

## Maths and Me: Junior Infants – Short-Term Plan, Unit 5: Numbers 4 and 5 (November: Weeks 1&amp;2)

**Strand(s) > Strand Unit(s)**

Number &gt; Uses of Number, Sets and Operations; Numeration and Counting; Place Value and Base Ten. Algebra &gt; Patterns, Rules and Relationships.




**Learning Outcome(s)**

Through appropriately playful and engaging learning experiences children should be able to develop an awareness that numbers have a variety of uses; recognise and understand what happens when quantities (sets) are partitioned and combined; develop an awareness that the purpose of counting is to quantify; use a range of counting strategies for a range of purposes; develop a sense of ten as the foundation for place value and counting.

Lesson	Focus of Learning (with Elements)	CM	Learning Experiences	Assessment
1	<b>Understanding Counting – 1 to 5:</b> Demonstrates a growing understanding of the five principles of counting (one-one, stable order, cardinal, order relevance and abstraction) (U&C); Keeps track of counting acts by using numerical patterns such as tapping or fingers (C)		<ul style="list-style-type: none"> <li><b>D</b> Choral Counting L1</li> <li><b>C</b> Class Clothes Line L1, 3</li> <li><b>C</b> Counting Objects, 1 to 5 L1</li> <li><b>C</b> Making Sets and Matching Numerals, 1 to 5 L2</li> <li><b>D</b> Reason &amp; Respond L2–6</li> </ul>	<b>Intuitive Assessment:</b> responding to emerging misconceptions
2	<b>Matching Numerals to Sets – 1 to 5:</b> Discusses cardinal numbers of personal significance, such as age, and compares with other familiar people (C); Sorts items into sets by quantity (U&C); Matches numerals to sets up to at least 5 (U&C); Subitises and counts the number of objects in sets up to at least 5 (R) Explores how the layout of or size of elements in a set has no effect on the overall total [conservation of number] (U&C)		<ul style="list-style-type: none"> <li><b>C</b> Ordering Numbers and Sets L3</li> <li><b>C</b> Maths Stations L4</li> <li><b>D</b> Quick Images L4</li> <li><b>D</b> Sorting Circles L5</li> <li><b>C</b> Combining and Partitioning L5</li> <li><b>C</b> Comparing Equivalent and Non-equivalent Sets L6</li> </ul>	<b>Planned Interactions:</b> responding to insights gleaned from children's responses to learning experiences
3	<b>Ordinality of Number:</b> Represents quantities, order and labels by numerals (R); Recognises the use of ordinal numbers first, second, third, last in everyday life contexts (U&C); Orders and distinguishes between sets without counting (subitising) (R); Orders numerals up to at least 5 (U&C); Orders sets of objects according to their quantity, up to at least 5 (A&PS)			
4	<b>Recording Numbers:</b> Represents numbers, using informal symbols and begins to record such numbers (C); Discusses, draws and writes representations of numbers 1–5, using manipulatives (C)			
5	<b>Composition of Number – 1 to 5:</b> Explores various arrangements (e.g. on number frames) of manipulatives to prompt different mental images of numbers up to 5, while developing a sense of each number (R); Partitions sets of two or more objects (U&C)			
6	<b>Equivalent and Non-equivalent Sets – 1 to 5:</b> Identifies, recognises and estimates 'more' or 'less' in the real-life contexts and/or play (R); Accurately counts and compares equivalent and non-equivalent sets from 1 up to at least 5, and establishes which set has more or less (R)		<b>Print resources</b> Pupil's Book pages 26–31 Home/School Links Book pages 14–15 PCMs 9, 22	<b>Assessment Events:</b> information gathered from completion of the unit assessment in the Progress Assessment Booklet page 11
7	<b>Review and Reflect:</b> Reviews and reflects on learning (U&C)			

**Key: Elements:** (U&C) Understanding and Connecting; (C) Communicating; (R) Reasoning; (A&PS) Applying and Problem-Solving. **CM: Cuntas Míosúil:** please tick when you have completed the focus of learning. **Learning Experiences:** **C** concrete activity; **D** digital activity; **P** activity based on printed materials, followed by lesson numbers.

## Additional information for planning

 <b>Progression Continua</b>	See 'Junior Infants <i>Maths and Me</i> Progression Continua Overview' for a detailed breakdown of how all progression continua are covered.
 <b>Maths Language</b>	See 'Junior Infants <i>Maths and Me</i> Maths Language Overview', individual lesson plans and Unit 5 Maths Language Cards.
 <b>Equipment</b>	See 'Junior Infants Maths Equipment Overview' and individual lesson plans.
<b>Inclusive Practices</b>	<ul style="list-style-type: none"> <li>● See Let's Strengthen and Let's Deepen suggestions throughout lesson plans.</li> <li>● See Unit 5 Let's Strengthen Suggestions for Teachers. (These address the Common Misconceptions and Difficulties listed below.)</li> <li>● See Unit 5 Let's Strengthen PCM.</li> <li>● See Unit 5 Let's Deepen PCM.</li> </ul>
<b>Integration</b>	See individual lesson plans.

