

## Number and Place Value

### Counting to 6, 7 and 8

#### Guidance

Children continue to apply the counting principles when counting to 6, 7 and 8 (forwards and backwards). They can represent 6, 7, and 8 in different ways and can count out the required number of objects from a larger group.

Placing objects onto a 10 frame will support the children to subitise 6, 7, and 8 to see them as 5 and 1, 5 and 2, and 5 and 3.

#### Other Resources

- Days of the Week counting song
- 1, 2 buckle my shoe
- Little Miss Muffet
- The Bad-Tempered Ladybird - Eric Carle
- The Very Busy Spider - Eric Carle

### Prompts for Learning

Note: All the prompts for counting to 5 can be applied to counting to 6, 7, and 8 in addition to these ideas.

Encourage the children to think about where we see 6, 7, and 8 in everyday life and to make collections of 6, 7, and 8 objects in the classroom.

How many legs does the ladybird have? How many spots? Use counters to add 6 spots to the other ladybirds. Can you find more than one way to do it?



How many colours do you see in the rainbow? Can you paint a rainbow with 7 colours? How many colours did you use?

Sort these items into 6, 7 and 8

How else could you show 6, 7, and 8?



### Counting to 9 and 10

#### Guidance

Children continue to apply the counting principles when counting to 9 and 10 (forwards and backwards).

They can represent 9 and 10 in different ways and can count out the required number of objects from a larger group.

Children may notice that the 10 frame is full when there is 10.

They can use 10 frames, fingers and bead strings to subitise 9 and 10

#### Other Resources

- How do Dinosaurs Count to 10? - Yolen & Teague
- Ten Terrible Dinosaurs - Paul Stickland
- Feast for 10 - Cathryn Falwell
- Draw a large hopscotch grid for the children jump along and show them how to play.

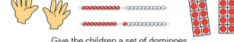
### Prompts for Learning

Note: All the prompts for counting to earlier numbers can be applied to counting to 9 and 10, in addition to these ideas.

Show me 10 fingers. Now show me 9. Did you need to count? Can we count back from 10?

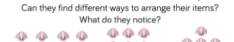
Show me 10 beads on the bead string. Show me 9. Show me 10 cubes on the 10 frame. What do you notice?

Show me 9 cubes. What do you notice? Could you put 9 or 10 buttons on the 10 frame without counting them?



Give the children a set of dominoes. What do they notice about the dominoes? Can they sort the dominoes? How many can they first with 9 spots? With 10 spots?

Ask the children to count out 9 or 10 small objects. Can they find different ways to arrange their items? What do they notice?



## Addition and Subtraction

### Bonds to 10 - 10 frame

#### Guidance

The children explore number bonds to 10 using a 10 frame.

10 frames can be filled in different ways to show the 5-and-a-bit structure and the pair structure.



5-and-a-bit structure pair structure

They may also use different representations such as fingers, number shapes or bead strings to explore the bonds to 10.

#### Other Resources

- Number Bonds Rhyme
- This can be done with finger actions to show the bonds.
- 5 and 5 add up to 10
- 6 and 4 make it again
- 7 and 3 they also do
- Guess what! So do 8 and 2
- 9 and 1, 10 and 0
- Learn them all, you're a number bond hero.

### Prompts for Learning

Ask the children to explore different ways of building 10 on the 10 frames using counters, cubes or any loose parts with 2 distinct groups.



You could also partly fill a 10 frame and ask how many more items are needed to make a whole 10. Encourage the children to use the empty spaces to help them see how many more are needed.

In small groups, provide each child with a number shape 10. How many ways can they build a new 10 on top by combining 2 different number shapes?



Place one of each of the number shapes 1-10 into a feely bag and have one of each on display for the children to see. Ask a child to draw out one shape from the bag. Can they represent this on their 10 frame and see which other number shape they need to collect to make 10?

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## Combining 2 groups

### Guidance

Children begin to combine 2 groups to find how many altogether. They should be given opportunities to do this in many contexts using real objects.

The interactive whiteboard files can be used to create scenes for the children to discuss.

Encourage the children to subitise where possible although they may need to count in ones to find how many altogether.

A part-whole model could be used to show the relationship between the parts and the whole.

### Other Resources

- Board games such as snakes and ladders - Roll 2 dice. How many spaces can you move altogether?
- Quack and Count by Keith Baker
- Animals on board by Stuart Murphy

## Comparing numbers to 10

### Guidance

Children make comparisons by lining items up to compare them directly or by counting each set carefully and comparing their position in the counting order. As the children's sense of number develops so does their knowledge of where each number sits in relation to other numbers.

They understand that when making comparisons a set can have more items, fewer items or the same number of items as another set.

Begin by comparing 2 sets and progress to ordering 3 or more sets.

### Other Resources

- Cockatoos - Quentin Blake
- Mr Magnolia - Quentin Blake

Ask the children to compare pictures from different parts of the stories.

