## Standard 4 Overview

We hope you find these Pre-Key Stage Standard suggestions useful. Please be aware that the suggestions and resources mentioned are potential ways to check understanding relating to the relevant strands. Other resources may be needed in addition to those suggested.

## Strand A

The pupil can read and write numbers in numerals from 0 to 9.

- Adult Teaching Suggestions
- Number Formation Rhymes PowerPoint
- Number Hunt Activity Sheet
- Number Formation Activity Sheet
- Digit Cards Resource Pack


## Strand B

The pupil can demonstrate an understanding of the mathematical symbols of add, subtract and equal to.

- Adult Teaching Suggestions - Equal or Not? Interactive PowerPoint
- Maths Sign Poster
- Sort the Symbols Interactive PowerPoint
- Maths Symbols Visual Cue Posters
- Maths Signs Poster


## Strand C

The pupil can solve number problems involving the addition and subtraction of single-digit numbers up to 10.

- Adult Teaching Suggestions - Addition to 10 Challenge Cards
- Adding On Resource Pack
- Subtraction from 10 Challenge Cards
- Taking Away Resource Pack
- Safari Addition and Subtraction to 10 Challenge Cards


## Strand D

The pupil can demonstrate an understanding of the composition of numbers to 5 and a developing ability to recall number bonds to and within 5 (e.g. $2+2=4$ and $3+1=4$ ).

- Adult Teaching Suggestions
- Create Your Own Addition

Number Sentence

- Number Bonds to 3 Sentence Cards
- Number Bonds to 3 Number Shapes Activity Sheet
- Number Bonds to 5 Resource Pack


## Strand E

The pupil can demonstrate an understanding of the commutative law (e.g. $3+2=5$, therefore $2+3=5$ ).

- Adult Teaching Suggestions
- Match It Addition Activity Cards
- Number Sentence Strips
- Domino Dots Activity


## Strand F

The pupil can demonstrate an understanding of inverse relationships involving addition and subtraction (e.g. if $3+2=5$, then $5-2=3$ ).

- Adult Teaching Suggestions
- Fact Family Street Activity
- Inverse Number Sentence Strips
- Part Part Whole Activity Mat


## Strand G

The pupil can demonstrate an understanding that the total number of objects changes when objects are added or taken away.

- Adult Teaching Suggestions - Addition and Subtraction Keyword Cards
- Same or Different Keyword Cards


## Strand H

The pupil can demonstrate an understanding that the number of objects remains the same when they are rearranged, providing nothing has been added or taken away.

- Adult Teaching Suggestions
- Arrangement Cards
- Number Cards 0-10


## Strand I

The pupil can count to 20 , demonstrating that the next number in the count is one more and the previous number is one less.

- Adult Teaching Suggestions
- Counting Scenes to 20 PowerPoint
- Ten in a Bed Counting PowerPoint
- Counting to 20 Games Pack
- Twenty Green Bottles PowerPoint


## Strand J

The pupil can recognise some common 2D shapes.

- Adult Teaching Suggestions - 2D Shapre Resource Pack
- Shape Hunt Worksheet


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\{1\}
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$$
\{3
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$$
\{5
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$$
\{6
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$$
\{8
$$



## 4

## 2




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## 6




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## $9$




(20)
30




(4)
昷

$$
y
$$



## Number Hunt

Find these numbers:
$\square 0$



## Number Hunt

## Find these numbers:


O2

$\square{ }_{4}$

$\square 7$



$$
\{1\}
$$



$$
\{3
$$



$$
\{5
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$$
\{6
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$$
\{8
$$




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## $9$




$9$
(20)
30




(4)
昷

$$
y
$$



## Number Formation 0-10

Can you trace the numbers?


## Adult Teaching Suggestions

We hope you find these Pre-Key Stage Standard suggestions useful. Please be aware that the suggestions and resources mentioned are potential ways to check understanding relating to the relevant strands. Other resources may be needed in addition to those suggested.

## Strand A

The pupil can read and write numbers in numerals from 0 to 9.

## Task

## Activity One - Reading Numbers

Develop number recognition skills by encouraging pupils to recognise numbers in a range of different contexts, using a multisensory approach. Go on a number hunt around your setting, - this could be indoors or outdoors using the Number Hunt Activity Sheet. Ask pupils to use a tablet device to take photographs of the numbers they recognise. Print the photographs and ask the pupils to order them to make their own number line. Hide a range
 of digit cards for pupils to find, name and sequence in your setting or outdoor area using a selection from the Digit Cards Resource Pack.