## Background and rationale

- Over the course of this two-week unit, the children will be counting 1 to 10. However, you are not expecting them to count this number of objects or recognise all of the numerals; they will be focusing on the numbers 1 to 5.
- You will be assessing whether the children know the *order* in which to count (1, 2, 3, 4, 5), that they are using one-to-one correspondence (assigning a number name to each object), that the last number is the total count, and that they understand conservation of number.
- They are also being introduced to the abstract principle of counting (e.g. counting sounds). This leads to children being able to create a mental image of a number, and they can then more easily 'count on' in their head.
- The children will be engaging in plenty of number games, rhymes, digital activities, and songs to extend their experience. It is, of course, of key importance that children see numbers in the 'real world' and that they apply their growing knowledge to experiences outside the classroom. Equivalent and non-equivalent sets are discovered in the outside world, when the children become 'Green Detectives' on a nature walk. They find out, for example, which twig has more leaves.
- The children will be using tally marks to record amounts and writing numerals 'creatively'. There is less of a focus initially on writing numerals on paper, to enable the children to embed the concept of assigning a number to an amount, to count in the correct order and to recognise each number. Acquiring the skill of writing numerals too early on can dilute children's deeper understanding of Number.
- Composition of number allows the children to 'break up' a number of objects (from 1 to 5) and explore the different combinations they can make. This activity solidifies their comprehension of the number itself and what it is 'made of'. Partitioning and combining becomes a natural progression when the children have already 'deconstructed' a number of objects.

The theme of this unit is **Numbers All Around Us**.

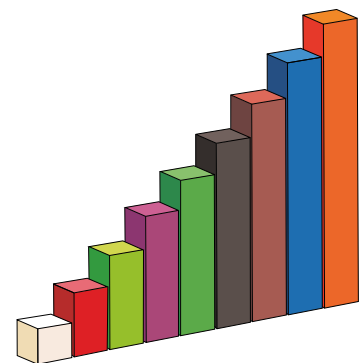
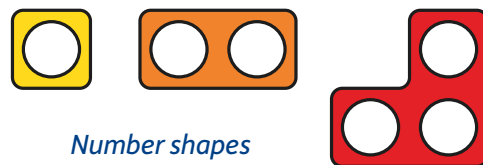
## Common misconceptions and difficulties

- The children may become confused with words that have the same sound, but different meanings (e.g. *for/four, ate/eight*).
- There is a lot of additional vocabulary to make sense of: *after, before, in-between, right order, take away, break up*. It is very helpful to make up small stories for this age group (e.g. 'There were five ducks out for a walk but then one dived into a pond').
- Making the link between the numeral, the number word and the objects (concrete and pictorial) requires engaging in multiple hands-on activities that reinforce this concept.
- The children may mix up letter symbols and number symbols (e.g. 5 and S, or 8 and B).

The Unit 5 Let's Strengthen Suggestions for Teachers address the common misconceptions and difficulties listed above.

## Mathematical models and representations

- Fingers
- Tally marks
- Five frames
- Counters
- Number shapes
- Cuisenaire rods



### Teaching tip

Five Frames and Number Shapes manipulative printables are available to support this unit. Click on the resources icon on the *Maths and Me* book cover on [edcolearning.ie](http://edcolearning.ie).

## Day 1, Lesson 1

## Understanding Counting – 1 to 5

## Focus of learning (with Elements)

- Demonstrates a growing understanding of the five principles of counting (one-one, stable order, cardinal, order relevance and abstraction) (U&C)
- Keeps track of counting acts by using numerical patterns such as tapping or fingers (C)

## Learning experiences

- D** Animation: Count Along With Monty  
**MAM Routine: Choral Counting**
- D** Digital activity: Counting from 1 to 10  
**MAM Routine: Choral Counting**
- C** Concrete activity: Class Clothes Line
- C** Concrete activity: Counting Objects, 1 to 5
- P** Pupil's Book page 26: Understanding Counting – 1 to 5

## Equipment

- Manipulatives for counting, such as bears, counters, beads, links, cubes, 2-D and 3-D shapes, collections of objects and objects on the groups' tables
- Class clothes line, and numeral posters 1 to 10
- Monty the puppet

## Maths language

- four, five

## Warm-up



- D** Animation: Count Along With Monty  
**MAM Routine: Choral Counting**

Use Monty the puppet alongside the digital animation. Reminder: one of the children might like to 'manipulate' Monty to make certain actions/gestures and 'talk' if required. The class could take turns 'being Monty'! Play the animation. You are now focusing on the numbers 4 and 5.



