

# **Age 4 - 5**

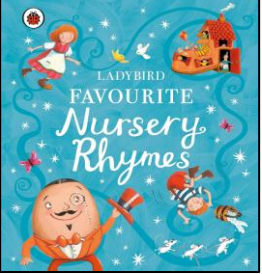
## **Autumn Block 3**

### **Pattern**






# Learning Sequence: Age 4 - 5 Block 3 Pattern


<b>Foundational knowledge</b>	Recognise, describe and build repeating patterns, including ABAB, AAB, ABC and AABC. Fix missing elements of a pattern, duplicate a pattern and extend a repeating pattern.	
<b>Key mathematical language (essential vocabulary)</b>	<b>Threshold vocabulary</b> pattern different unit of repeat	<b>Clarification vocabulary</b> part mistake represent
<b>Sentence stem</b>	The unit of repeat is ____ .	
<b>Resources required</b>	objects for building different patterns (Initially, try to ensure that only one criterion changes, e.g. use cubes (not linking) of different colours or use different-shaped red objects. The criterion could be colour, size, shape or capacity.) puppet circular template pattern track  Note: ensure pupils have enough objects to build a unit of repeat three times.	
<b>At the end of this unit, pupils will ...</b>	<b>Know</b>	<b>Be able to</b>
	<ul style="list-style-type: none"> <li>• a pattern has a repeating unit</li> <li>• there are different types of repeating pattern.</li> </ul>	<ul style="list-style-type: none"> <li>• recognise a pattern</li> <li>• describe a pattern</li> <li>• repeat a pattern</li> <li>• name the unit of repeat.</li> </ul>
<b>Prompting questions for thinking hard</b>	Tell me what your unit of repeat is. What comes next in your pattern? Let's see how long we can make your pattern. What will be the last object in your pattern? Can you fit your pattern in a circle? Oh no, my pattern has a mistake in it. Can you spot the mistake? Shall we try to fix it together? Can you fix it on your own? Can you draw your pattern? Can you represent your pattern? What could we use to represent the blue bear, for example?	

# Learning Sequence: Age 4 - 5 Block 3 Pattern






Opportunities and experiences	Creative play	Role-play	Water tray
 <p>Rhyme and repetition can create a pattern. Explored via oracy, attention can be drawn to the repeating patterns and sequencing.</p>	<p>Use a variety of objects from the outdoor provision to make large patterns, e.g. tyres, planks, bricks or blocks.</p> <p>Pupils make sound patterns with their own bodies or with instruments, e.g. clapping, stamping or different voice sounds.</p> <p>Print repeating patterns using stamps and paint.</p>	<p>Design tablecloths and curtains with a repeating pattern.</p> <p>Design saris with a repeating pattern.</p> <p>Build patterns in a garden area with pebbles, flowers and leaves.</p>	<p>Draw patterns in wet sand.</p> <p>Press different-shaped objects or objects of various sizes into the sand to make a pattern.</p> <p>Decorate castles with a repeating pattern, using pebbles, sticks or flowers.</p>


# Learning Sequence: Age 4 - 5 Block 3 Pattern

Part 1/2				
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)
Lesson 1 - recognise and describe an ABC pattern				
Teacher to create ABAB sound patterns for class to follow, e.g. stamp, clap, stamp, clap or swish, bop, swish, bop.	Instruct the key vocabulary - unit of repeat (x3) which refers to the smallest part of the pattern that helps us know how to continue it. Different (x3) means not the same as each other. My pattern is made up of three different objects.	Remind class of previous learning about ABAB patterns. Explain that every pattern follows a rule and we call this the unit of repeat. It is the smallest part of the pattern.	Teacher to build an ABC repeating pattern (red cube, blue cube, green cube ...). Build at least three repeats so that the pattern can be identified. Ask pupils to say the pattern with you (red, blue, green, red, blue, green, red, blue, green ...). What comes next? Give pupils some thinking time. With the whole class chanting, continue to build the pattern. My unit of repeat is red, blue, green. There are three different objects in my unit of repeat.	The teacher builds another ABC pattern with at least three repeats. Ask pupils to turn to their talk partner and repeat the pattern. What comes next? What is my unit of repeat? Have pupils used the sentence stem <i>The unit of repeat is ____</i> . All adults should listen to the responses. The teacher responds with <i>This is what I heard ____</i> . Check that every pupil can identify the unit of repeat.






 Guided
Repeat the checking for understanding activity with the adult building a pattern and emphasising the unit of repeat by pulling it away from the sequence. The group then chants the pattern while the teacher continues to build it. What comes next? What is my unit of repeat? Use the sentence stem <i>The unit of repeat is ____</i> .


