

One to One Correspondence (How to count)

Key Points

Associated Knowledge: *Stable order principle / knowledge of number word sequence.*

Description: This involves the assigning of one, and only one, distinct counting word to each of the items to be counted. Therefore, the same number of items as tags/words. A child has to be able to partition and repartition the collection into two categories: those that have been allocated a number name (counted) and those that have not (been counted).

Supporting Learners

- Modelling with individual or small groups of students by counting items during play.
- Modelling in larger groups and encouraging students to show fingers or perform actions while reading counting books or counting rhymes.
- Moving objects when counting.
- When playing an instrument such as rhythm sticks, a drum, or a xylophone, students can record one mark for every sound.
- Helping to set the table for snack or in the kitchen play centre.
- Counting the number of buttons on a jacket

Planning and Observations

- Children may have their own stable order which may not be the correct stable order e.g. they may consistently give the number word sequence 1, 2, 3, 4, 6, 7.
- SEAL strand 5.3, 5.4, 5.5 and 5.6 will support the development of one to one correspondence

Stable Order (How to count)

Key Points

Prior Knowledge: Exposure to oral counting

Description: This is the knowledge that there is a set of counting words that never changes.

Supporting Learners

- Exposure to oral counting in action for example, nursery rhymes, songs, story books, visual aids.
- Spotting mistakes – counting aloud with missing / errors in sequence, allowing children opportunities to identify and correct.
- Practical counting experiences, e.g. setting out plates at the snack area.
- Concrete materials at a counting station using different colours, textures, sizes for stimulation.

Planning and Observations

- Children may have their own stable order which may not be the correct stable order e.g. they may consistently give the number word sequence 1, 2, 3, 4, 6, 7.
- SEAL strand 5.1 will support the development of stable order principle.
- Planning should include opportunities for children to be exposed to the number word sequence.

Cardinality (How to count)

Key Points

Prior Knowledge: one to one correspondence, concept of the words to orally count in stable order.

Description: When counting items, the last number in the count represents how many items are in the set.

1 2 3 4 5 6 **7**

Supporting Learners

- Giving children opportunities to subtilize is one way of reinforcing the cardinal principle.
- Modelling. Use everyday examples to expose children to the cardinal principle in action, for example “How many boys are here today “1, 2, 3, 4. We have **4 boys**”.
- Practical counting experiences
- concrete materials / counting stations
- Board games with dice e.g. snakes and ladders
- Musical percussion instruments

Observation & Planning

- Children may start at 0 and not 1
- Cardinality can be hard to assess. One way to check is to ask children ‘how many’. Children will begin counting from 1. If they haven’t grasped the cardinal principle, when asked again ‘How many’ they will recount the same collection from 1.
- SEAL strands 5.3, 5.4, 5.5 and 5.6 will support the development of this principle.

Abstraction (What to Count)

Key Points

Prior Knowledge: number word sequence, one to one correspondence, the cardinal principle.

Description: The understanding that a range of items can be counted as one collection. E.g. an apple, a ball and a yoyo can make up a collection of 3. Counting can also take place in an abstract way, for example, counting sounds such as claps or times you've been to the toilet.

Also, understanding of the conservation of number, i.e. that items can be spaced out, arranged in different configurations or be of different sizes.

Supporting Learners

- Counting non-tangible things such as:
 - sounds
 - actions
 - words people say
 - questions people ask
 - steps people take
- Matching sets of different items with the same quantity.
- Counting objects that are varying in size / shape and spatial arrangement.

Planning and Observations

- Children may assume collections laid out over a larger area is higher in quantity.
- Children may assume a collection of large objects (5 chairs) is higher in quantity than small objects (5 pieces of Lego).
- Children may not understand counting items they can't see.
- SEAL strand 5.6 and activities 5.5.6 and 6.6.7 will support the development of abstraction principle.

Order Irrelevance (What to Count)

Key Points

Prior Knowledge: Number word sequence, cardinal principle, one to one correspondence.

Description: It does not matter in which order you count, the number in the set does not change.

Supporting Learners

Counting sets of items from

- left-to-right
- right-to-left
- top-to-bottom
- bottom-to-top
- counting in a circle
- counting in a random pattern

Planning and Observations

- Ensure children are exposed to this principle alongside the abstraction principle, giving opportunities to count items of varying size in different orders.
- When counting in a non-linear fashion, children might continue the count, forgetting where they began.
- This is quite a complex skill as children must keep track of both the items they have counted, and those they have yet to count.
- SEAL strand 5.3, 5.4 and 5.5 will support the development of order irrelevance principle.