## Activity Two - Writing Numbers

Develop numeral formation by encouraging pupils to overwrite numbers from 0-9 using a variety of different media, sensory materials and tools. Tools may include sand, cornflour, shaving foam, water, paintbrushes, pipe cleaners, feathers and lollipop sticks. Use the Number Formation Rhymes PowerPoint to support. Teach formation of numbers in small steps until pupils are secure, for example from 0 to 4 and then from 5 to 9. Scaffold
 number formation using the Number Formation Activity Sheet before pupils write numbers independently.

## Activity Three- Mixed Numbers

Once pupils are secure with reading and writing numbers in order, progress to pupils reading and writing mixed numbers in a range of contexts. Set out a range of digit cards from the Digit Cards Resource Pack and see if pupils can select and write the numbers on command. You could also hide these in a large tuff spot or in a
 sensory tray for pupils to find.

## BSL Maths Word Mat




take away


## BSL Maths Word Mat



## Adult Teaching Suggestions

We hope you find these Pre-Key Stage Standard suggestions useful. Please be aware that the suggestions and resources mentioned are potential ways to check understanding relating to the relevant strands. Other resources may be needed in addition to those suggested.

## Strand B

The pupil can demonstrate an understanding of the mathematical symbols of add, subtract and equal to.

## Task

## Activity One - Add and Subtract

Set up small groups of ten objects using sensory materials, counting apparatus, outdoor materials and topic items. Add one or more objects to each group and see if pupils can recognise when objects have been added. Repeat the activity but instead of adding more, this time, take away one or more objects from the group and see if pupils can recognise when the objects have been taken away. Encourage pupils to verbalise what has happened to the groups. Use the Maths Sign Poster to see if pupils can
 select the appropriate symbol from a choice of two.

It may be helpful to teach pupils a visual cue for 'add', 'subtract' and 'equal to' using the Maths Symbols Visual Cue Posters to aid their understanding.

## Activity Two - Is It Equal or Not?

Support pupils to recognise whether groups are equal or not equal by using the Equal or Not? Interactive PowerPoint. If the groups shown on the PowerPoint are not equal, pupils can then select and drag objects to the correct groups to make them equal.


## Activity Three - Add, Subtract and Equal To

Use the Sort the Symbols Interactive PowerPoint for pupils to sort and arrange the correct mathematical symbols. You could also use the Maths Signs Poster to replicate this activity, sorting each symbol into the corresponding hoop, in the classroom or on a larger scale in the outdoor environment.


## ${ }_{2}^{1} 3^{3}$ Create Your Own Addition Number Sentence ${ }_{2}^{3}$ <br>  <br> 

1

## Number Shape Addition to 10

Use the number shapes to work out the answers to each addition question.

$\square$

## $+$ <br> 

$=$

$\square$

$\square$

$\square$


## $\square$


4

$\square$


$\because=$

If you had 2 dogs and 4 cats, how many animals would you have altogether?


If you had 5 milkshakes and 2 fizzy drinks, how many drinks do you have in total?


If you had 3 squares of chocolate and 2 chocolate fingers, how many pieces of chocolate would you

If there are 4 blackbirds and 1 robin in a garden, how many birds are in the garden? have altogether?


If you had 3 cherry cakes and 3 plain cakes, how many cakes would you have?

If you had 2 red pencils and 5 blue pencils, how many pencils would you have altogether?
$/ / / / / / /$

If you had 5 hotdogs and 3 portions of chips, how many food portions would you have?


If you had 6 blue dice and 4 red dice, how many dice would you have in total?


If you had 5 apples and 5 pears, how many pieces of fruit would you have?


If you had 1 boiled egg and 9 fried eggs, how many eggs would you have in total? how many dinosaurs could you see altogether?


## Safari Themed Challenge Cards

1. 2 lions run through the grassland to join 3 more lions.
How many are there now?

2. 8 zebra are in the grassland but 2 leave to find water.
How many are in the grassland now?

3. 9 meerkats are foraging for food.

An eagle flies over and 5 run away. How many were left behind?

5. 5 giraffes are by a tree when 5 more come to join them.
How many giraffes are there now?


## Answers

1. 5 lions
2. 7 elephants
3. 6 zebras
4. 4 meerkats
5. 10 giraffes
6. 3 lions

There are 5 dogs but 3 run away. How many are there now?


I collect 5 pencils but 2 of them are broken. How many are not broken?


There are 6 trees but 3 lose their leaves. How many keep their leaves?


I have 8 footballs but 3 roll away. How many are left?


I buy 7 cakes and I eat 4 . How many are left?


