Summer Scheme of Learning

Year 1/2

#MathsEveryoneCan

2019-20
How to use the mixed-age SOL

In this document, you will find suggestions of how you may structure a progression in learning for a mixed-age class.

Firstly, we have created a yearly overview.

For each block of learning, we have grouped the small steps into themes that have similar content. Within these themes, we list the corresponding small steps from one or both year groups. Teachers can then use the single-age schemes to access the guidance on each small step listed within each theme.

The themes are organised into common content (above the line) and year specific content (below the line). Moving from left to right, the arrows on the line suggest the order to teach the themes.

Each term has 12 weeks of learning. We are aware that some terms are longer and shorter than others, so teachers may adapt the overview to fit their term dates.

The overview shows how the content has been matched up over the year to support teachers in teaching similar concepts to both year groups. Where this is not possible, it is clearly indicated on the overview with 2 separate blocks.
Notes and Guidance

How to use the mixed-age SOL

Here is an example of one of the themes from the Year 1/2 mixed-age guidance.

### Subtraction

<table>
<thead>
<tr>
<th>Year 1 (Aut B2, Spr B1)</th>
<th>Year 2 (Aut B2, B3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many left? (1)</td>
<td>Subtract 1-digit from 2-digits</td>
</tr>
<tr>
<td>How many left? (2)</td>
<td>Subtract with 2-digits (1)</td>
</tr>
<tr>
<td>Counting back</td>
<td>Subtract with 2-digits (2)</td>
</tr>
<tr>
<td>Subtraction - not crossing 10</td>
<td>Find change - money</td>
</tr>
<tr>
<td>Subtraction - crossing 10 (1)</td>
<td></td>
</tr>
<tr>
<td>Subtraction - crossing 10 (2)</td>
<td></td>
</tr>
</tbody>
</table>

In order to create a more coherent journey for mixed-age classes, we have re-ordered some of the single-age steps and combined some blocks of learning e.g. Money is covered within Addition and Subtraction.

The bullet points are the names of the small steps from the single-age SOL. We have referenced where the steps are from at the top of each theme e.g. Aut B2 means Autumn term, Block 2. Teachers will need to access both of the single-age SOLs from our website together with this mixed-age guidance in order to plan their learning.

### Points to consider

- Use the mixed-age schemes to see where similar skills from both year groups can be taught together. Learning can then be differentiated through the questions on the single-age small steps so both year groups are focusing on their year group content.
- When there is year group specific content, consider teaching in split inputs to classes. This will depend on support in class and may need to be done through focus groups.
- On each of the block overview pages, we have described the key learning in each block and have given suggestions as to how the themes could be approached for each year group.
- We are fully aware that every class is different and the logistics of mixed-age classes can be tricky. We hope that our mixed-age SOL can help teachers to start to draw learning together.
<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
<th>Week 7</th>
<th>Week 8</th>
<th>Week 9</th>
<th>Week 10</th>
<th>Week 11</th>
<th>Week 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Autumn</strong></td>
<td>Number: Place Value Y1 - Numbers to 20 Y2 - Numbers to 100</td>
<td>Number: Addition and Subtraction Year 1: Numbers within 20 (including recognising money) Year 2: Numbers within 100 (including money)</td>
<td>Number: Year 1: Place Value to 50 and Multiplication Year 2: Multiplication</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td>Number: Year 1: Division &amp; consolidation Year 2: Division</td>
<td>Year 1: Place Value to 100</td>
<td>Measurement: Length and Height</td>
<td>Geometry: Year 1: Shape and Consolidation Year 2: Properties of Shape</td>
<td>Number: Year 1: Fractions and Consolidation Year 2: Fractions</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Summer</strong></td>
<td>Geometry: Position and Direction</td>
<td>Measurement: Time</td>
<td>Year 1: Place Value recap</td>
<td>Measurement: Year 1: Weight and Volume Year 2: Mass, Capacity and Temperature</td>
<td>Year 1: Four Operations recap</td>
<td>Year 2: Consolidation and Investigations</td>
<td>Consolidation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In this section, content from single-age blocks are matched together to show teachers where there are clear links across the year groups. Teachers may decide to teach the lower year’s content to the whole class before moving the higher year on to their age-related expectations. The lower year group is not expected to cover the higher year group’s content as they should focus on their own age-related expectations.

In this section, content that is discrete to one year group is outlined. Teachers may need to consider a split input with lessons or working with children in focus groups to ensure they have full coverage of their year’s curriculum. Guidance is given on each page to support the planning of each block.

The themes should be taught in order from left to right.
Children use mathematical vocabulary to describe position, direction and movement.

In Year 1, children describe whole, half, quarter and three quarter turns. In Year 2, they build on this by describing whether turns are clockwise or anti-clockwise.

Both year groups describe movement using forwards, backwards, left and right. Year 1 focus on describing position using language such as on top of, in front, behind etc. Year 2 apply their mathematical vocabulary when describing patterns in shapes.