- D** Digital activity: Counting from 1 to 10  
**MAM Routine: Choral Counting**

Play the slideshow. The children should chant the numbers. Ask:

- Can anyone show me one/two/three fingers?
- Can anyone show me four fingers?
- Can anyone show me four fingers in a different way?
- Can anyone give me a high-five? Give your partner a high-five!

## Teaching tip

Any children who have difficulty saying the numbers in order will learn from the other children. However, try to give extra opportunities for counting practice to any children who are missing numbers, saying a number twice or using the wrong order.

## Teaching tip

Try to incorporate a counting activity as a warm-up for each day of this unit.

- C** Concrete activity: Class Clothes Line

With the aid of the class clothes line and numeral posters 1 to 10, highlight the numbers 4 and 5 while using the following language: *after, before, in-between*.

## Main event

- C** Concrete activity: Counting Objects, 1 to 5

Distribute manipulatives to each group. This is another opportunity to assess each child's understanding of the five



principles of counting. The children are not assigning numerals in this activity; they are focusing on the count and the introduction of numbers 4 and 5. They engage in the following activities: counting a

set of 1, 2, 3 objects (revision); counting a set of 4, 5 objects. Assess whether or not the children:

- Assign a number name to each object
- Touch each object once
- Count in the correct order (with the added numbers of 4 and 5)
- Understand that the *final* number is the *total* of all the objects.

**Let's deepen**

Ask the children to give you, for example, four cubes from a group of six cubes. Assess:

- Do they need to recount the amount when asked how many cubes they gave you?
- Do they understand the conservation of number?
- Do they understand that the objects can be moved apart slightly or counted top to bottom (e.g. in a stack of cubes) and they will still get the same number?
- Are they beginning to understand the abstraction principle?

To assess the children's understanding of the abstraction principle, you could tap on the table a

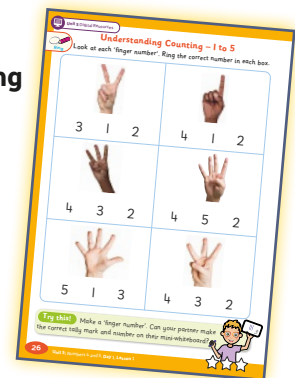
few times. Tell the children to close their eyes and count the number of taps they hear. Ask:

- How many taps did you hear?
- Can you tap the table five times?
- Tap the table three times. If I tap the table again, how many taps would that be?

Using Think-Pair-Share, ask:

- Can you tap a pattern/rhythm? (e.g. 1, 2, pause, 1, 2, pause)
- Can your partner copy your pattern?
- Can your partner share your pattern/rhythm with the class?

**P Pupil's Book page 26: Understanding Counting – 1 to 5**



**Optional consolidation and extension possibilities**

**Number of the Day (or Week)** The children decide which number (4 or 5) they would like to make Number of the Day. Using PCM 21: Numerals 4 and 5 (Large) place the numeral and name of Number of the Day above a small table. The children make sets of the number (e.g. a set of 4 conkers, a set of 4 lunch boxes) and put them on the table. Distribute PCM 22: Numerals 4 and 5 (Small). The children place the correct small numeral beside each set on the table.

(If you opt for Number of the Week, ensure you change the number at the beginning of next week.)

**Get With the Beat** (Integration with Music) Play a simple piece of music with a 4/4 beat, for example: [edco.ie/wksh](http://edco.ie/wksh). Can the children identify a steady beat (1, 2, 3, 4; 1, 2, 3, 4)?

**Story** Read *Bear Counts* by Karma Wilson and Jane Chapman or listen to a reading at [edco.ie/6ec7](http://edco.ie/6ec7)



**Days 2 and 3, Lesson 2**

**Matching Numerals to Sets – 1 to 5**

**Focus of learning (with Elements)**

- Discusses cardinal numbers of personal significance, such as age, and compares with other familiar people (C)
- Sorts items into sets by quantity (U&C)
- Matches numerals to sets up to at least 5 (U&C)
- Subitises and counts the number of objects in sets up to at least 5 (R)
- Explores how the layout of or size of elements in a set has no effect on the overall total [conservation of number] (U&C)

## Learning experiences

- D** Digital activity: Ages  
**MAM Routine: Reason & Respond**
- C** Concrete activity: Making Sets and Matching Numerals, 1 to 5
- P** Pupil's Book page 27: Matching Numerals to Sets – 1 to 5

## Equipment

- Manipulatives for counting, such as bears, counters, beads, links, cubes, 2-D and 3-D shapes, collections of objects and objects on the groups' tables
- PCMs 9, 22

## Maths language

- Informal use of: one more, one less (in relation to age)

## Warm-up

**D** Digital activity: Ages**MAM Routine: Reason & Respond**

Play the activity, which contains photographs of ten children aged one to ten, along with the numerals 1 to 10. Ask:

- What age do you think the baby is?
- Who has a one-year-old baby sister/brother/cousin?