I take 9 books to school and leave 4 of them in class. How many do I take home?


I collect 10 stickers. I give 5 to a friend. How many do I have left?


I have 10 computer games. I play 3 games on Monday. How many do I still have to play?


# Building Brick Subtraction 

Can you subtract the bumps on the building bricks?

$\square$

$\square$


## Building Brick Subtraction

Can you subtract the bumps on the building bricks?


## Dinosaur Subtraction

Write the answers in the circles.


## Dinosaur Subtraction Answers

Write the answers in the circles.


## Dinosaur Subtraction

Write the answers in the circles.


## Dinosaur Subtraction Answers

Write the answers in the circles.






Subtraction From 10


Subtraction From 10


## Adult Teaching Suggestions

We hope you find these Pre-Key Stage Standard suggestions useful. Please be aware that the suggestions and resources mentioned are potential ways to check understanding relating to the relevant strands. Other resources may be needed in addition to those suggested.

## Strand C

## The pupil can solve number problems involving the addition and subtraction of single-digit

 numbers up to $\mathbf{1 0}$. For all activities detailed here, pupils should have access to a range of apparatus, including number shapes, pictorial supports, maths objects and any other available maths manipulatives.
## Task

## Activity One - Adding On

Encourage pupils to tell a range of number stories involving the addition of single-digit numbers up to five. Model and demonstrate a range of addition stories beforehand, e.g. 'Two cars fill up with petrol at a garage. Three more cars also arrive and fill up. How many cars are there at the garage altogether?' Progress to ten, telling stories and using a range of apparatus and real-life objects.


Practise the addition of single digits using a variety of resources in the Adding On Resource Pack.

## Activity Two - Taking Away

Encourage pupils to tell a range of number stories involving the subtraction of single-digit numbers from five, then progress to ten using a range of apparatus and real-life objects, e.g. 'Eight pupils go swimming. Two pupils get out of the pool early. How many are still in the pool?' (Model and demonstrate a range of subtraction stories before pupils tell their own.)


Practise the subtraction of single digits using the Taking Away Resource Pack.

## Activity Three - Number Problems

Use the Addition to 10 Challenge Cards to support pupils to solve a variety of addition problems.

Use the Subtraction from 10 Challenge Cards to support pupils to solve a variety of subtraction problems.

Use the Safari Addition and Subtraction to 10 Challenge Cards to present pupils with a range of mixed problems
 involving addition and subtraction within ten. Encourage pupils to identify which operation is required to solve the problems.

## ${ }_{2}^{1} 3^{3}$ Create Your Own Addition Number Sentence ${ }_{2}^{3}$ <br>  <br> 

1


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## $0+4=$

## $0+5=$

$$
4+0=
$$

## 5+0=

$$
1+4=
$$

$$
4+1=
$$

$$
2+2=
$$

$3+2=$

## Number Bonds to 5

Can you find the missing number bond to make 5 in the robot's tummy?


Number Bonds to 5


Number Bonds to 5


Number Bonds to 5


Number Bonds to Five Using Number Shapes

How many ways can you make 5? Write your addition statement beside each representation.

E.g.


Number Bonds to Five Using Number Shapes

How many ways can you make 5? Write your addition statement beside each representation.


## $1+2=$

## 2+1 $=$

$0+3=$
3+0=

Number Bonds to Three Using Number Shapes

How many ways can you make 3? Write your addition statement beside each representation.
E.g.


Number Bonds to Three Using Number Shapes

How many ways can you make 3? Write your addition statement beside each representation.
E.g.


## Adult Teaching Suggestions

We hope you find these Pre-Key Stage Standard suggestions useful. Please be aware that the suggestions and resources mentioned are potential ways to check understanding relating to the relevant strands. Other resources may be needed in addition to those suggested.

## Strand D

The pupil can demonstrate an understanding of the composition of numbers to 5 and a developing ability to recall number bonds to and within 5 (e.g. $2+2=4$ and $3+1=4$ ).

## Task

## Activity One - Let's Combine Numbers

Using a group of five objects, counters, natural objects or other relevant mathematical apparatus, model how to separate the five objects into two groups. Model how to write a simple number sentence to show a number bond for five. Use the Create Your Own Addition Number Sentence activity sheet to support and show how to
 write number bonds visually.

## Activity Two - Making Three

Use a variety of apparatus, including number shapes, pictorial supports and maths objects to support pupils to make a total of three. Ensure that pupils can explain the combinations they have made and the number bonds using apparatus and supports.

Use the Number Bonds to 3 Sentence Cards and the
 Number Bonds to 3 Number Shapes Activity Sheet.