# Learning Sequence: Age 4 - 5 Block 3 Pattern

Part 1/2				
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)
Lesson 2 - continue an ABC pattern				
Sing the song <i>Oats, beans and barley grow</i> three times (p157, <i>Nursery Rhymes</i> ). Watch a video clip of the rhyme being performed. What pattern do you notice?	Instruct the key vocabulary - unit of repeat (x3) which refers to the smallest part of the pattern that helps us know how to continue it. Different (x3) means not the same as each other. My pattern is made up of three different objects.	Remind the class of their previous learning about patterns. Explain that you are going to make a repeating pattern using three different objects in your unit of repeat. Show me three on your fingers. Build an ABC pattern with coloured cubes, e.g. red, green, blue, red, green, blue. The smallest part of my pattern is red, green, blue. So, my unit of repeat is red, green, blue. Model the repeating pattern, chanting as you build.	Build another ABC repeating pattern, using appropriate objects. Finish the pattern at the end of the unit of repeat.	Provide pupils with the same resources and ask them to continue your pattern. All adults should look out for misconceptions and errors. Can every pupil continue the ABC pattern?






 Guided
Repeat the <i>Attempt</i> phase. The adult builds an ABC pattern and supports pupils to continue it.


# Learning Sequence: Age 4 - 5 Block 3 Pattern

Part 1/2				
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)
Lesson 3 - build an ABC pattern				
<p>Sing <i>The magic porridge pot</i>.</p> <p><i>Split, splat, splot,</i> <i>Split, splat, splot,</i> <i>Magic porridge pot.</i> <i>Plip, plap, plop,</i> <i>Plip, plap, plop,</i> <i>Stir it, never stop.</i></p> <p>Sing the song twice. Say: I spot a pattern here – <i>Split, splat, splot.</i> Continue this pattern with pupils chanting with you. Identify the unit of repeat as <i>Split, splat, splot</i>.</p>	<p>Instruct the key vocabulary – unit of repeat (x3) which refers to the smallest part of the pattern that helps us know how to continue it. Different (x3) means not the same as each other. My pattern is made up of three different objects.</p> <p><i>The magic porridge pot</i></p>	<p>Revisit previous learning. Tell pupils that the pattern they will be building today has three different objects in the unit of repeat. Show me three on your fingers. Choose a criterion to base your pattern on, e.g. size (small spoon, medium spoon, big spoon) or type of shape (square, circle, triangle). Build an ABC pattern, clearly identifying the unit of repeat for pupils by drawing it away from the pattern and describing it. Ask pupils to chant to continue your pattern.</p>	<p>Build another ABC pattern with at least three repeats. Describe your unit of repeat and identify it. Chant your pattern.</p>	<p>Provide pupils with three colours of counters, cubes (not interlocking) or other objects. Ask pupils to work with their partner to build a pattern with three different objects in their unit of repeat. Ask pupils to say their pattern as they build it. All the adults should look out for any misconceptions and errors. Can every pupil build an ABC pattern?</p>






 Guided
<p>Provide opportunities for pupils to build ABC patterns with the teacher and then independently.</p>


# Learning Sequence: Age 4 - 5 Block 3 Pattern

Part 1/2				
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)
Lesson 4 - recognise and continue an AAB				
Can you follow my pattern? Choose a physical AAB pattern, e.g. tap head, head, then shoulders. Ask pupils to watch for the first three repeats of the pattern and then to join in. You could chant, "head, head, shoulder" to scaffold this task. Repeat with another physical or aural pattern.	Instruct the key vocabulary - unit of repeat (x3) which means the smallest part of the pattern that helps us know how to continue it. A part (x3) is a smaller bit of the whole. My unit of repeat will have three parts.	Explain that today, we are looking at a different type of pattern with a different unit of repeat. Tell pupils that the pattern they will be building today uses two different objects in the unit of repeat and that one of them is used twice. Show me two on your fingers. This pattern has three parts. My pattern has two parts that are the same and one part that is different. Here's my pattern (build an AAB pattern in front of the pupils). Describe the pattern as you build it, e.g. leaf, leaf, stick or teddy, teddy, doll or square, square, triangle. Repeat the pattern at least three times. Draw out the unit of repeat and identify the two parts that are the same and the one part that is different.	Build another AAB pattern, making the unit of repeat explicit.	Provide pupils with the same resources that you used in the <i>Example</i> task and ask them to continue your pattern. All the adults should look for any misconceptions or errors. Can every pupil continue an AAB pattern?

 Guided
Build an AAB pattern and ask pupils to continue it.