You are not expecting 'correct' answers; this is an exploration of their understanding of age and number. Click to reveal the age (number) of each child. Say/ask:

- This baby is aged one. What age do you think the *next* child is?

Continue with similar questions up to the eldest child, clicking to reveal the correct numeral for each child.

Ask:

- Where is the child aged four? Show me.
- Is there anyone in the class who is four? Does anyone have a sister/brother/cousin who is four?
- Where is the child aged five? Show me.
- Is there anyone in the class who is five?

## Let's deepen

Explore the concepts of *one more* and *one less* in terms of age and number.

## Main event

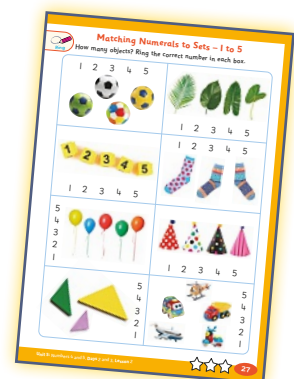
**C** Concrete activity: Making Sets and Matching Numerals, 1 to 5

Distribute manipulatives and copies of the numerals to each group (PCM 9: Numerals 1, 2 and 3 (Small); and PCM 22: Numerals 4 and 5 (Small)). This is an opportunity to assess each child's understanding of Number (1 to 5). Over the two days, the children engage in the following activities:

- Making a variety of sets (using the same or different objects and arranging them in different ways) for numerals 2, 3, 4, 5
- Matching numbers (small numerals from PCMs 9 and 22) to sets (1–5 objects)
- Subitising *different arrangements* of the same number of objects (2–5), and checking the count



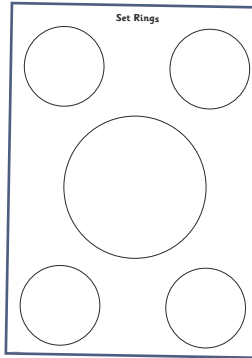
- Connecting numbers to the sets of objects they have counted (counting a set of objects and choosing the correct number)
- Choosing a number from 1 to 5 and making the equivalent set of objects
- Exploring conservation of number (e.g. counting four objects, assigning the number name, moving the objects, but not recounting).

**P** Pupil's Book page 27: Matching Numerals to Sets – 1 to 5

## Optional consolidation and extension possibilities

**Making Sets** Print a copy of PCM 23: Set Rings for each child. Write a numeral (e.g. 5) inside the largest ring on each, or use the small numerals from PCM 29.

Distribute the PCM and a collection of objects/manipulatives to each child. The children place that amount of objects/manipulatives in the smaller rings. They can use different colours/different objects to make up the full amount (e.g. two erasers and three crayons).



**Forming Groups** (Integration with PE) You will need the following:

- large numerals from PCM 8 and PCM 21
- maths language cards (number words *one, two, three, four, five*)
- one copy of PCM 24: Sets of 2, 3, 4, 5.

Take the children to the PE hall. Hold up a

'representation of a number' (e.g. a set of five objects) and call out the number or clap that number of times. The children form groups of this amount. Any 'left over' children should try to form a group (e.g. 5) or they are out!

**Giant Steps and Baby Steps** (Integration with PE)

The children all stand at the end of the PE hall in a horizontal line. You stand at the top of the hall, with your back to them. Call out:

- Everyone take two giant steps forwards.
- Anyone who is wearing red/is wearing trainers/has long hair, etc., take three baby steps forwards.
- Anyone who has short hair, take one baby step backwards.

Continue along these lines until one child reaches you.

**Tip:** Take a quick look behind you every now and then to make sure the instructions are being followed.

**Home/School Links Book** Page 14 can be completed any time after this lesson.

### Days 4 and 5, Lesson 3

## Ordinality of Number

### Focus of learning (with Elements)

- Represents quantities, order and labels by numerals (R)
- Recognises the use of ordinal numbers first, second, third, last in everyday life contexts (U&C)
- Orders and distinguishes between sets without counting (subitising) (R)
- Orders numerals up to at least 5 (U&C)
- Orders sets of objects according to their quantity, up to at least 5 (A&PS)

### Learning experiences

- D** Toolkit: Number Path Flip Chart  
**MAM Routine: Reason & Respond**
- C** Concrete activity: Class Clothes Line
- C** Concrete activity: Ordering Numbers and Sets
- P** Pupil's Book page 28: Ordinality of Number

### Equipment

- Manipulatives for counting, such as bears, counters, beads, links, cubes, 2-D and 3-D shapes, collections of objects and objects on the groups' tables
- Class clothes line and numerals 1–5
- PCMs 9, 22

### Maths language

- first, second, third, informal use of: fourth, fifth

## Warm-up



### D Toolkit: Number Path Flip Chart

#### MAM Routine: Reason & Respond

Begin by asking the children to chant the numbers 1 to 10, showing each number with their fingers.