## Activity Three - Making Five

Once pupils are secure in making three in different combinations, progress to using a variety of apparatus, including number shapes, pictorial supports and maths objects to support pupils to make a total of five. Ensure that pupils can explain the combination they have made and the number bonds using apparatus and supports. Use
 the Number Bonds to 5 Resource Pack to support.

$1+3$

## 0 <br> $+$ <br> 5

$3+3$

$$
44
$$



$$
5+0+0
$$



2


1



9
$+$
1
$6+2$
$3+4$

$4+3$

5
$+$
$3+5$

$$
3+4
$$

## $1+30+5$

$3+14+2$

$$
\begin{array}{l|l|l|l}
1+2+1 & 6+2 & 3+4
\end{array}
$$

$2+64+5$
$4+3$
$5+3$
$3+53+4$





## Adult Teaching Suggestions

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## Strand E

The pupil can demonstrate an understanding of the commutative law (e.g. $3+2=5$, therefore $2+3=5$ ).

## Task

## Activity One - Change It Round

Use a variety of counting objects, such as natural objects or number rods to make simple number sentences up to five, e.g. $1+4=5$. Record the number sentence either using the Number Sentence Strips or a variety of multisensory materials, such as chalk, cornflour, playdough, paint or sand. Show pupils how to change the order of the numbers being added using the apparatus; demonstrate that the answer remains the same, e.g. $4+$
 $1=5$. You could use a balance to show that both number sentences total five.

## Activity Two - Match It!

Match pairs of calculations using the Match It Addition Activity Cards to develop understanding of the commutative law of addition. Spread the cards out randomly, then either ask pupils to match the cards or play a game of 'Splat!' using their hands as fly swats.


## Activity Three - Pair Up!

Use the Domino Dots Activity to encourage pupils to find commutative addition pairs. The dominoes could be hidden inside or outside for pupils to find. Additionally, give pupils a large domino card which they can match with another pupil's card, for example $4+1$ pairs with $1+4$.






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## Adult Teaching Suggestions

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## Strand F

The pupil can demonstrate an understanding of inverse relationships involving addition and subtraction (e.g. if $3+2=5$, then $5-2=3$ ).
Ensure that pupils are secure with simple addition and subtraction up to five and that they can recognise and understand both the addition and the subtraction symbols.

## Task

## Activity One - Using the Inverse up to Five

Use a variety of counting objects, including natural objects or number rods to make and record simple number sentences up to five, e.g. $1+4=5$. Pupils could also use multisensory materials, such as chalk, cornflour, playdough, paint or sand to record their number sentences. Demonstrate the inverse by starting with the 'answer' to the calculation and taking away one of the other numbers.
 Use the Inverse Number Sentence Strips and a variety of apparatus to demonstrate this visually.

## Activity Two - Fact Families

Use the Fact Family Street Activity to create fact family number sentences which include the additions of given numbers and their inverse operations. To extend the activity, complete the blank houses by using appropriate number sentences of your own.


## Activity Three - Part Part Whole Models

Encourage pupils to demonstrate their understanding of the inverse operation by using a variety of apparatus to make part-part-whole models. Use the Part Part Whole Activity Mat as a visual scaffold.


## same

## 睤


,

## different <br>  <br> 

## group

## add



## take away

## plus


subtract

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## less



## group

## total

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## Adult Teaching Suggestions

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## Strand G

The pupil can demonstrate an understanding that the total number of objects changes when objects are added or taken away.

## Task

## Activity One - Same or Different?

Using a variety of counting objects, such as natural objects or classroom items, set up a range of small groups of objects up to ten. Some groups should have the same number of objects, e.g. two groups of five pencils. Other groups should have different amounts, e.g. one group of five leaves and one group of seven leaves. Support pupils to identify groups with the same amount and groups with different amounts. Encourage pupils to identify same
 or different amounts independently. Use the Same or Different Keyword Cards to support this activity.

## Activity Two - All Change

Using a variety of counting objects, such as natural objects or classroom items, set up a range of small groups of objects up to ten. Add one or more objects to the group and show pupils how the total number of objects changes. Repeat the activity, modelling how the total number of objects changes when objects are taken away. Ensure pupils can recognise the process of addition and
 subtraction. Use the Addition and Subtraction Keyword Cards to support this activity.

## Adult Teaching Suggestions

We hope you find these Pre-Key Stage Standard suggestions useful. Please be aware that the suggestions and resources mentioned are potential ways to check understanding relating to the relevant strands. Other resources may be needed in addition to those suggested.