# Learning Sequence: Age 4 - 5 Block 3 Pattern


Part 1/2				
 <b>Connect</b>	 <b>Vocabulary</b>	 <b>Explain</b>	 <b>Example</b>	 <b>Attempt</b> (checking for understanding)
<b>Lesson 5 - flexible content</b>				
<p>The purpose of this lesson is to provide teachers with an opportunity to respond to pupil outcomes from the rest of the teaching week. This time should be used strategically to move pupils' thinking forwards. This lesson can be moved to a different position in the week to ensure it is used where and when it is needed. Although not an exhaustive list, below are some suggestions of how this time can be utilised to maximise impact.</p> <p>Revisit areas in which pupils would benefit from further consolidation.</p> <p>Respond to pupils' interests.</p> <p>Deepen pupils' thinking about the subject matter.</p> <p>Pre-teach vocabulary or background knowledge.</p>				

 <b>Guided</b>









# Learning Sequence: Age 4 - 5 Block 3 Pattern







Part 2/2				
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)
Lesson 1 - build an AAB pattern				
Revisit previous learning – songs / nursery rhymes.	Instruct the key vocabulary – unit of repeat (x3) which refers to the smallest part of the pattern that helps us know how to continue it. <i>P part</i> (x3) is a smaller bit of the whole. My unit of repeat will have three parts.	Explain to pupils that the pattern they will be building today has two different objects in the unit of repeat and that one of them is used twice. Show me two on your fingers. This pattern has two parts that are the same and one part that is different. Choose a criterion to base today's pattern on, e.g. natural materials (stick, stick, pine cone) or type of shape (circle, circle, triangle). Build an AAB pattern, clearly identifying the unit of repeat for pupils by drawing it away from the pattern and describing it. Ask pupils to chant to continue your pattern.	Build another AAB pattern with at least three repeats. Describe your unit of repeat and identify it. Chant your pattern.	Provide pupils with two colours of counters, cubes (not interlocking) or other objects. Ask pupils to work with their partner to build a pattern, using two different objects (two parts that are the same and one part that is different). Provide structure, as necessary. I want to see you build your unit of repeat. Show me the two parts that are the same and show me the one part that is different. Now build your pattern. Ask pupils to say their pattern as they build it. All adults should look out for any misconceptions or errors. Can every pupil build an AAB pattern?

 Guided
Provide opportunities for pupils to build AAB patterns with the teacher and then independently. Focus on the pupils choosing the two parts that are the same and the one part that is different to make their unit of repeat.






# Learning Sequence: Age 4 - 5 Block 3 Pattern


Part 2/2					
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)	 Guided
Lesson 2 - recognise and describe an AABC pattern					
Revisit previous learning – songs / nursery rhymes.	Instruct the key vocabulary – unit of repeat (x3) which refers to the smallest part of the pattern that helps us know how to continue it. A part (x3) is a smaller bit of the whole. My unit of repeat will have four parts.	<p>Explain to pupils that today, we are going to be looking at a different type of pattern with a different unit of repeat. This pattern is made with three different objects. Show me three on your fingers. My pattern has four parts. My pattern has two parts that are the same, one part that is different and another one part that is different. Here is my pattern – explicitly show the two parts that are the same, one part that is different and the other one part that is different while you build an AABC pattern in front of the pupils. Describe the pattern as you build it, e.g. red, red, blue, yellow or leaf, leaf, stick, pine cone or circle, circle, triangle, square.</p> <p>Repeat the pattern at least three times. Draw out the unit of repeat and identify the two parts that are the same, one part which is different and the other part which is different. Pull this away from the pattern to make it explicit.</p>	Build another AABC pattern, making the unit of repeat explicit.	Provide the pupils with the same resources that were used in the <i>Example</i> task and ask them to continue your pattern. All the adults should look out for any misconceptions or errors. Can every pupil continue an AABC pattern?	Build another AABC pattern and identify the unit of repeat. Chant the pattern then ask pupils to continue it.

# Learning Sequence: Age 4 - 5 Block 3 Pattern






Part 2/2					
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)	 Guided
Lesson 2 - recognise and describe an AABC pattern					
Revisit previous learning – songs / nursery rhymes.	Instruct the key vocabulary – unit of repeat (x3) which refers to the smallest part of the pattern that helps us know how to continue it. A part (x3) is a smaller bit of the whole. My unit of repeat will have four parts.	<p>Explain to pupils that today, we are going to be looking at a different type of pattern with a different unit of repeat. This pattern is made with three different objects. Show me three on your fingers. My pattern has four parts. My pattern has two parts that are the same, one part that is different and another one part that is different. Here is my pattern – explicitly show the two parts that are the same, one part that is different and the other part that is different while you build an AABC pattern in front of the pupils. Describe the pattern as you build it, e.g. red, red, blue, yellow or leaf, leaf, stick, pine cone or circle, circle, triangle, square.</p> <p>Repeat the pattern at least three times. Draw out the unit of repeat and identify the two parts that are the same, one part which is different and the other part which is different. Pull this away from the pattern to make it explicit.</p>	Build another AABC pattern, making the unit of repeat explicit.	Provide the pupils with the same resources that were used in the <i>Example</i> task and ask them to continue your pattern. All the adults should look out for any misconceptions or errors. Can every pupil continue an AABC pattern?	Build another AABC pattern and identify the unit of repeat. Chant the pattern then ask pupils to continue it.