This is an opportunity to assess the children's counting skills:

- Can they count in sequence?
- Can they isolate individual numbers and name the number that comes before and after?
- Can they identify a missing number?

Next, display the interactive number path flip chart, focusing on the numbers 1 to 5. Ask:

- Can you name each number? (Some children may be able to do this.)
- Which number comes after/before ... (e.g. 4)?
- Which number comes in-between 3 and 5? How do you know?

Hide a number (e.g. 6) and ask:

- What number is missing? How do you know?



- What number comes before/after the missing number?
- Which number would you prefer: 4 or 5? Why?

### C Concrete activity: Class Clothes Line

Bring five children up beside you. Ask a child to take the numerals 1, 2, 3, 4 and 5 off the class clothes line, and assign the correct numeral to each child (from left to right). Ask:

- How did you know how to put the numbers in the right order? (1, 2, 3, 4, 5)
- Which number is the biggest/the smallest/in-between ...?
- Which number comes before/after/in-between ...?

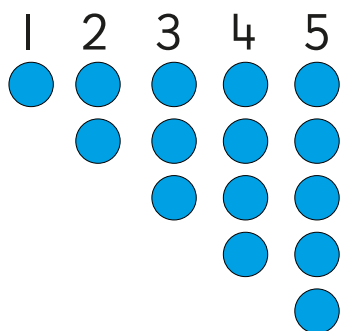
The five children mix themselves up and the other children then reorder them. Ask:

- Who comes first?
- Who comes second?
- Who comes third? (Add fourth and fifth at your own discretion.)

## Main event

### C Concrete activity: Ordering Numbers and Sets

Distribute manipulatives/collections of objects and copies of the small numerals to each group. Use PCM 9: Numerals 1, 2 and 3 (Small); and PCM 22: Numerals 4 and 5 (Small). The children make sets of 1, 2, 3, 4 and 5, and assign the correct numeral to each set. They might like to set out the five numerals in a horizontal line (from left to right). They could then line up the correct amount of objects (e.g. counters) *below* each number.



Ask:

- Can you put the numbers and sets in order?
- Which set comes first/second/third/fourth/last (fifth)?
- Which set is first, in-between .../last/second/third?
- Which set is the biggest/smallest?

The children subitise the amounts and then check by counting.

### Let's deepen

Some children could set out the five numerals in a vertical line and align the correct amounts.

### Let's deepen

**Think-Pair-Share:** Child A takes an assortment of objects and makes sets of 1, 2, 3, 4 and 5 objects. Child B assigns the numerals and put the sets in order. The pair then tell the rest of the group what they have done. Ask:

- Which number/set would you prefer? Why? (This set has one more/one less.)
- This set has 3 bears. This set has 4 bears. How many more bears are there in this set of 4? Is that why you would prefer it?
- Can you line up the two sets and check which set has *one more* object?
- This set has 4 counters/circles. This set has 5 counters/circles. How many more counters/circles are there in this set of 5? Is that why you would prefer it?
- Can you line up the two sets and check which set has *one more* object?



The children arrange the sets in order and assign the correct numerals (so that *one more* item can be clearly seen in each set).

The children carry on using items on their table (pencils, crayons, erasers, copies, etc.) to make sets, assign numerals and order the sets.

**P** Pupil's Book page 28: Ordinality of Number



## Optional consolidation and extension possibilities

**Numbers Before and After** Using the Unit 5 Let's Strengthen PCM, the children place small numerals in the 'before' and 'after' boxes. They can add the correct amount of objects as well.

**Number Track/Hopscotch** (Integration with PE) The children hop/jump along a number track or hopscotch grid in the PE hall, while counting out 1–10. Ask them to stop on a certain number (e.g. 4). Tell them then to move/hop one step.

**Races** (Integration with PE) Set up different races for the children (e.g. sprint, three-legged race, egg-and-

spoon race). At first hand, they will get to experience who comes first, second and third. Extend to fourth and fifth, depending on the class's ability.

**Small World** The children set up their own mini races, using toy horses or cars. (If using horses, give the horses interesting names.) Which horse/car comes first, second, third?

**STEM** The children use building bricks or other blocks to build up a set of stairs in increments of one. They are given 15 blocks to make the stairs.

