. Let’s keep going! What comes next? Build on the skill to get the count to 20 or beyond. [Remember to focus on the correct pronunciation of the ‘teen’ numbers.] |
| Teach and practise  | Display the dot image on slide 7 of the presentation. What a lot of dots! Can we say how many without counting? Draw attention again to the fact that subitising is not a useful strategy to use on this occasion.Can we GUESS how many dots there are? Do you think there are more than 20? Who thinks there are fewer than 20?How can we count the dots without getting into a muddle?[Try to rearrange the dots on the slide for easier counting.]Oh no! The dots won’t move today! What can we do instead?Take suggestions from the children and discuss their strategies together.Conclude the session by sharing and practising counting strategies for when the objects can’t be moved, e.g. cross through/draw a ring around each dot as you count together; or start at the top and count from left to right before moving systematically down.Repeat the activity by asking the children to practise their chosen strategy to count the dots on slide 8.[You may find it helpful to print large copies of slides 7 and 8 of the presentation to model the different counting strategies. Alternatively, you can use your own resources, such as sheets of wrapping paper with repeating patterns, or you could draw simple objects/shapes on a whiteboard or flipchart.]Has this made it easier to know what we’ve counted? How is it easier? |
| Resources | Counting puppet [hand puppet or soft toy]; counting wand; printed copies of slides 7 and 8 – optional; materials with repeating patterns of objects to count, e.g. wrapping paper or fabric – optional |