# Learning Sequence: Age 4 - 5 Block 3 Pattern

Part 2/2				
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)
Lesson 3 - build an AABC pattern				
Revisit previous learning – songs / nursery rhymes.	Instruct the key vocabulary – unit of repeat (x3) which means the smallest part of the pattern that helps us know how to continue it. A part (x3) is a smaller bit of the whole. My unit of repeat will have four parts.	Explain to the pupils that the pattern they will be building today has three different objects in the unit of repeat and that one of them is used twice. The unit of repeat has two parts that are the same, one part that is different and another one part that is different. Choose a criterion to base today's pattern on. Build an AABC pattern, clearly identifying the unit of repeat for pupils by drawing it away from the pattern and describing it. Ask pupils to chant to continue your pattern.	Build another AABC pattern with at least three repeats. Explicitly show the two parts that are the same, one part that is different and the other one part that is different. Describe your unit of repeat and move it away from the rest of the pattern. Chant your pattern. Note: this will be the most challenging pattern to build due to the use of three different objects with one of them being repeated. Provide additional modelling as necessary.	Provide the pupils with three colours of counters, cubes (not interlocking) or other objects. Ask pupils to work with their partner to build a pattern using three different objects – two parts that are the same, one part that is different and another one part that is different. Provide structure, as necessary. I want to see you build your unit of repeat. Show me the two parts that are the same. Show me one part that is different. Show me the other one part that is different. Now build your pattern. Ask pupils to say their pattern as they build it. All the adults should look out for any misconceptions or errors. Can every pupil build an AABC pattern?



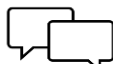


 Guided
Provide opportunities for pupils to build AABC patterns with the teacher and then independently. Focus on the pupils choosing the two parts that are the same, one part that is different and another part that is different to make their unit of repeat.


# Learning Sequence: Age 4 - 5 Block 3 Pattern

Part 2/2				
 Connect	 Vocabulary	 Explain	 Example	 Attempt (checking for understanding)
Lesson 4 - correct an error in a pattern				
The teacher creates a variety of repeating patterns for pupils to observe. What was the unit of repeat?	Instruct the key vocabulary – unit of repeat (x3) which refers to the smallest part of the pattern that helps us know how to continue it. A mistake (x3) is something that is wrong. I have made a mistake in my pattern so it is wrong.	Remind pupils that in patterns, we look for the unit of repeat. Introduce your puppet. Explain that it is going to make a pattern. Let’s try to follow his pattern. Manipulate the puppet to build a pattern (ABAB or ABC) but make a mistake within it.  Note: there should be at least three repeats of the pattern in the sequence that are correct, e.g. ABC, ABC, ABB, ABC or ABC, ABC, ABC, ABB ... . Ask the pupils to chant the pattern with you.  What do they notice?	Explain the mistake your puppet has made. Model how to correct the error in the pattern.	Ask the pupils to watch your puppet carefully as he makes another pattern. Build a pattern (ABAB or ABC) with an error.  Acknowledge the mistake and using the same resources, ask pupils to work with a partner to build the pattern correctly.  Can every pupil identify the unit of repeat? Can every pupil correct the error in a pattern?

 Guided
The teacher builds patterns that include mistakes. Support pupils to identify the unit of repeat and to correct any mistakes. Note: there should be at least three repeats of the pattern in the sequence that are correct, e.g. ABC, ABC, ABB, ABC or ABC, ABC, ABC, ABB ... .

# Learning Sequence: Age 4 - 5 Block 3 Pattern

Part 2/2				
 <b>Connect</b>	 <b>Vocabulary</b>	 <b>Explain</b>	 <b>Example</b>	 <b>Attempt</b> (checking for understanding)
<b>Lesson 5 - flexible content</b>				
<p>The purpose of this lesson is to provide teachers with an opportunity to respond to pupil outcomes from the rest of the teaching week. This time should be used strategically to move pupils' thinking forwards. This lesson can be moved to a different position in the week to ensure it is used where and when it is needed. Although not an exhaustive list, below are some suggestions of how this time can be utilised to maximise impact.</p> <p>Revisit areas in which pupils would benefit from further consolidation.</p> <p>Respond to pupils' interests.</p> <p>Deepen pupils' thinking about the subject matter.</p> <p>Pre-teach vocabulary or background knowledge.</p>				

 <b>Guided</b>