### Day 6, Lesson 4

## Recording Numbers

### Focus of learning (with Elements)

- Represents numbers, using informal symbols and begins to record such numbers (C)
- Discusses, draws and writes representations of numbers 1–5, using manipulatives (C)

### Learning experiences

- D** Digital activity: Name That Number! **MAM Routines: Quick Images, with Reason & Respond**
- D** Digital activities: Tally Marks (A) & (B) **MAM Routines: Quick Images; Reason & Respond**
- C** Concrete activity: Maths Stations
- P** Pupil's Book page 29: Recording Numbers

### Equipment

- Links
- Manipulatives for counting, such as bears, counters, beads, cubes, 2-D and 3-D shapes, collections of objects and objects on the groups' tables
- Sand area
- Tactile numerals in Pupil's Book

### Maths language

- There is no new maths language for this lesson.

## Warm-up

- D** **Digital activity: Name That Number!** **MAM Routines: Quick Images, with Reason & Respond**

Assess the children's recognition of each number. Click to briefly reveal and then



hide each image. The children guess which number they see and explain *why* they thought it was that number (e.g. 'It had a straight hat' for number 5). They will also see quick images of sets of 1, 2, 3, 4 and 5 objects. Ask them to subitise the amount each time.



**D Digital activities: Tally Marks (A) & (B)**  
**MAM Routines: Quick Images; Reason & Respond**

Play the Tally Marks (A) slideshow, which explores the use of tally marks to represent amounts. Click to briefly reveal and then hide each image. Ask:

- How many tally marks are there?

- How many more tally marks are there in ... (e.g. showing 3 and then 4 marks)?
- How many fewer/less are there in ...?

Play the Tally Marks (B) flipcards activity, which shows various objects. Ask the children how many tally marks represent each object, then click to flip the card and reveal the answer.

## Main event

**C Concrete activity: Maths Stations**

Set up Maths Stations for making numerals.

Before commencing the activities the children could trace over the tactile numerals 1 to 5 in their Pupil's Book. Can they name each number?

Group 1 – Sand area: The children trace the numerals 1, 2, 3, 4 and 5 in the sand. Afterwards, ask:

- Can you use any items in the sand area to *draw* numerals in the sand?
- Can you make raised numerals with the sand?

Group 2 – Links: Ask the children to explore how many different ways they can make the numerals with links.

Group 3 – Representing sets: Distribute manipulatives/collections of objects to each child.

Using paper and crayons, the children make and draw representations of sets. For example, if they make a set of four circles, they draw four circles.

Groups 4 and 5 – Tally marks: Distribute manipulatives/collections of objects to each child. The children count out sets of 1, 2, 3, 4 and 5. Using a pencil, they make the corresponding tally marks on paper.

**P Pupil's Book page 29:  
Recording Numbers**



## Optional consolidation and extension possibilities

**Musical Chairs** (Integration with PE) In the PE hall, set up enough *groups* of four or five chairs (or hula hoops, beanbags, or small mats on the floor) for the whole class. Each child sits down on their 'chair'. When you play some music, they get up and dance around their group of chairs. Stop the music and take away a chair (e.g. one chair from one group). Ask:

- How many chairs do we have now?
- Are there enough chairs for each child? (No.)

Continue until somebody wins the game.

**Dotted Numerals 4 and 5** Using PCM 25: Dotted Numerals 4–5, the children trace over the numerals.

**Body Numerals** (Integration with PE) Ask the children if they can make the numeral 4 or 5 with two fingers/arms or with a partner. Can they make a giant numeral 5 in a group?

**Maths Journals** The children make tally marks in response to either fingers, objects or a numeral being held up. Carry out these activities, depending on the level:

- Hold up, for example, 3 fingers (the children make 3 tally marks). If appropriate for their level, the children write 3.
- Hold up 4 objects.
- Hold up the numeral 5.

### Days 7 and 8, Lesson 5

## Composition of Number – 1 to 5

### Focus of learning (with Elements)

- Explores various arrangements (e.g. on number frames) of manipulatives to prompt different mental images of numbers up to 5, while developing a sense of each number (R)
- Partitions sets of two or more objects (U&C)

## Learning experiences

- D** Toolkit: Sorting Circles
- D** Digital activity: Composition of Number – Chicks **MAM Routine: Reason & Respond**
- C** Concrete activities: Combining and Partitioning
- P** Pupil's Book page 30: Composition of Number – 1 to 5

## Equipment

- Manipulatives for counting, such as bears, beads, links, cubes, 2-D and 3-D shapes, collections of objects and objects on the groups' tables
- Dominoes with a total of one, two, three and four dots (i.e. combining both sides of the domino)
- Counters
- Different-coloured clothes pegs
- Four cards or bowls, each marked with a different number from 2 to 5
- Different-coloured cups (two per pair)
- PCMs 9, 22

## Maths language

- There is no new maths language in this lesson.

