Reception

Examples to support learning

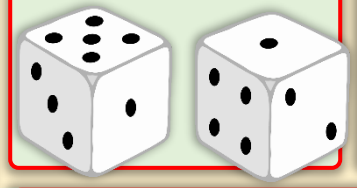
Put objects into five frames and then ten frames to begin to familiarise children with the tens structure of the number system.

Develop the key skills of counting objects including saying the numbers in order and matching one number name to each item.

Say how many there are after counting – for example, "...6, 7, 8. There are 8 balls" – to help children appreciate that the last number of the count indicates the total number of the group. This is the cardinal counting principle.

Prompt children to subitise first when enumerating groups of up to 4 or 5 objects: "I don't think we need to count those. They are in a square shape so there must be 4." Count to check.

Show small quantities in familiar patterns (for example, dice) and random arrangements.



Mathematics 1

Sing counting songs and number rhymes and read stories that involve counting.

Say how many there might be before you count to give a purpose to counting: "I think there are about 8. Shall we count to see?" Count out a smaller number from a larger group: "Give me seven..."

Play games which involve counting. Identify children who have had less prior experience of counting and provide additional opportunities for counting practice.

Knowing when to stop shows that children understand the cardinal principle.

Build counting into everyday routines such as register time, tidying up, lining up or counting out pieces of fruit at snack time.

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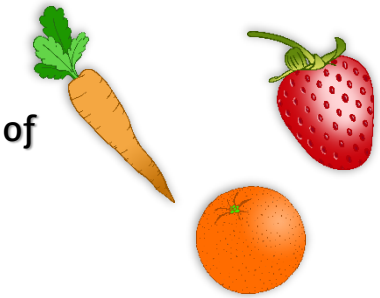
Examples to support learning

Distribute items evenly, for example: “Put 3 in each bag,” or give the same number of pieces of fruit to each child. Make deliberate mistakes to provoke discussion.



Play games which involve quickly revealing and hiding numbers of objects.

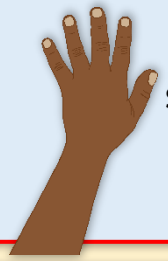
Provide collections to compare, starting with a very different number of things. Include more small things and fewer large things, spread them out and bunch them up, to draw attention to the number not the size of things or the space they take up. Include groups where the number of items is the same.

Provide images such as number tracks, calendars and hundred squares indoors and out, including painted on the ground, so children become familiar with two-digit numbers and can start to spot patterns within them.

Use vocabulary: ‘more than’, ‘less than’, ‘fewer’, ‘the same as’, ‘equal to’. Encourage children to use these words as well.

Mathematics 2

Discuss the different ways children might record quantities (for example, scores in games), such as tallies, dots and using numeral cards.



Encourage children to show a number of fingers ‘all at once’, without counting.

Count verbally beyond 20, pausing at each multiple of 10 to draw out the structure, for instance when playing hide and seek, or to time children getting ready.

Play card games such as snap or matching pairs with cards where some have numerals, and some have dot arrangements.

Display numerals in order alongside dot quantities or tens frame arrangements.

2

1

Reception

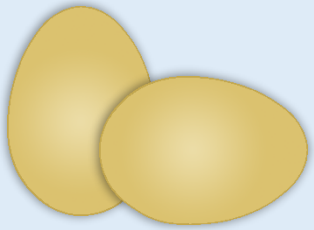
Examples to support learning

Help children to learn number bonds through lots of hands-on experiences of partitioning and combining numbers in different contexts and seeing subitising patterns.

Tell a story about a character distributing snacks unfairly and invite children to make sure everyone has the same.

Have a sustained focus on each number to and within 5. Make visual and practical displays in the classroom showing the different ways of making numbers to 5 so that children can refer to these.

Model conceptual subitising: "Well, there are three here and three here, so there must be six." Emphasise the parts within the whole: "There were 8 eggs in the incubator. Two have hatched and 6 have not yet hatched."



Play hiding games with a number of objects in a box, under a cloth, in a tent, in a cave, etc.: "6 went in the tent and 3 came out. I wonder how many are still in there?"

Mathematics 3

Plan games which involve partitioning and recombining sets. For example, throw 5 beanbags, aiming for a hoop. How many go in and how many don't?

Provide a range of visual models of numbers: for example, six as double three on dice, or the fingers on one hand and one more, or as four and two with ten frame images.

Focus on composition of 2, 3, 4 and 5 before moving onto larger numbers.

Make predictions about what the outcome will be in stories, rhymes and songs if one is added, or if one is taken away.

Provide 'staircase' patterns which show that the next counting number includes the previous number plus one.

Reception

Examples to support learning

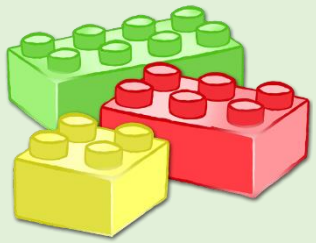
Intentionally give children the wrong number of things. For example: ask each child to plant 4 seeds then give them 1, 2 or 3. "I've only got 1 seed, I need 3 more."

Spot and use opportunities for children to apply number bonds: "There are 5 of us but only 2 clipboards. How many more do we need?"

Challenge children to copy increasingly complex 2D pictures and patterns with these 3D resources, guided by knowledge of learning trajectories:

"I bet you can't add an arch to that," or "Maybe tomorrow someone will build a staircase."

Provide high-quality pattern and building sets, including pattern blocks, tangrams, building blocks and magnetic construction tiles, as well as found materials.



Make patterns with varying rules (including AB, ABB and ABBC) and objects and invite children to continue the pattern. Make a deliberate mistake and discuss how to fix it.

Mathematics 4

Model comparative language using 'than' and encourage children to use this vocabulary. For example: "This is heavier than that."

Ask children to make and test predictions. "What if we pour the jugful into the teapot? Which holds more?"

Investigate how shapes can be combined to make new shapes: for example, two triangles can be put together to make a square. Encourage children to predict what shapes they will make when paper is folded. Wonder aloud how many ways there are to make a hexagon with pattern blocks. Find 2D shapes within 3D shapes, including through printing or shadow play.

Place objects into a five frame and talk about how many spaces are filled and unfilled.

Teach children to solve a range of jigsaws of increasing challenge.

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