### Prompts for Learning

Note: Continue to embed the vocabulary introduced in the Autumn term: same as more than fewer than.

Ask questions to make comparisons for a real purpose. Are there more children having sandwiches or dinners?

How did you travel to school? Did more people travel by car or walk today? Which book shall we read at the end of the day? Can you use cubes to vote for your favourite?



Ask the children to find all the dominoes with 7 spots? Can they make sets with more than 7 and fewer than 7 spots? Use the dominoes to play Who Has More in pairs.

With the dominoes face down, choose one domino each. How many spots does each domino have? The player with the most spots can collect a point. Can you record your points?

Provide a feely bag filled with different number shapes. Ask the children to work in groups of 3.

Each child takes a number shape from the bag. Can they identify which number they have? Work together to compare and order the shapes. Who has the largest number? Who has the smallest? Does anyone have the same?

## Vocabulary

**number sentence**

how many there are altogether.

**number bonds to 10**

all of the pairs of numbers which add to 10 (3+7, 4+6)

**number bonds within 10**

all of the pairs numbers which add to each number up to 10 (e.g. 2+3= 5, 1+4=5)

**subitise**

saying the number of objects in a small group (up to 8) without counting.

## Shape and Space

### Spatial awareness

#### Guidance

Children hear and begin to use positional language to describe how items are positioned in relation to other items.

They begin to represent real places they have visited or places in stories with their drawings, maps or models. They build life-sized journeys outdoors and travel through them, exploring them from different perspectives.

#### Other Resources

- We're Going on a Bear Hunt - Michael Rosen
- Rosie's Walk - Pat Hutchins
- Little Red Riding Hood - Traditional Tale
- Mrs Wishy-Washy - Joy Cowling
- Me on a Map - Joan Sweeney

Song: In and Out the Dusty Bluebells

### Prompts for Learning

Positional language can be modelled and practised on a daily basis with the children through their play. Tidy-up time in particular is full of opportunities to use positional language for a real purpose. Eg. Put the bricks into the basket. Sit teddy on the shelf next to the books.



Many stories focus on positional language or journeys. Encourage the children to use actions to represent the language such as over, under, around, through as you read. Provide opportunities to sequence familiar journeys by drawing pictures or maps. Children could also build models of the route and the places passed or visited along the way.



Outside the children can build large-scale representations of places and journeys.

## 3-D Shapes

### Guidance

Children will naturally explore 3-D shapes through their block play and modelling. They should be introduced to the names of the shapes and be given opportunities to explore similarities and differences between them and to sort them according to what they notice.

Prompt them to consider which shapes are good for stacking, which will roll and why that is. They should be given opportunities to construct their own 3-D shapes in different ways.

### Other Resources

Construction sets which can be used to build models of 3-D shapes.



A variety of everyday objects in different shapes and sizes such as boxes, tubes, balls etc.

### Prompts for Learning

Show the children a collection of 3-D shapes. Choose one of the shapes. Ask the children to tell their partner as many things as they can about the shape. Can they find another shape like this? Can they find a different shape? How is it different?



Sort the shapes into groups.

Ask: 'Why did you put these shapes together?' How is this set different to this one? Is there another way we could sort them?'

Build a tower. Which shapes are the best for stacking? Which shapes work best on the top? Are there any shapes which are not good for building? Why?



Hold up a shape. Can you find any items in the classroom which have the same shape as this? Why is it the same?

## 2-D Shapes

### Guidance

Children are encouraged to see 2-D shapes on the flat faces of 3-D shapes. They begin to name some common shapes such as circles, triangles, and rectangles including squares. It is important to show shapes in different orientations.

Provide opportunities to compare 2-D shapes and say what is the same and what is different. Encourage them to explore how shapes can be combined or partitioned to make new shapes.

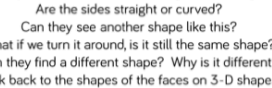
### Other Resources

Tangrams and Pattern Blocks, although not technically 2-D, allow the children opportunities to explore how shapes can be combined or partitioned to make new shapes and patterns.

The shape book series - Mac Barnett and Jon Klassen

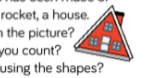
### Prompts for Learning

Show the children a variety of 2-D shapes in different sizes and orientations on the interactive whiteboard. Choose one of the shapes. Ask the children to tell you what they notice. Are the sides straight or curved? Can they see another shape like this? What if we turn it around, is it still the same shape? Can they find a different shape? Why is it different? Link back to the shapes of the faces on 3-D shapes.



Show the children a picture which has been made of different shapes. Eg. a boat, a rocket, a house.

What shapes can you see in the picture? How many triangles can you count? Can you make your own picture using the shapes?



Go on a shape hunt. Where can you see 2-D shapes on the surface of everyday objects?