## Warm-up

**D Toolkit: Sorting Circles**

Open the Manipulatives e-Toolkit and select the Sorting Circles tool. Display two circles on the workspace. Using the selection of draggable items, explore composition of number by sorting up to five items by colour, shape and size.

Encourage the children to partition the items into the two circles using their own criteria. For example, two small blue bears and two large blue bears. Or, two big

leaves and one small leaf, or one green leaf and two brown leaves.

**D Digital activity: Composition of Number – Chicks MAM Routine: Reason & Respond**

Play the interactive flipcards activity. For each card, the children see an empty box with a numeral marked on it and a number of chicks outside the box (e.g. the numeral 3 on the box, and two chicks outside the box). Can they tell you how many chicks are still inside the box? Flip the card to reveal the answer.

## Main event

**C Concrete activities: Combining and Partitioning**

Assess the children's understanding of the fact that numbers above 1 are made up of smaller numbers. Do they comprehend that, for example, number 3 can be broken down into 2 and 1?



**Activity 1:** Distribute a set of manipulatives that can be sorted in two ways (e.g. by size and colour) to each child. The children:

- Make sets of 2, 3, 4, and 5 objects.
- Break up/split each set of 2, 3, 4 and 5 objects and explain what they are doing. (e.g. 'I have made a set of 2 and a set of 3.')
- Combine the sets again and explain what they have done. (e.g. 'I have put the set of 2 and the set of 3 back together. I now have a set of 5.')

**Activity 2:** Distribute dominoes with a total of one, two, three, four and five dots, and small numerals

from PCM 9 and PCM 22 to each child. The children assign the correct numeral to each domino.

**Activity 3:** Introduce a five frame to the children and ask them to count the squares from left to right. Tell them to use their counters to make different compositions of 2, 3, 4 and 5 (e.g. 2 yellow counters and 3 red counters).

**Activity 4:** To each child, distribute different-coloured clothes pegs, and four cards or bowls, each marked with a different number from 2 to 5. The children use the clothes pegs to make different compositions of number (e.g. 2 red pegs and 3 blue pegs on the card marked with 5, or 2 red counters and 3 blue counters in the bowl marked with 5).

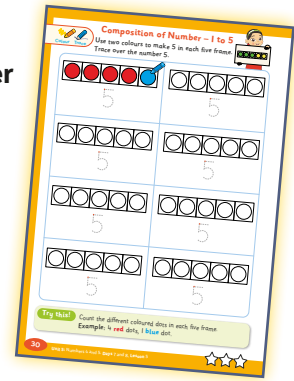
## Let's deepen

Some children might be able to record what they are doing by using tally marks or by drawing pictures of their sets (combined and partitioned).

## Let's deepen

**Counters Under Cups:** Distribute four counters and two different-coloured cups to each pair. Child A closes their eyes while Child B hides the four counters under the two cups. They can 'divide' the counters in any way they wish (e.g. 3 under one cup and 1 under the other, or 2 under each cup). Child A tries to guess the composition. Each pair then shares the composition they have made with the group. Alternatively you could distribute five counters.

**P Pupil's Book page 30:**  
**Composition of Number**  
– 1 to 5



## Optional consolidation and extension possibilities

**Home/School Links Book** Page 15 can be completed any time after this lesson.

**Domino Number Bonds** Give each child small numerals from PCM 9 and PCM 22, and dominoes with a total of one, two, three, four and five dots. The children place the numerals and dominoes on the Unit 5 Let's Deepen PCM to make number bonds for numbers 2–5.

**Make a Number** (Integration with PE) Each child receives a paper plate. Approximately one-quarter of the plates are marked with one dot, one-quarter are marked with two dots, one-quarter are marked with three dots, and one-quarter are marked with four dots. The dots are marked in different arrangements, but each plate only has dots of one colour. Call out a number from 2 to 5. For example, call out the number 4. The children move around and compare plates. The first two children to call out that they have made 4 (by their combined total) win the game.

## Day 9, Lesson 6

## Equivalent and Non-equivalent Sets – 1 to 5

## Focus of learning (with Elements)

- Identifies, recognises and estimates 'more' or 'less' in the real-life contexts and/or play (R)
- Accurately counts and compares equivalent and non-equivalent sets from 1 up to at least 5, and establishes which set has more or less (R)

## Learning experiences

- D** Digital activity: Five-a-Side Football  
**MAM Routine: Reason & Respond**
- C** Concrete activities: Comparing Equivalent and Non-equivalent Sets
- P** Pupil's Book page 31: Equivalent and Non-equivalent Sets – 1 to 5

## Equipment

- Manipulatives for counting, such as bears, counters, beads, links, cubes, 2-D and 3-D shapes, collections of objects and objects on the groups' tables
- Number shapes 1–5
- Cuisenaire rods

## Maths language

- There is no new maths language for this lesson.