- **Turns**
  - Year 1 (Sum B3)
    - Describe Turns
  - Year 2 (Sum B1)
    - Describing Turns

- **Movement**
  - Year 1 (Sum B3)
    - Describe Position (1)
  - Year 2 (Sum B1)
    - Describing Movement
    - Describing Movement and Turns

- **Position**
  - Year 1 (Sum B4)
    - Describe Position (2)

- **Patterns with shapes**
  - Year 2 (Sum B1)
    - Making patterns with shapes
Block 1 – Position and Direction

Theme 1 – Turns
Describe Turns

Notes and Guidance

Children use the language ‘full’, ‘half’, ‘quarter’ and ‘three-quarter’ to describe turns made by shapes/objects.

Children should practically turn objects, shapes and themselves in different directions but do not need to describe the direction of the turns. Children should investigate whether they can finish facing the same direction if they complete different turns.

Mathematical Talk

What is each turn called?
Is there only one direction shapes/objects can move in?

Does it make a difference which way the shape / object / person is turned?

What part of a whole has the shape/object turned?
What will the shape/object look like before or after the turn?

Varied Fluency

Give the children instructions using the language ‘quarter turn’, ‘half turn’, ‘three quarters turn’ and ‘full turn’. Children could then work in pairs to give and follow directions. This could be developed into a routine with music or as the children line up.

Draw what each shape will look like once it has turned a:

- quarter turn
- half turn
- three-quarter turn
- full turn

Complete the sentence to describe the turns these shapes have made.

The shape has turned a __________________________ turn.
Describe Turns

Reasoning and Problem Solving

Are these statements correct? Is there more than one answer? Explain how you know.

The shape has made a quarter turn. 

The shape has made a half turn.

The shape has made a three-quarter turn.

Correct in either direction. It could also be a three-quarter turn in either direction.

Correct in either direction. The shape could have made a three-quarter turn clockwise or a quarter turn anti-clockwise.

Alex turns her number shape and it finishes facing this direction.

What direction could it have started facing?

What turn could it have made?

A half turn.

A quarter turn

A whole turn

A quarter turn

A three-quarter turn

A three-quarter turn
Describing Turns

Notes and Guidance


It is important to encourage the children to take into consideration which direction the object/person is facing to begin with.

What direction was the turn?

Describe the turn that the number shapes have made?

Could there be more than one answer? Why?

Varied Fluency

Turn a figure.

Ask your partner to describe the turn using the language, ‘full turn’, ‘half turn’, ‘quarter turn’, ‘three-quarter turn’, ‘clockwise’ and ‘anticlockwise’.

Match the turn to the description.

A full turn.
A quarter turn clockwise.
A half turn anticlockwise.

Describe how the triangle has turned each time.

The triangle has made a _____ turn ______.

The triangle has made a _____ turn ______.

The triangle has made a _____ turn ______.
Look at the number shape below:

How could the number shape have turned?

Describe all possibilities.

Possible answers:
No turn
Quarter/half/three-quarter or full turn clockwise.

Quarter/half/three-quarter or full turn anticlockwise.

Always, Sometimes, Never

If two objects turn in different directions they will not be facing the same way.

Sometimes. It depends on how far the objects are turned – quarter, half, three quarters or full.
Children use ‘left’, ‘right’, ‘forwards’ and ‘backwards’ to describe position and direction. They will describe the position of objects and shapes from different starting positions.

You could use board games such as Snakes and Ladders and Twister to explore positional language.

Where possible, this concept should be explored practically.

What are the different directions we can move in?

How would I get to the ........?

How could you describe the movement?
How could we record the movement?

How would I get from the ....... to the ........?

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**Mathematical Talk**

- Use cones to mark out a route for a partner. Describe the route your partner needs to take using the words ‘left’, ‘right’, ‘forwards’ and ‘backwards’.

- Use a grid to move a bot to different places. Use the words ‘left’, ‘right’, ‘forwards’ and ‘backwards’ to describe the movements.

- Complete the sentences using ‘left’ and ‘right’ to describe the position of the coins.

The £1 coin is to the ______ of the 1p coin.
The 50p coin is to the ______ of the 1p coin.
The 2p coin is to the ______ of the 50p coin.
Use the clues to colour the shapes.

- The circle in the middle is blue.
- The circle on the right is red.
- The shape up from the right circle is green.
- The shape down from the circles is green.
- The square to the left of the green triangle is red.
- The four-sided shape up from the rectangle is blue.
- The triangle on the left is red.

The pink doughnuts are on the right.

The pink doughnuts are on the left.

Who is correct? Explain how you know.

Both children could be correct because they have not stated what the pink doughnuts are left or right in relation to.

The pink doughnuts are on the left of the yellow doughnuts and the pink doughnut are on the right of the blue and brown doughnuts.
Children use language ‘forwards’, ‘backwards’, ‘up’, ‘down’, ‘left’ and ‘right’ to describe movement in a straight line.

Children will practically follow and give directions with a partner before writing directions for routes and recording routes on 2-D grids. Teachers need to discuss the direction objects are facing, in order to correctly complete left and right movements.

**How far have you/has your partner moved?**
In what direction have you/has your partner moved?

What direction are we facing in at the start? Why is this important?

Can you describe the movements made by ____?

How could we record these movements?