## Strand H

The pupil can demonstrate an understanding that the number of objects remains the same when they are rearranged, providing nothing has been added or taken away.

## Task

## Activity One - Let's Arrange

Arrange a variety of up to ten counting objects, such as natural objects or classroom resources, in an array or in a shape, e.g. a circle. Ask pupils to count the objects and then model how to rearrange them, asking pupils what they notice. Ensure the pupils understand that the number of objects remains the same, even when they are rearranged and when nothing has been added or taken away.


## Activity Two - Making Arrangements

Provide the pupils with a range of counting apparatus to manipulate. Using the Number Cards 0-10 and the Arrangement Cards, ask the pupils to choose one card from each pack and arrange the number of objects in a certain way. (You could use a feely bag for pupils to select their cards.)

Ask the pupils to choose another of the Arrangement
 Cards to rearrange their same number of objects in a different way.


$9$



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0

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Pick up 2 coins!




## Player Counters

## Treasure Hunt

## You will need:

- 1 game board
- A treasure chest board for each player
- Gold coins
- Coloured counters
- Chance cards
- Dice


Good luck me hearties!


- Pick up a chance card

Each player starts with 3 coins in their chest. Roll the dice and move your counter along the coloured circles. If you land on a red circle, pick up a chance card. If you land on a black circle, go back 3 sgaces. When all the players have reached the end, count up your gold coins. The winner is the pirate with the most coins!






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9
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1015


| 14 | 13 | 16 |
| :--- | :--- | :--- |



14



| 12 | 17 |
| :--- | :--- |
| 16 |  |



13
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11
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10
17

## Adult Teaching Suggestions

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## Strand I

The pupil can count to 20 , demonstrating that the next number in the count is one more and the previous number is one less.

## Task

## Activity One - Count to 20

Practise rote counting to 10 and then to 15 with pupils. Count forwards and backwards. Ensure that the pupils are secure with all the numbers in the count and that they can count independently. Use a variety of counting songs and the Ten in a Bed Counting PowerPoint to support.

Once secure, progress to rote counting to 20. Count objects and point to numbers on a number line or on a number
 square. Count forwards and backwards. Use the Twenty Green Bottles PowerPoint to support this activity.

## Activity Two - One More and One Less

Use the Counting Scenes to 20 PowerPoint for pupils to practise counting objects up to 20. Ask pupils what one more and one less would be for any number up to 10. When secure, progress up to 15 then up to 20 . Use a range of mathematical apparatus and visuals to support.


## Activity Three - Let's Play!

Use the Counting to 20 Games Pack for pupils to apply their counting skills to a range of turn-taking games. Children can also apply their knowledge to a range of role-play activities, such as a post office, a café or a cinema, counting relevant objects and coins.


## 2D Shape Cut and Stick Matching Activity

Cut and paste the shapes into the correct category.



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square


## triangle

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rectangle

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## circle



## square



## triangle




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# pentagon 



## hexagon



## octagon


kite


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## 2D Shape Word Mat



## Pizza Shape Colouring


$\square$ rectangle

## Shape Hunt

Colour the shapes as you see them. Which shape did you see the most?


## Shape Hunt

Colour the shapes as you see them. Which shape did you see the most?


## Shape Hunt

Use a tally to count the shapes you see.
Which shape did you see the most?
Which shape did you see the least?
Shape

## Adult Teaching Suggestions

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## Strand J

The pupil can recognise some common 2D shapes.

## Task

## Activity One - Matching Shapes

Use the 2D Shape Resource Pack to ensure pupils understand the names of some common 2D shapes, such as circle, square, triangle and rectangle. Use real-life shapes and mathematical shape apparatus for pupils to view, match and touch 2D shapes. Use shape or pattern blocks to make shape pictures, such as a train, a house or a dinosaur.

Use a range of shape apparatus to ensure the pupils
 understand key mathematical vocabulary, including 'side', 'face', 'corner', 'straight' and 'curved'.

## Activity Two - We're Going on a Shape Hunt!

Encourage pupils to identify common 2D shapes in their environment by going on a shape hunt indoors or outdoors. You could even do a shape hunt in the local community by taking pupils on an organised walk. Use a tablet device to take photographs. Match the photographs to the names of shapes or use them to make a shape
 collage for display. Use the Shape Hunt Worksheet to support this strand.

## Activity Three - Sorting Shapes

Provide pupils with a range of multisensory shape apparatus and ask pupils to sort and select shapes on command, e.g. 'Can you find a square?' or 'point to the circle'. Use the 2D Shape Resource Pack to help develop pupils' understanding of 2D shapes.