## Warm-up



### D Digital activity: Five-a-Side Football

#### MAM Routine: Reason & Respond

Display the interactive activity, which features two teams of five players. Drag and drop to position the players on/off the pitch. Ask:

- How many players are there on this team?
- If one player gets sent off, how many will we have on this team? (Drag and drop one player to the sidelines.)

- Which team has more/less players now?
- If this player comes back onto the pitch, how many players will we have on this team?

Continue asking similar questions.

## Main event

### C Concrete activities: Comparing Equivalent and Non-equivalent Sets

Assess the children's understanding of the language involved in comparing equivalent and non-equivalent sets. Can they use the language themselves and can they carry out instructions when this language is being used?



**Activity 1:** Distribute manipulatives to each child. The children:

- Count 1, 2, 3, 4 and 5 objects (the same objects or different objects).
- Make two equivalent sets, then add one more object to one set and explain the difference.
- Make two equivalent sets, then take away one object from one set and explain the difference.
- Make two sets, aligning the objects in the two sets to find out which set has more/less objects.

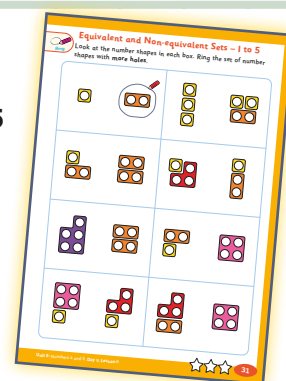
**Activity 2:** Distribute number shapes 1–5 to each child. Initially, the children count the holes on each of the shapes, assign number names and put them in order of 1–5. When the five number shapes are in order, the children could explain how (starting at 1) each piece increases by one more. They then explore the number shapes by adding two pieces together (e.g. 1 and 2) and comparing them to the 4.

**Activity 3:** Distribute a set of Cuisenaire rods to each child. Initially, the children examine the rods and may decide that the first white rod/cube is '1'. Working in groups, they will discover that two white rods make one red rod, three white rods make one light green rod, etc. They assign a number name to each rod and put the rods in order of 1–5 by making steps/stairs. When the five rods are in order, starting at '1', the children explain how each rod increases by one more. They explore the rods by aligning two rods together, for example aligning a red rod and a light green rod: What is the difference? (The difference is 1.)

### Let's deepen

The children record the objects in two sets, using tally marks or pictures. They explain how one set has more/less.

### P Pupil's Book page 31: Equivalent and Non-equivalent Sets – 1 to 5



## Optional consolidation and extension possibilities

**More and Less** In the play/water/sand/small-world area, the children explore the concepts of *more* and *less* in terms of length and weight. They could also explore this concept in terms of objects, for example:

- I have less animals/diggers/stones/dinosaurs than you.
- You have more blocks/cubes/zoo animals than me.

**Nature Walk** (Integration with Science) Go on a nature walk and ask the children to be Green Detectives. You might like to bring Monty the Puppet with you! They need to look *very carefully* to see if they can find two non-equivalent sets of: leaves (e.g. a leaf with four leaflets and another leaf with five leaflets), twigs, pieces of bark, stones, pinecones. You could take photographs of their findings.

## Day 10, Lesson 7

## Review and Reflect

## Focus of learning (with Elements)

- Reviews and reflects on learning (U&C)

## Warm-up

Carry out a warm-up activity of your choice from one of the lessons in this unit.

## Main event

Choose from this menu of activity ideas, or choose your own way to best structure this last lesson to suit your needs and the needs of your class.

<b>Let's create!</b>	<b>Let's play!</b>
The children could create their own version of the composition of number (e.g. 3 large feathers and 2 small pinecones to make 5) in the shape of a mandala. Alternatively, they could paint non-equivalent sets (e.g. 3 leaves and 4 flowers).	Play one of the PE suggestions you did not have time to try.
<b>Maths language</b>	<b>Maths strategies and models</b>
Ensure that the children understand and can use the key language when engaging with manipulatives. Use the maths language cards for this unit to revise the key terms. For example: if the image and text are cut apart, can the children match them?	Use the number shapes and/or Cuisenaire rods with any group that did not have the chance to use them. Use the five frame with any group that did not have the chance to use it.
<b>Progress Assessment Booklet</b>	<b>Maths eyes</b>
Complete Questions 15–20 on pages 11–12. Alternatively, these can be left to do as part of a bigger review during the next review week.	If a nature walk was not feasible, bring in examples of equivalent and non-equivalent sets or photographs of leaves, twigs or branches.
<b>Let's strengthen</b>	<b>Let's deepen</b>
Identify children who might benefit from extra practice with some of the key concepts or skills in this unit. Consult the Unit 5 Let's Strengthen Suggestions for Teachers and/or use the Unit 5 Let's Strengthen PCM.	Use the Unit 5 Let's Deepen PCM.