**Using the words forwards, backwards, left and right, give your partner some instructions to follow when moving around the classroom/playground.**

Complete the stem sentences to describe the movements made.

The [ ] has moved 1 square [____].

The [ ] has moved ___ squares [____].

The [____] has moved 2 squares up.

The [____] has moved ___ squares down.

Record these movements on the grid using arrows.

The [ ] moves 1 square right.

The [ ] moves 3 squares forward.

The [ ] moves 1 square down.

The [ ] moves 1 square up.
Amir is incorrect. The sheep has moved 2 squares to the left because of the way it was facing to begin with.

How many different routes can you write for the bee to get to the hive?
Use the words forwards, backwards, left and right.

Possible answers:
- Forward 3, Right 1.
- Right 1, Forward 3.
- Right 2, Forward 3, Left 1.
- Right 1, Forward 3.
- Right 2, Forward 2, Left 1, Forward 1.

There are more routes for the children to find.
Children use their knowledge of movement and turns to describe and record directions. They need to be aware of the direction the object is facing before it is turned.

Children may explore movement and turns further using ICT or during P.E.

Which direction is ____ facing to begin with? Why is this important?

Is ____ moving or just changing direction? How do you know?

How can we record the directions given?

Are there any other routes that could be taken?

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**Varied Fluency**

- Describe the route Dennis takes to school.

- Draw the route to show these directions.
  - Forward 1 square. Turn left.
  - Forward 1 square, quarter turn anti-clockwise.
  - Forward 1 square. Make a quarter turn clockwise.
  - Forward 1 square. Make a three quarter turn anti-clockwise. Forward 3

- Write directions for Dennis to get to each place on the map.
How many different routes can you find to get from start to finish. Use the words ‘forwards’, ‘backwards’, ‘clockwise’, ‘anti-clockwise’ and ‘quarter turn’.

Children will find a range of routes. For example:

- Turn a quarter anticlockwise.
- Forward 1
- Turn a quarter clockwise.
- Forward 1
- Turn a quarter clockwise.
- Forward 3
- Turn a quarter anticlockwise.
- Forward 1

Is Whitney correct?

Possible answer: Whitney is correct.

A quarter turn clockwise is the same as a three-quarter turn anticlockwise.

Convince me.

Children may use objects/small people to show their reasoning.
Children will build upon directional language ‘left’ and ‘right’ to assist with describing position. They will describe position using: ‘top’, ‘in between’, ‘bottom’, ‘above’ and ‘below’. Children explore the position of objects and shapes from different starting points.

Where possible, this concept should be explored practically both in and out of the classroom.

Where is the _____ in relation to you?

What is _______ of you?

What is _______ of this object?

How can we describe the position of ____?

Can you create your own instructions to build a tower?

Think about where you are sitting in the classroom. What can you see around you? Complete the table.

<table>
<thead>
<tr>
<th>In front of me</th>
<th>Behind me</th>
<th>To the left of me</th>
<th>To the right of me</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use objects in your classroom or outside area to complete the sentences. Use the words: ‘top’, ‘middle’, ‘bottom’, ‘above’ and ‘below’ to describe the position.

The _______ is above _______.
The _______ is below _______.
In between _______ and _______ is _______.
Above _______ is _______ and _______.
There is nothing between _______ and _______.

Use 5 cubes to build a tower.
• Start with a yellow cube.
• Place a blue cube on top of the yellow cube.
• Place a white cube below the yellow cube.
• Place a red cube on the top of the tower.
• Place the green cube in between the yellow and white cube.
Describe Position (2)
Reasoning and Problem Solving

**Jack is directly above Alex.**
*Eva is directly below Alex.*
________ is to the right of Eva.
There is no-one above Amir.
What are the missing names?
Add people to complete the grid and describe where they are.

How many different ways can you describe the position of the 2p coin?

Possible answers may include:
- The 2p coin is: **Below** the 50p
- **Above** the 10p
- **In between** the £1 and 5p
- To the **left** of the 5p
- To the **right** of the £1
Block 1 – Position and Direction

Theme 4 - Patterns with shapes
Children build on previous knowledge of patterns and repeating patterns from Year 1.

They now describe and create patterns that involve direction and turns.

Children use the language ‘clockwise’, ‘anti-clockwise’, ‘quarter’, ‘half’ and ‘three quarters’ to describe patterns.

**Mathematical Talk**

- What is happening in the pattern?
- What would the next shape look like?
- How would you describe its position?
- How can we work out the missing shape?

**Notes and Guidance**

Continue these patterns by adding the next 3 shapes.

Fill in the missing shapes to complete the patterns.

Describe the turn for each pattern.
Making Patterns with Shapes

Reasoning and Problem Solving

How many different patterns can you create using this shape?

Possible answers:

Spot the mistake in each pattern. Explain why they are incorrect.

The rule is turn the shape a quarter turn.

The rule is turn the shape three quarters.

Eva could both be correct as no direction is given. Eva may be turning clockwise and Rosie anticlockwise.

Who is correct?

Eva and Rosie

The 4th shape should be pointing right.

Or the 8th shape should be pointing left.

The 5th shape has not made half a turn.